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Human Behavior and Social Institutions



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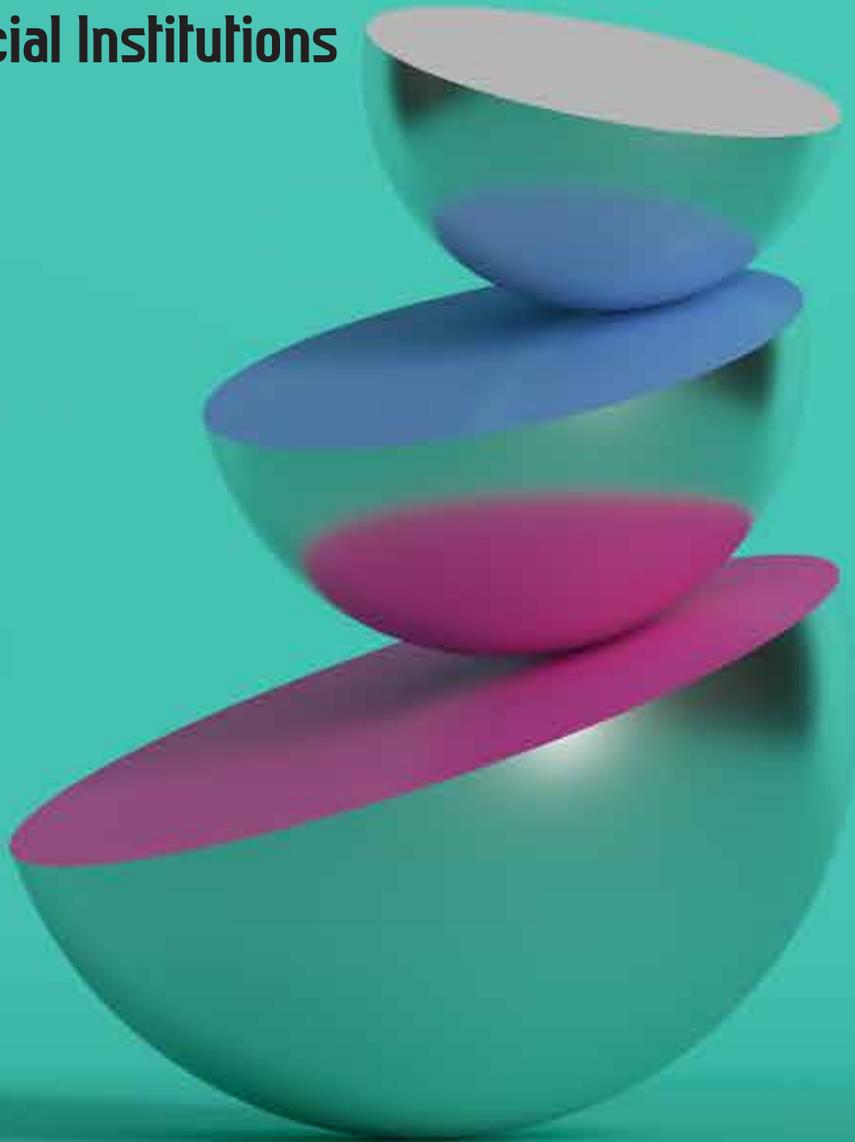


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Editorial

The special issue on "Human Behavior and Social Institutions" explores the intricate interplay between individual actions and the broader structures that shape society. This collection of articles delves into various aspects of human behavior, shedding light on how our actions, choices, and interactions influence and are influenced by the social institutions we inhabit. The issue encompasses a diverse range of topics, offering fresh perspectives on the dynamics that underlie our social world. Within this special issue, readers can expect to find in-depth examinations of the impact of individual and collective behavior on institutions such as education, criminal justice system, and healthcare. The articles provide valuable insights into how our decisions as individuals ripple through society, affecting the quality of our institutions and, in turn, the lives of our fellow citizens.

Furthermore, the special issue encompasses studies on the reciprocal relationship between social institutions and human behavior. It uncovers how institutional norms and policies can shape our actions, motivations, and values. In essence, the special issue on "Human Behavior and Social Institutions" offers an interdisciplinary exploration of the complex and often profound ways in which human behavior and social structures interact, highlighting the importance of considering both individual agency and institutional contexts when seeking to comprehend and address the challenges of our contemporary world. Readers can anticipate a thought-provoking journey through these articles, which collectively shed light on the dynamics at the heart of our social institutions and the people who navigate them.

The OPUS Journal of Society Research (OPUS JSR) brings together a diverse range of theory, practice, and research in the pursuit of understanding human behavior in its social context. The interdisciplinary viewpoint lays the groundwork for presenting and establishing a holistic relationship with other disciplines, concepts, and methods. The OPUS JSR allows researchers to use an interdisciplinary approach to present different interpretations and alternative points of view. The theoretical frameworks that underpin the analyses and interpretations of the subjects under study are as important as the intersection of disciplines. This framing can lead to greater clarity of multiple, even contradictory findings, allowing for a better understanding of social dynamics that would otherwise be invisible if scholars concentrated on a single set of theoretical dynamics.

OPUS JSR reflects more than 10 years of journal sponsorship by ADAMOR Society Research Center and its partner organization, the Institute of Urban Studies. The OPUS Journal of Society Research is the direct successor of two previously published journals: OPUS Turkish Journal of Social Policies and Work Life Studies: OPUS International Journal of Society Research (ISSN 2528-9527 E-ISSN 2528-9535).

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RESEARCH ARTICLE

Culture, Motivation, and Performance: Remote and Workplace Dynamics in Organizations

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Abstract

In this study, a divergence in the perceptions of organizational culture between workplace and remote employees within Turkish banks was examined. Workplace employees viewed the culture as bureaucratic yet also innovative and supportive, contrasting with remote employees' perspectives. The research uncovered distinct working styles that significantly influenced job performance, with remote workers displaying a notably positive impact. However, significant differences in the effects of job satisfaction and motivation on job performance between the two groups are not detected. An unexpected discovery was the reverse relationship between a supportive organizational culture and job performance among remote employees. Organizational commitment had a positive influence on job performance for all employees, emphasizing its role in enhancing job satisfaction and performance. This research contributes to the understanding of the intricate relationship between organizational culture and employee performance, in the context of remote and workplace workers. The findings suggest that non-monetary factors significantly motivate employees, with workplace employees emphasizing effective communication and teamwork, while remote workers prioritize effective planning and task execution. While the study provides insights, its industry-specific focus and sample size limitations should be considered for future research to explore these complex relationships in more diverse contexts.

Keywords: Organizational Culture, Motivation, Job Satisfaction, Job Performance, Remote Work

Öz

Bu çalışmada, Türk bankalarında ofiste ve uzaktan çalışanların örgütsel kültür algıları arasındaki farklılıklar incelenmiştir. İşyeri çalışanları kültürü bürokratik olarak görmüş, ancak aynı zamanda yenilikçi ve destekleyici olarak değerlendirmişlerdir, bu görüş uzaktan çalışanların bakış açılarıyla farklılık oluşturmaktadır. Araştırma, uzaktan çalışanların örgüt performansına belirgin bir olumlu katkı sunduğunu göstermiştir. Bununla birlikte, iki grup arasında iş memnuniyeti ve motivasyonunun iş performansı üzerindeki etkilerinde anlamlı farklılıklar tespit edilmemiştir. Beklenmedik bir bulgu, uzaktan çalışanlar arasında destekleyici bir örgütsel kültür ile iş performansı arasındaki ters ilişki olarak tespit edilmiştir. Örgütsel bağlılık ise tüm çalışanlar arasında örgüt performansını olumlu etkilemiş, iş memnuniyetini ve performansı artırmada rol oynamıştır. Bu araştırma, uzaktan ve ofiste çalışanlar bağlamında, örgütsel kültür ile çalışan performansı arasındaki karmaşık ilişkinin anlaşılmasına katkı sağlamaktadır. Bulgular, çalışanların büyük ölçüde maddi olmayan faktörlerle motivasyonlarının arttığını ve ofis çalışanlarının etkili iletişim ve takım çalışması üzerine vurgu yaparken, uzaktan çalışanların ise etkili planlama ve görev yürütme üzerinde daha fazla odaklandığını göstermektedir. Çalışma, bankacılık sektörüne odaklanmasının ve örneklem büyüklüğünün sınırlılıkları dikkate alındığında, gelecekte daha çeşitli bağlamlarda bu karmaşık ilişkileri araştırmak için yön gösterici olmaktadır.

Anahtar Kelimeler: Örgüt Kültürü, Motivasyon, İş Tatmini, İş Performansı, Uzaktan Çalışma

Introduction

The prevalence of remote work has surged in recent years (Barsness et al., 2005). Since the early months of 2020, the COVID-19 pandemic has caused economic and societal disruptions on a global scale. This unforeseen situation has led to a sudden and significant transformation of traditional modes of daily business operations. Millions of employees worldwide have been compelled to carry out their full-time jobs from their homes. Consequently, the term 'remote work' has gained momentum globally under these particular circumstances (Wickramasinghe and Nakandala, 2022). Since it is newly emerged in many organizations, many human resources managers started to go into organizational factors which effects remote workers' performances (Wickramasinghe and Nakandala, 2022). The assessment of organizational performance assumes a position of utmost significance, representing the cornerstone for the evaluation of an organization's achievements and overall success (Stannack, 1996). This multifaceted assessment entails the measurement of various facets including effectiveness, competence, appropriateness, and growth, all of which are universally acknowledged as pivotal determinants of organizational prosperity.

It is a complex undertaking, requiring a holistic examination of the intrinsic components that contribute to commendable job performance (Vroom, 1964). In this vein, motivation emerges as the central impetus propelling individuals toward the attainment of superior outcomes, while capacity, an encompassing amalgamation of knowledge and proficiency, collaborates in synergy with motivation to augment overall performance (Vroom, 1964). Moreover, the efficacious communication of management-set objectives plays an indispensable role in nurturing improved job performance, offering lucidity of purpose and direction within the organizational landscape (Stannack, 1996). Expanding upon this foundational perspective, an additional theoretical framework, advanced by Motowidlo and Van Scotter (1994), posits a comprehensive evaluation of performance through the delineation of two distinct dimensions: task performance and

contextual performance. Task performance entails the mastery of the technical facets of a job role and the execution thereof, while contextual performance pertains to the interpersonal dynamics characterizing task execution, rendering it a pivotal influencer in the configuration of organizational behavior (Chen, 2004). This multifaceted terrain is further enriched by the perpetual evolution of workplace flexibility and the advent of remote work arrangements. It is imperative to scrutinize the manner in which the intricacies of job tasks intersect with stress levels and to discern the impacts of the duration of remote work, the effective management of work-life equilibrium, and the presence of leadership support on stress levels (Olsen, Hildrum, Kummen, and Leirdal, 2023). In this regard, the aggregation of temporal elements underscores the pivotal role played by substantial support from both leaders and colleagues, a dynamic correlating positively with heightened job engagement. These revelations accentuate the vital necessity not only to regard workplace flexibility as a facilitative modality but also to accentuate the contributory factors that fortify resilience (Bareket-Bojmel, Chernyak-Hai, and Margalit, 2023).

It is conspicuously evident that the perpetuation of employee engagement can no longer be unconditionally tethered to their exclusive physical presence within the organizational confines. The advent of remote work arrangements necessitates an adaptative recalibration of leadership styles attuned to the distinctive profiles and requisites of remote workers (Pianese, Errichiello, and da Cunha, 2023).

The advocacy for remote work within organizational frameworks mandates a nuanced consideration of demographic attributes, behavioral proclivities, and distinctive facets germane to remote work configurations (Sahut and Lissillour, 2023). Among these attributes, in this study the primary objective is set as to examine and compare the perceptions of remote and workplace employees regarding organizational culture, motivation, job satisfaction, commitment, and job performance. Followings are the research questions for this study:

- ⇒ How does organizational culture in Turkish banks impact employee

motivation, job satisfaction, and job performance, and are there significant differences in these impacts between remote and workplace employees?

- ⇒ What non-monetary factors primarily motivate employees within Turkish banks, and how do these motivational factors differ between remote and workplace employees?
- ⇒ What are the key dimensions of job performance for workplace and remote employees in Turkish banks, and how do their priorities vary, particularly with regard to effective planning and task execution?
- ⇒ To what extent does the organizational culture, including bureaucratic and supportive aspects, influence job performance within the Turkish banking industry, and how does this influence differ between workplace and remote employees?
- ⇒ Does organizational commitment have a stronger impact on job performance for remote employees compared to their workplace counterparts in Turkish banks, and what is the moderating role of working style in this relationship?
- ⇒ How do hierarchical and compartmentalized structures within Turkish banks impact employee behavior, including their inclination to adhere to orders versus exercising initiative and leveraging their creative capacities?

In summary, this study investigates the complex interplay between organizational culture, motivation, job satisfaction, and job performance for remote and workplace workers. Conducted prior to the pandemic, it offers insights into evolving modern work dynamics. Unveiling these factors equips organizations to enhance management, engagement, satisfaction, and organizational performance within the rapidly changing landscape of remote work trends.

Performance

The assessment of organizational performance commonly revolves around the achievements of the workforce, with indicators such as effectiveness, competence, appropriateness, and growth standing as vital markers of success within the organization (Stannack, 1996). This evaluation necessitates consideration of motivation and capacity as essential components of commendable job performance (Vroom, 1964). Motivation serves as the driving force behind job performance, propelling individuals to pursue superior outcomes (Stannack, 1996), while capacity encompasses knowledge and proficiency, working in tandem with motivation to enhance performance (Vroom, 1964). Moreover, effective communication of management-set objectives is crucial for facilitating improved job performance by providing clear context (Stannack, 1996).

An additional theoretical framework by Motowidlo and Van Scotter (1994) suggests that performance evaluation can be comprehensively assessed through task performance and contextual performance. Task performance involves mastery of technical job aspects and their effective execution, while contextual performance pertains to interpersonal dynamics during task execution, playing a pivotal role in shaping organizational behavior (Chen, 2004). Evaluating the suitability and performance of remote work for each employee is the responsibility of management (Ferreira et al., 2021). During the COVID-19 pandemic, it was observed that some managers struggled with remote management due to a lack of perspective, and such difficulties were found to have adverse effects on employee morale and performance (Parker et al., 2020). Additionally, it has been demonstrated that Emotional Intelligence is positively associated with fundamental project success factors and project performance (Sang et al., 2018; Sampaio et al., 2022). Organizations should assess employee performance not solely based on hours spent completing tasks but with a focus on meeting specified job objectives. To ensure a positive experience during the transition to fully remote or hybrid work models, it is essential to recognize that Human Resource Development interventions will need to take the

form of a transformation from the current human resource business model (Pillai and Prasad, 2023).

Workplace Flexibility and Remote Work

This section delves into the intricate relationship between work flexibility and remote arrangements. Specifically, it examines how the complexity of work tasks correlates with stress levels, revealing a noteworthy positive association. Moreover, it investigates the impact of the duration of remote work, effective work-life balance management, and leadership support on stress, revealing consequential negative linkages (Olsen, Hildrum, Kummen and Leirdal, 2023). Additionally, the accumulation of time demonstrates that robust support from both leaders and colleagues, combined with adept work-life balance management, positively correlates with heightened job engagement. This underscores the vital need to not only address workplace flexibility as a facilitative element but also to accentuate factors contributing to resilience. Exploring supplementary methods to foster emotional connections between employees and the organization, particularly in the absence of physical presence, emerges as a compelling imperative. Furthermore, pivotal findings from empirical investigations underscore a paradigm shift: the sustenance of employee engagement cannot be categorically tethered to their exclusive on-site presence within the organization (Bareket-Bojmel, Chernyak-Hai and Margalit, 2023). Simultaneously, managers shoulder the responsibility of recalibrating their leadership styles, attuned to the distinct personalities of remote workers (Pianese, Errichiello, and da Cunha, 2023). Advocating for remote work within organizations mandates a nuanced consideration of demographic attributes, behavioral propensities, and distinctive facets associated with remote arrangements. Notably, the pursuit of effective persuasion necessitates meticulously tailored strategies, encompassing variables such as gender, age, willingness, past experiences, commuting distances, job roles, and personal values (Sahut and Lissillour, 2023). While an all-encompassing return to traditional office paradigms remains an improbable trajectory

(Smite, Moe, Hildrum, Gonzalez-Huerta and Mendez, 2023), it is prudent to acknowledge the malleability of current practices and corporate policies. In the context of a transformative phase, organizations stand poised to refine their approaches, capitalizing on hybrid work experiences to shape a more resilient and engaging work environment.

Motivation

The essence of human behavior is driven by an internal mechanism, from which the concept of motivation originates. The term "motivation" stems from the Latin word "movere," meaning "to move." When applied to human context, motivation signifies the transition from apathy to engagement, fueling the pursuit of goals. This cognitive stimulus propels individuals to exert focused effort towards predefined objectives (Mitchell, 1982). Motivation stands as one of the paramount factors in elevating employee productivity, enhancing organizational contributions, and improving the overall quality of work life within an institution. It holds immense significance in the corporate domain, where heightened motivation significantly augments the institution's contributions by driving an increase in personnel productivity (Ameed et al., 2023). Greenberg and Baron (1997) propose three stages of motivation: stimulation, orientation, and its perpetuation until goals are reached. Bartol and Martin (1998) define motivation as a driving force that enhances behavior by inspiring individuals to persevere for their objectives. Motivation empowers individuals to clarify goals, identify paths, and cultivate persistence for desired outcomes. It is integral for management as leaders must competently motivate subordinates (Islam and Ismail, 2008). Motivation theories classify into needs theory, cognitive theory, and reinforcement theory (Bartol and Martin, 1998). Abraham Maslow's hierarchy of needs (1970) is widely accepted. Needs span five levels, from physiological to self-actualization (Beardwell et al., 2004). Esteem and self-actualization also motivate job satisfaction (Armstrong, 2003). Alderfer's ERG theory (1972) condenses Maslow's levels into existence, relatedness, and growth (Armstrong,

2003). Herzberg et al. (1959) introduce motivators and hygiene factors. Vroom's expectancy theory (1964) asserts that stronger belief in a positive outcome leads to desired behavior (Robbins, 1993). Equity theory emphasizes task rewards as motivation foundation, with comparisons to peers (Carrell and Dittrich, 1978). The goal-setting theory provides effective motivation through relevant, challenging goals (Mullins, 2005). Reinforcement theory by Skinner (1945 cited in Islam and Ismail, 2008) links behavior to environmental outcomes. Positive consequences encourage repetition, negative ones deter (Islam and Ismail, 2008). Recent studies highlight the relevance of early motivation theories (Kotler, 1999; Wheatley, 1999; Kouzes and Posner, 1995). Herzberg's theory is pertinent to organizational investigations (employee turnover) (Herzberg et al., 1959).

Motivation's role in job performance varies, influenced by multiple factors (Weiner, 1986). External influences and evolving motivation levels add complexity to performance assessment. Attribution theory suggests evaluating skills, abilities, effort, and extrinsic factors (Weiner, 1986). However, it is indicated that motivation generally has a positive effect on job performance (Kuswati, 2020). In this sense, the first hypothesis of this study is set as: motivation has a positive effect on job performance (H1).

Organizational Culture

Organizational culture encompasses the collective values, beliefs, and behaviors that prevail within an organization, shaping the assimilated norms of employees upon their entry into the establishment (Lawson and Ventriss, 1992). This culture has the capacity to shape the value systems, beliefs, and behaviors of individuals and establish a standard for goal expectations within the organization (Ababaneh, 2010). Furthermore, the shared values and beliefs within an organization can also influence the services provided, thereby impacting quality improvement efforts (Hann et al., 2007).

The significance of organizational culture lies in its crucial role in achieving targets and fostering a suitable level of quality within the organization. This pursuit of quality improvement takes into account various factors, such as available

resources, existing culture, management practices, teamwork, and goal attainment (Kunkel et al., 2007). While most organizations possess an overarching culture that applies to and is embraced by the majority of employees (Ababaneh, 2010), it is important to acknowledge the existence of subcultures within the organization. These subcultures serve to highlight common issues and challenges faced by specific groups of individuals within the organizational context. Examples of such subcultures include supportive subcultures, process subcultures, task subcultures, people subcultures, bureaucratic subcultures, innovative subcultures, power subcultures, and role subcultures. Although each subculture plays a significant role to some extent within the organization, the most prominent and wide-ranging subcultures for fulfilling organizational needs are considered to be bureaucratic, supportive, and innovative subcultures (Lai and Lee, 2007). The bureaucratic subculture is characterized by a strict adherence to rules, regulations, and orders within the organization.

Employees are expected to comply with prescribed procedures and have limited autonomy in task execution. The management and communication processes follow predetermined guidelines and hierarchical structures (Ababaneh, 2010). This type of subculture is expected to create a negative effect on job performance (Lai and Lee, 2007). Therefore, the second hypothesis of this study is set as: bureaucratic subculture has a negative effect on job performance (H2).

Conversely, the innovative subculture encourages employees to embrace their entrepreneurial spirit. Individuals are empowered to generate new ideas, and their innovative abilities are nurtured. The organization promotes a culture of risk-taking, where employees are unafraid of potential failures. This subculture diminishes the significance of hierarchical structures and promotes lateral communication, facilitating the formation of cross-functional teams and enabling the generation of novel and creative plans, ultimately enhancing performance (Ababaneh, 2010). This type of subculture is expected to create a positive effect on job performance (Lai and Lee, 2007). Therefore, the

third hypothesis of this study is set as: innovative subculture has a positive effect on job performance (H3).

The supportive culture places a strong emphasis on human relationships and promotes collaboration among teams within the organization. This subculture encourages the development of trust and a sense of partnership among employees. Through mutual support, individuals work together to achieve organizational goals (Ababaneh, 2010). This type of subculture is expected to create a positive effect on job performance (Lai and Lee, 2007). Therefore, the fourth hypothesis of this study is set as: supportive subculture has a positive effect on job performance (H4).

While Wallach (1983) initially classified these three subcultures as independent entities, it has been observed that organizations benefit from striking a balance among all three subcultures to achieve optimal results (Kanungo et al., 2001). Social connections form a crucial part of a positive organizational culture, fostering trust, collaboration, and a supportive atmosphere. Engaged employees who have strong social ties tend to produce higher-quality work and exhibit lower absenteeism (Hickman and Robison, 2020). As organizations continue to hire new employees, many of these recruitments occur in a virtual setting, potentially impacting the process of onboarding and understanding the organizational culture for new hires.

Notably, some employees have had to cope with the emotional stress of COVID-19 spread within their families, which can affect their mental well-being. In this context, human resource managers may encounter new challenges in managing employees' emotional equilibrium (Ayedee et al., 2021).

Organizational Commitment

In scholarly literature, the concept of "organizational commitment" has been examined and defined in various ways. Smith, Gregory, and Cannon (1996) conceptualize organizational commitment as the degree of an individual's psychological attachment and involvement with an organization. On the other hand, Armstrong

(2007) presents organizational commitment as the sense of belongingness an individual feels towards the organization, driven by the alignment of personal goals with the organization's objectives, and the motivation to exert effort in support of the organization.

Building upon Armstrong's (2007) perspective, three key dimensions can be discerned in the concept of organizational commitment: the recognition and alignment of organizational objectives, values, and goals; the motivation to invest effort for the betterment of the organization; and the desire to maintain a continued affiliation with the organization. Organizations have a significant reason to be concerned about the level of commitment their employees feel, as there is a substantial benefit to having engaged and participative employees (Schalow, 2020). An employee experiencing disengagement is an individual who has momentarily distanced themselves from their work responsibilities due to an inability to effectively manage the excessive demands imposed by their professional duties (Afrahi et al., 2022). This underscores the pivotal role of fostering commitment among employees, as it can lead to increased productivity and a more positive work environment, both of which are important for an organization's performance (Afrahi et al., 2022). Therefore, the fifth hypothesis for this study is set as: organizational commitment has a positive effect on job performance (H5).

Job Satisfaction

According to Crossman and Abou-Zaki (2003), the establishment of job satisfaction is crucial for fostering a healthy organizational environment, as it is the responsibility of human resources to deliver effective services to consumers. Achieving better job satisfaction propels employees to provide quality service.

However, it is essential to recognize the impact of other factors on organizational efficiency, including infrastructures and internal relationships. The definition of job satisfaction presented here aligns with Spector's (1997) observation, which posits that it is a positive emotional state derived by a worker through the gratification of providing effective services to

consumers and, consequently, experiencing increased job satisfaction.

Hoy and Miskel (1996) assert that job satisfaction is influenced by situational theories, which postulate the interrelationships among various factors such as task characteristics, organizational characteristics, and individual characteristics. They further mention that employees analyze situational characteristics before commencing work, while situational occurrences are evaluated during the course of work. The combination of situational characteristics and situational occurrences contributes to overall satisfaction, as mentioned by Quarstein et al. (1992). Crossman and Abou-Zaki (2003) highlight that factors proposed by situational characteristics, such as work, salary, promotion, supervision, and co-workers, are key determinants of job satisfaction. Additionally, other factors like employee involvement and organizational commitment also play a significant role in the job satisfaction process which all ultimately increases the job performance of the employees. Therefore, the sixth hypothesis for this study is that job satisfaction has a positive effect on the job performance (H6).

Oshagbemi (2000) notes the existence of extensive literature on job satisfaction, emphasizing the effectiveness of demographic characteristics such as age, gender, tenure, and education. Although various studies reveal a relationship between demographic characteristics and job satisfaction, the findings are mixed, identifying both positive and negative associations among the same variables. Therefore, there remains ample scope for further research to explore the relationship between job satisfaction and performance. It cannot be assumed that greater job satisfaction leads to high performance or that high performers are necessarily satisfied with their jobs (Euske et al., 1980). While some studies, like Spector (1997), imply a probable relationship between satisfaction and performance, others indicate a significant gap in the associations (Iaffaldano and Muchinsky, 1985). Empathy is a crucial element contributing to successful workplace communication and job satisfaction. Particularly in the context of remote work where communication happens digitally, it is

essential to pay specific attention to empathy and understand that empathic communication doesn't occur automatically (Smith, 2021).

Moreover, research has indicated that remote workers tend to have more positive outcomes in terms of job satisfaction. In this context, the degree to which employees establish connections within a workplace community and feel a sense of shared identity plays an effective role in their positive work experience and personal well-being (Bilotta et al., 2021). This underscores the significance of nurturing empathy in the workplace to enhance job satisfaction and overall work experiences, especially in remote work settings.

Relationship between Organizational Culture, Motivation, Job Satisfaction and Job Performance

Organizational culture is a critical concept that influences various outcome-oriented behaviors of individuals, such as motivation, fulfillment, and commitment. It is considered the foundation from which different human resource management factors emerge (Harris and Mossholder, 1996). The relevance of organizational culture and personal characteristics plays a significant role in job outcomes, including factors like employee retention, job satisfaction, and individual job performance (Wallach, 1983).

The relationship between job performance and organizational commitment is another area of research. Studies by Price and Mueller (1981) and Vandenberg and Lance (1992) suggest that organizational commitment can be generally regarded as a contributing factor to job satisfaction. According to Reed et al. (1994), the nature of work, promotion and compensation policies, relationships with colleagues and supervisors are crucial factors that contribute to workers' job satisfaction and organizational commitment. Chen (2004) found a negative correlation between job performance and the cost associated with leaving the organization and organizational commitment.

The relationship between the work environment and job satisfaction and organizational commitment has also been examined by Odom et al. (1990). They explain that the bureaucratic nature of the work environment

does not have a significant impact on an individual's job satisfaction and commitment. However, the removal of bureaucratic barriers can have a positive influence on enhancing fulfillment and commitment, particularly when it is carried out to foster innovation and support. This is because innovation and support are two significant factors that enhance employee behavior, worker satisfaction, and organizational commitment.

Methodology

The primary objective of this study is to examine and compare the perceptions of remote and workplace employees regarding organizational culture, motivation, job satisfaction, commitment, and job performance. To achieve this, a positivist, quantitative, and deductive approach was adopted. The study drew upon existing literature to derive factors related to job performance, motivation, organizational culture, job satisfaction, and organizational commitment. Both secondary and primary data were utilized in this study. In addition to a comprehensive review of existing literature and the methodology, a questionnaire was employed to capture the perceptions of both remote and workplace employees. The questionnaire served as a primary data collection tool to address the research questions. The questionnaire consisted of six sections, comprising a total of 54 questions/statements. Part 1 of the questionnaire aimed to assess organizational culture, utilizing Wallach's (1983) organizational culture index. This index categorized cultural settings into three types: innovative, bureaucratic, and supportive culture. The participants rated their agreement with each statement using a five-point Likert scale ranging from 1 to 5.

A score of 1 indicated that the statement did not describe the participant, while a score of 5 indicated that the statement described the participant most of the time. Specifically, items 1, 6, 7, 11, 13, 18, 19, and 23 pertained to innovative culture, items 3, 4, 10, 12, 14, 20, 21, and 24 addressed bureaucratic culture, and items 2, 5, 8, 9, 15, 16, 17, and 22 explored supportive culture.

Part 2 of the questionnaire aimed to assess the level of job satisfaction among remote and

workplace employees. For this purpose, a five-facet satisfaction scale developed by Judge et al. (2000) was employed. The scale utilized a five-point rating system, where a score of 1 indicated strong disagreement with the given statement, and a score of 5 indicated strong agreement.

Part 3 of the questionnaire aimed to measure the level of motivation among participating employees in the banking industry of Turkey. To assess motivation, eight motivating factors identified by Islam and Ismail (2008) were incorporated. Participants rated their agreement with each statement using a five-point Likert scale, with a score of 1 indicating strong disagreement and a score of 5 indicating strong agreement.

Part 4 of the questionnaire aimed to assess the organizational commitment of both remote and workplace employees. To measure this construct, a modified version of Cook and Wall's (1980) organizational commitment questionnaire, as adapted by Shaw et al. (2003), was employed. This section comprised four items, and participants rated their level of agreement using a five-point Likert scale, ranging from strongly agree to strongly disagree.

Part 5 of the questionnaire aimed to determine the job performance of the participating employees based on seven statements, drawing from Shore and Martin's (1989) four-dimensional job performance measures: dependability, planning, know-how and judgment, and cooperation. Job performance was assessed using a five-point Likert scale, ranging from strongly agree to strongly disagree.

Part 6 of the questionnaire focused on gathering demographic information about the participating employees, including gender, education level, age, working style, and tenure.

In this study, a purposive sampling technique was employed to align with the research objective, which exclusively examined the performance of employees in the banking industry of Turkey in 2019. The researcher-initiated contact with the HR managers of banks operating in Istanbul, Turkey, by introducing herself and explaining the research purpose, accompanied by a sample questionnaire.

For the distribution of the employee survey, a snowball sampling procedure was followed. The author initially provided the questionnaires to the

HR managers of selected banks, who subsequently distributed them to the employees. Completed questionnaires were collected by the author in the week following their delivery to the HR managers. A total of 101 questionnaires were collected for analysis. The researcher utilized SPSS software Version 16 to conduct statistical analyses on the collected data.

Descriptive statistics, including mean, median, and standard deviation, were employed to analyze the responses to items measuring organizational culture, motivation, organizational commitment, job satisfaction, and job performance. These statistics were used to determine average scores and assess the reliability and dispersion of the data.

To identify any statistically significant differences between remote and workplace employees in the aforementioned factors, t-tests were conducted using the obtained scores. Additionally, regression analyses were performed using the average scores to examine the extent to which organizational culture, motivation, job satisfaction, organizational commitment, and working style could predict the job performance of employees in the banking industry of Turkey.

Data Analysis

Profile of the Survey Participants

This section provides a concise overview of the salient characteristics of the employees who participated in the survey. The resulting findings are outlined as follows:

Table 1. Profile of the Survey Participants

Characteristics		%
Gender	Male	44
	Female	56
Education Level	Not answered	4
	College/ High school	29
	Bachelor degree or equivalent	45
	Post graduate degree	22
Age	21-35	62
	36-50	35
	51+	3
Working Style	Remote Employee	45
	Workplace Employee	55
Tenure	Not answered	1
	0-5 years	60
	6-10 years	31

More than 10 years 8

As depicted in the aforementioned table, the predominant portion of the participants in the survey consisted of female employees, comprising 56% of the total sample, while male employees accounted for 44%. Furthermore, a significant proportion of the respondents possessed higher education qualifications, specifically holding a bachelor's degree or an equivalent level of education. In terms of age distribution, the majority of the participants were relatively young, falling within the age range of 21 to 35 years. The findings reveal that among the surveyed employees, 55% were classified as workplace employees, while the remaining portion constituted remote employees. Additionally, the data suggests that the sample predominantly comprised employees with no more than five years of work experience in the surveyed banks. Employees with a tenure of six to ten years represented 31% of the sample, whereas the most seasoned employees, with more than eight years of experience, accounted for only 8% of the sample.

Reliability and Factor Analysis

Table 2. KMO and Barlett Test of Organizational Culture

Kaiser-Meyer-Olkin (KMO)		,842
Bartlett Test	Approx. Chi-Square	3045,246
	df	134
	Sig.	,000

As a result of the KMO and Barlett test analysis, the KMO test result of organizational culture scale is 0.842 and Bartlett test result is statistically significant ($p=0.00$; $p<0.05$). According to these results, there is a high level of correlation between the variables in the scale and the data set is suitable for factor analysis.

Table 3. Factor Analysis of Organizational Culture

	Component			Cronbach Alpha (α)
	1	2	3	
1. Risk taking	,801			
6. Results-oriented	,804			
7. Creative	,815			
11. Pressurised	,736			,822
13. Stimulating	,718			
18. Challenging	,782			
19. Enterprising	,725			
23. Driving	,792			
3. Hierarchical		,902		,913

4. Procedural	,804	
10. Structured	,823	
12. Ordered	,806	
14. Regulated	,909	
20. Established, solid	,808	
21. Cautious	,832	
24. Power-oriented	,829	
2. Collaborative		,708
5. Relationship-oriented		,796
8. Encouraging		,787
9. Sociable		,704
15. Personal freedom		,706
16. Equitable		,690
17. Safe		,758
22. Trusting		,789
Total scale		,870

As can be seen from the factor analysis table above, there are 3 sub-dimensions of the organizational culture scale. According to the Cronbach Alpha analysis results, the reliability coefficient of the total scale is 0.870 and the reliability coefficients of the sub-dimensions of the scale also vary between 0.801 and 0.913. These values mean that the total scale and the sub-dimensions have high reliability.

Table 4. KMO and Barlett Test of Job Satisfaction

Kaiser-Meyer-Olkin (KMO)		,870
Bartlett Test	Approx. Chi-Square	4629,025
	df	136
	Sig.	,000

As a result of the KMO and Barlett test analysis, the KMO test result of job satisfaction scale is 0.870 and Bartlett test result is statistically significant ($p=0.00$; $p<0.05$). According to these results, there is a high level of correlation between the variables in the scale and the data set is suitable for factor analysis.

Table 5. Factor Analysis of Job Satisfaction

	Component 1	Cronbach Alpha (α)
I feel fairly satisfied with my present job	,940	
Most days I am enthusiastic about my work	,923	
Each day of work seems like it will never end	,937	,912
I find real enjoyment in my work	,896	
I consider my job rather unpleasant	,894	

As can be seen from the factor analysis table above, there are 1 sub-dimensions of the job satisfaction scale. According to the Cronbach Alpha analysis results, the reliability coefficient of the total scale is

0.912, this means that the job satisfaction scale has high reliability.

Table 6. KMO and Barlett Test of Motivation

Kaiser-Meyer-Olkin (KMO)		,845
Bartlett Test	Approx. Chi-Square	3429,356
	df	212
	Sig.	,000

As a result of the KMO and Barlett test analysis, the KMO test result of motivation scale is 0.845 and Bartlett test result is statistically significant ($p=0.00$; $p<0.05$). According to these results, there is a high level of correlation between the variables in the scale and the data set is suitable for factor analysis.

Table 7. Factor Analysis of Motivation

	Component 1	Cronbach Alpha (α)
My superiors fully appreciate of the work I done	,840	
I find my job interesting	,833	
The work conditions in the bank is good	,830	
The wages are good	,896	
Management helps to solve my personal problems	,894	,870
Rules, regulations, procedures and policies of the bank are sensible to personal differences of employees	,832	
The bank provides opportunities to grow through learning new things	,722	
I have job security in this bank	,892	

As can be seen from the factor analysis table above, there are 1 sub-dimensions of the motivation scale. According to the Cronbach Alpha analysis results, the reliability coefficient of the total scale is 0.870, this means that the motivation scale has high reliability.

Table 8. KMO and Barlett Test of Organizational Commitment

Kaiser-Meyer-Olkin (KMO)		,802
Bartlett Test	Approx. Chi-Square	3355,206
	df	130
	Sig.	,000

As a result of the KMO and Barlett test analysis, the KMO test result of organizational commitment scale is 0.802 and Bartlett test result is statistically significant ($p=0.00$; $p<0.05$). According to these results, there is a high level of correlation between the variables in the scale and the data set is suitable for factor analysis.

Table 9. Factor Analysis of Organizational Commitment

	Component Cronbach	
	1	Alpha (α)
I am quite proud to tell people who I work for	,789	
I feel like I'm part of this organization	,823	
I have no intention to leave this organization	,802	,802
I prefer to continue to work in this organization in the future	,792	

As can be seen from the factor analysis table above, there are 1 sub-dimensions of the organizational commitment scale. According to the Cronbach Alpha analysis results, the reliability coefficient of the total scale is 0.802, this means that the organizational commitment scale has high reliability.

Table 10. KMO and Barlett Test of Job Performance

Kaiser-Meyer-Olkin (KMO)		,856
Bartlett Test	Approx. Chi-Square	4635,324
	df	203
	Sig.	,000

As a result of the KMO and Barlett test analysis, the KMO test result of job performance scale is 0.856 and Bartlett test result is statistically significant ($p=0.00$; $p<0.05$). According to these results, there is a high level of correlation between the variables in the scale and the data set is suitable for factor analysis.

Table 11. Factor Analysis of Job Performance

	Component				Cronbach Alpha (α)
	1	2	3	4	
I maintain high standards of work and perform all needed work					,938
I can be counted on to perform assigned jobs without being watched					,896
I believe I make good use of time and resources to get the job done	,951				,901
I usually select the most important job to do first	,909				
I believe I have the necessary know-how and do the job correctly			,890		,830
I exchange information with colleagues to facilitate individual and group performance				,789	,878

I actively seek interactions with other beyond requirements to solve problems and facilitate performance					,757
Total scale					,890

As can be seen from the factor analysis table above, there are 4 sub-dimensions of the job performance scale. According to the Cronbach Alpha analysis results, the reliability coefficient of the total scale is 0.890 and the reliability coefficients of the sub-dimensions of the scale also vary between 0.830 and 0.938. These values mean that the total scale and the sub-dimensions have high reliability.

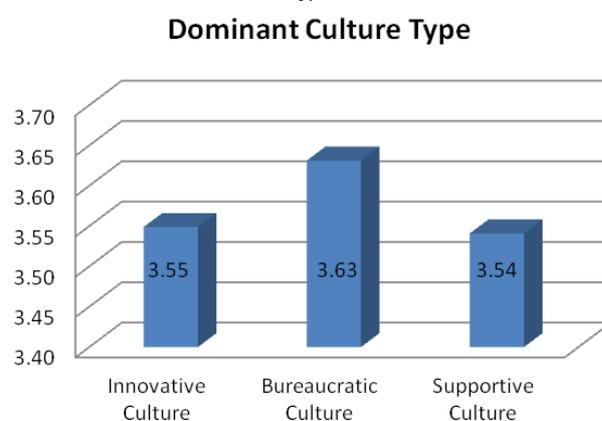
Descriptive Statistics

This section entails the exposition of the outcomes derived from the analysis of organizational culture, job satisfaction, motivation, organizational commitment, and job performance using descriptive statistical measures such as mean, median, and standard deviation.

Results of Organizational Culture

The objective of this section was to ascertain the prevailing organizational culture perceived by both remote and workplace employees within the sampled banks. The subsequent chart illustrates the mean scores of the three distinct organizational cultures, namely innovative, bureaucratic, and supportive, as outlined by Wallach (1983).

Bar Chart 1. Dominant Culture Type

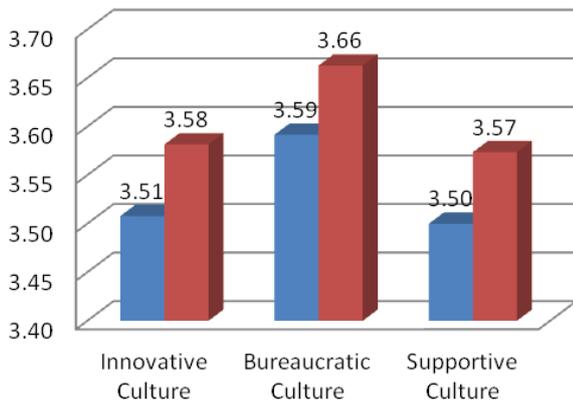


Based on the aforementioned chart, the average score for the innovative culture in the sampled

banks is 3.55, the bureaucratic culture has an average score of 3.63, and the supportive culture has an average score of 3.54. Notably, the highest average score was obtained for the bureaucratic culture, suggesting its prominence as the dominant organizational culture within the banks operating in Turkey.

Having established the dominant culture, it is crucial to compare the perceptions of remote and workplace employees regarding the various types of organizational culture prevalent in the selected institutions. The subsequent chart illustrates the comparative analysis of remote and workplace employees' perspectives concerning the dominant culture within these organizations.

Bar Chart 2. Contrasting Remote and Workplace Employees' Perceptions



Upon careful examination of the chart depicted above, it becomes apparent that workplace employees hold divergent perceptions compared to their remote counterparts. Notably, the scores provided by the workplace employees, represented by the red columns, surpass the average scores of the remote employees. This disparity indicates that, from the perspective of workplace employees, the organizational culture within the banks exhibits a greater degree of bureaucracy (mean workplace = 3.66) compared to remote employees (mean remote = 3.59). However, it is noteworthy that workplace employees also perceive the organizational culture as being innovative (mean workplace = 3.58) and supportive (mean workplace = 3.57) in nature, as opposed to remote employees who rated these dimensions slightly lower (mean remote = 3.51 for

innovation and mean remote = 3.50 for supportiveness).

Results of Job Satisfaction

In this section, the findings pertaining to the various facets of job satisfaction are elucidated. Participating employees were presented with five statements and requested to rate their agreement with each statement, enabling an assessment of their respective levels of job satisfaction. The tabulated outcomes are presented below:

Table 12. Job Satisfaction

Statistics	N		Mean	Std. Deviation	Minimum	Maximum
	Valid	Missing				
I feel fairly satisfied with my present job	101	0	3.51	1.026	1	5
Most days I am enthusiastic about my work	101	0	3.50	1.016	1	5
Each day of work seems like it will never end	101	0	2.97	1.237	1	5
I find real enjoyment in my work	101	0	3.36	.934	1	5
I consider my job rather unpleasant	101	0	2.60	1.096	1	5

Upon observing the table provided above, it becomes evident that the facet denoting satisfaction with the present job received the highest mean score (M = 3.51, SD = 1.026) compared to the other four facets of job satisfaction.

The findings further suggest that, overall, the surveyed employees demonstrate a notable level of enthusiasm towards their current occupation (M = 3.50, SD = 1.016). Additionally, the outcomes

imply that the participating employees generally perceive their job as pleasant ($M = 2.60$, $SD = 1.096$). Conversely, the employees displayed a certain level of uncertainty regarding their enjoyment of work ($M = 3.36$, $SD = 0.934$); nevertheless, they concurred that their work leans towards being somewhat monotonous ($M = 2.97$, $SD = 1.237$).

Results of Motivation

This section entails the presentation of findings pertaining to the various dimensions of employee motivation. The survey participants were provided with a set of eight statements and were requested to express their level of agreement or disagreement using a five-point Likert scale. The subsequent table presents a concise summary of the obtained results:

Table 13. Motivation

Statistics	N		Mean	Median	Std. Deviation	Minimum	Maximum
	Valid	Missing					
My superiors fully appreciate of the work I done	101	0	3.54	4.00	1.162	1	5
I find my job interesting	101	0	3.57	4.00	1.052	1	5
The work conditions in the bank is good	101	0	3.64	4.00	.976	1	5
The wages are good	101	0	3.25	3.00	1.135	1	5
Management helps to solve my personal problems	101	0	3.02	3.00	1.200	0	5
Rules, regulations, procedures and policies of the bank are sensible to personal differences of employees	101	0	3.24	3.00	1.050	1	5
The bank provides opportunities to grow through learning new things	101	0	3.41	4.00	1.051	1	5
I have job security in this bank	101	0	3.48	4.00	1.054	1	5

In light of the tabulated outcomes presented above, it is evident that the most influential motivating

factor for the participating employees is the prevailing working conditions within the banking institution (mean = 3.64, standard deviation = 0.976). Following closely behind is the perceived level of job interestingness (mean = 3.57, standard deviation = 1.052), which holds substantial significance as a motivating force. Additionally, the employees expressed that recognition and appreciation from their supervisors for their work performance (mean = 3.54, standard deviation = 1.162) significantly contributes to their motivation levels.

It is noteworthy to mention that the responses obtained from the surveyed employees exhibit a positively skewed distribution. However, when considering the standard deviation statistics, the dispersion of the responses can be deemed acceptable. Conversely, the facets of job security (mean = 3.48, standard deviation = 1.054) and learning opportunities (mean = 3.41, standard deviation = 1.051) displayed a negatively skewed distribution, indicating a higher concentration of responses towards lower score points, as evidenced by their higher median statistics (median = 4 for both facets).

Furthermore, it is important to highlight that the dimensions of wages (mean = 3.02, standard deviation = 1.135), sensibleness to personal differences (mean = 3.24, standard deviation = 1.050), and management's efforts in resolving personal problems (mean = 3.02, standard deviation = 1.200) yielded relatively lower mean scores from the respondents. This suggests that these aspects have comparatively lower influence on employee motivation within the sampled context.

Results of Organizational Commitment

This section unveils the outcomes pertaining to the facets of organizational commitment. The participating employees were presented with four statements, and they were requested to assess and rate these statements on a five-point Likert scale. The aim was to gauge the degree of commitment exhibited by the employees towards the banks they are employed in. The tabulated results are provided below:

Table 14. Organizational Commitment

Statistics	N		Mean	Standard Deviation	Minimum	Maximum
	Valid	Missing				
I am quite proud to tell people who I work for	101	0	3.83	0.970	1	5
I feel like I'm part of this organization	101	0	3.69	0.977	1	5
I have no intention to leave this organization	101	0	3.52	1.064	1	5
I prefer to continue to work in this organization in the future	101	0	3.57	1.043	1	5

The data presented in the table illustrates the level of organizational commitment exhibited by the participating employees in relation to the banks they are employed by. The findings indicate that the surveyed employees displayed a moderate degree of commitment.

According to the results, the employees expressed a sense of pride in identifying themselves with their respective banks, as evidenced by a mean score of 3.83 (SD=0.970). Furthermore, the employees reported a strong sense of affiliation and inclusion within their organizations, as reflected by a mean score of 3.69 (SD=0.977). Moreover, the employees demonstrated a propensity to maintain their employment with their current banks, as indicated by a mean score of 3.57 (SD=1.043). Additionally, the findings revealed that the employees exhibited a notable lack of intention to pursue alternative job opportunities, as reflected by a mean score of 3.52 (SD=1.064).

These results suggest that the participating employees displayed a moderate level of commitment to the banks they work for. They expressed pride in their organizational affiliation,

indicating a strong identification with their respective banks. The employees' inclination to continue their tenure further signifies their dedication and attachment to their current organizations. Moreover, the findings indicate that the employees exhibited a low likelihood of job turnover, denoting a stable and committed workforce within the organizational context.

Results of Job Performance

This section pertains to the assessment of job performance among the employees included in the survey. To evaluate job performance, the present study employed the four-dimension job performance measures proposed by Shore and Martin (1989), which encompass the dimensions of dependability, planning, know-how and judgement, and co-operation. These dimensions were assessed based on seven statements provided to the participants. The average scores for each dimension of job performance are presented below:

- ⇒ Dependability: The average score for dependability, reflecting the employees' reliability and consistency in fulfilling their job responsibilities, was 3,92.
- ⇒ Planning: The average score for planning, which signifies the employees' ability to effectively strategize and organize their work tasks, was 3,99.
- ⇒ Know-how and judgement: The average score for know-how and judgement, indicating the employees' level of expertise and sound decision-making abilities in their work domain, was 4,04.
- ⇒ Co-operation: The average score for co-operation, reflecting the employees' willingness and ability to collaborate and work effectively with others, was 3,99.

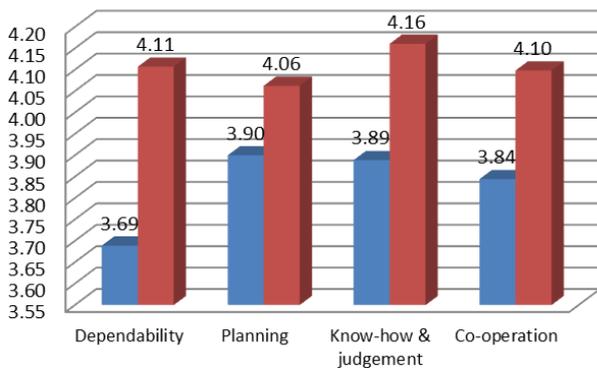
These average scores provide insights into the job performance levels across the identified dimensions. By utilizing the four-dimension job performance measures, this study aims to comprehensively assess the employees' performance in terms of dependability, planning, know-how and judgement, and co-operation.

Bar Chart 3. Job Performance



Based on the presented bar chart, it can be observed that the job performance indicator with the highest level of agreement among the surveyed employees was know-how and judgement, as indicated by the median score of 4.04. Following this, the facets of planning and co-operation received identical scores (m=3.99). The dimension of dependability was also moderately agreed upon by the participants, with a mean score of 3.92. These findings suggest that performing the job correctly was perceived as the most important aspect of job performance by the surveyed employees. Interestingly, effective resource utilization, information exchange with co-workers, and maintaining high work standards were relatively deemed as less important, in that order. To ascertain whether there are any discernible differences in the job performance between remote and workplace employees, their responses pertaining to the different facets of job performance were compared and presented below.

Bar Chart 4. Contrasting Remote and Workplace Employees Job Performance



The presented bar chart comparing the average scores reveals noteworthy findings regarding the job performance of remote and workplace employees. The results indicate that for workplace employees, the facet of know-how and judgement

holds the highest importance in job performance, as reflected by a mean score of 4.16. In contrast, for remote employees, the planning dimension emerges as the most significant aspect of job performance, with a mean score of 3.90. Additionally, while dependability ranks as the second most important factor for workplace employees (m=4.11), it assumes the least importance for remote employees (m=3.69).

However, the results suggest that exchanging information is valued as the third most important factor, with an average score of 4.10 for workplace employees and 3.84 for remote employees. These findings imply that working style may serve as a significant predictor of job performance.

Analysis of Differences between Remote and Workplace Employees

This section aims to examine the distinctions between remote and workplace employees by employing t-test analyses. These analyses evaluate the mean differences and their statistical significance based on the average scores derived from the earlier conducted descriptive analyses. The ensuing results from these analyses are presented in the following table:

Table 15. Comparison of Mean Difference for Remote and Workplace Sample with t-test

	Mean Difference	Std. Error Difference	t value	df	Sig. (2-tailed)
Innovative Culture	-.092	.149	-.615	92.723	.540
Bureaucratic Culture	-.141	.162	-.873	91.652	.385
Supportive Culture	-.078	.149	-.524	98.446	.602
Job Satisfaction	-.010	.145	-.068	98.623	.946
Motivation	-.042	.173	-.245	91.013	.807
Organizational Commitment	-.253	.178	-1.416	99	.160
Job Performance Effect of Working Style on Job Performance	-.223	.177	-1.260	95.690	.211
	2.531	.088	28.826	99	.000

The presented table provides the relevant statistics obtained from the conducted t-test analyses, which aimed to compare and differentiate remote and workplace employees in terms of organizational culture, job satisfaction, motivation, organizational commitment, job performance, and the impact of working style on job performance. As observed in the table, there was only one statistically significant distinction found between remote and workplace employees, specifically regarding the influence of working style on job performance ($t=28.826, p=0.000<0.05$). The results indicated a significant and positive effect of working style on job performance, with remote employees exhibiting a notably higher mean difference (2.531) in comparison to workplace employees. This suggests that the working style positively impacts the job performance of remote employees to a greater extent than that of workplace employees. However, aside from this particular finding, the t-test analyses did not yield any statistically significant differences between remote and workplace employees in relation to organizational culture factors, job satisfaction, motivation, organizational commitment, and job performance.

Analyses of Predictors of and Moderating Effect of Work Status on Job Performance

This section aims to examine the predictive capacity of organizational culture, motivation, job satisfaction, and organizational commitment in determining job performance. Additionally, it explores the moderating effect of working style on the relationship between these variables. Regression analyses were conducted to investigate these relationships, and the results are displayed in the following table:

Table 16. Regression Analysis 1 – Total Employees

Model Summary				
Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.589 ^a	.347	.298	.745

a. Predictors: (Constant), Organizational Commitment, Working Style, Innovative Culture, Job Satisfaction, Motivation, Supportive Culture, Bureaucratic Culture

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.437	7	3.920	7.071	.000 ^a
	Residual	51.553	93	.554		
	Total	78.990	100			

a. Predictors: (Constant), Organizational Commitment, Working Style, Innovative Culture, Job Satisfaction, Motivation, Supportive Culture, Bureaucratic Culture

b. Dependent Variable: Job Performance

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	1.508	.492		3.067	.003
	Working Style	.098	.151	.055	.647	.519
	Innovative Culture	.097	.168	.080	.574	.567
	Bureaucratic Culture	.278	.152	.251	1.834	.070
	Supportive Culture	-.373	.158	-.317	-2.358	.020
	Job Satisfaction	.151	.121	.125	1.249	.215
	Motivation	.081	.118	.078	.690	.492
	Organizational Commitment	.399	.109	.402	3.652	.000

a. Dependent Variable: Job Performance

The provided tables present the results of a regression model in which job performance serves as the dependent variable and is regressed against seven predictors: organizational commitment, working style, innovative culture, job satisfaction, motivation, supportive culture, and bureaucratic culture. The R-squared statistic, displayed in the model summary table, indicates that these seven predictors collectively account for only 34.7% of the variance in job performance. Despite the limited predictive power of these factors, the model demonstrates statistical significance, as evidenced by the significance F statistic (Significance F = 0.00 < 0.05) reported in the ANOVA table.

The coefficients table provides information on the individual effects of the predictors on job performance and the significance of their associations. Based on the obtained results, three

out of the seven factors emerge as significant determinants of job performance. Bureaucratic culture is found to have a positive and statistically significant impact on job performance at a 90% confidence level ($r = 0.278$, $t = 1.834$, $p = 0.070 < 0.10$). Likewise, organizational commitment is identified as the second predictor, exhibiting a positive and statistically significant influence on job performance at a 95% confidence level ($r = 0.399$, $t = 3.652$, $p = 0.00 < 0.05$). Interestingly, a reverse and statistically significant relationship is observed between supportive culture and job performance ($r = -0.373$, $t = -2.358$, $p = 0.020 < 0.05$).

These findings suggest that an increase in the dimensions of bureaucratic culture and employees' organizational commitment leads to higher job performance. However, an increase in the elements of supportive culture is associated with a reduction in employee performance.

To investigate whether employees' work status moderates the relationship between job performance and the predicting factors, two additional regression analyses were conducted separately for remote and workplace samples. The results of these analyses are displayed below:

Table 17. Regression Analysis 2– Remote Employees

Model Summary					
Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	
1	.634 ^a	.401	.307	.723	

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.325	6	2.221	4.246	.002 ^a
	Residual	19.875	38	.523		
	Total	33.200	44			

a. Predictors: (Constant), Organizational Commitment, Innovative Culture, Job Satisfaction, Motivation, Supportive Culture, Bureaucratic Culture

b. Dependent Variable: Job Performance

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	2.070	.661		3.132	.003
	Innovative Culture	.098	.234	.085	.419	.678
	Bureaucratic Culture	.336	.229	.321	1.465	.151
	Supportive Culture	-.468	.263	-.374	-1.782	.083
	Job Satisfaction	.115	.205	.089	.562	.578
	Motivation	-.024	.172	-.025	-.139	.890
	Organizational Commitment	.437	.136	.540	3.204	.003

a. Dependent Variable: Job Performance

The R-squared statistics in the model summary table indicate that the seven predictors account for 40.1% of the variance in job performance among remote employees. Similar to regression model 1, the overall model in this analysis demonstrates statistical significance, as indicated by the Significance F statistics in the ANOVA table (Significance F = 0.002 < 0.05). The coefficients table reveals that two factors predict changes in job performance for remote employees, namely supportive culture and organizational commitment.

The findings indicate a reverse and statistically significant relationship between supportive organizational culture and job performance among remote employees at a 90% confidence level ($r = -0.468$, $t = -1.782$, $p = 0.083 < 0.10$). Conversely, the relationship between organizational commitment and job performance among remote employees is positive and statistically significant at a 95% confidence level ($r = 0.437$, $t = 3.204$, $p = 0.003 < 0.05$). These results suggest that an increase in organizational commitment among remote employees enhances their job performance, while an increase in elements of supportive organizational culture significantly impairs the performance of remote employees. The results for workplace employees will be presented in the following section.

Table 18. Regression Analysis 3 – Workplace Employees

Model Summary					
Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	
1	.553 ^a	.306	.221	.795	

a. Predictors: (Constant), Organizational Commitment, Supportive Culture, Job Satisfaction, Motivation, Innovative Culture, Bureaucratic Culture

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.619	6	2.270	3.596	.005 ^a
	Residual	30.934	49	.631		
	Total	44.554	55			

a. Predictors: (Constant), Organizational Commitment, Supportive Culture, Job Satisfaction, Motivation, Innovative Culture, Bureaucratic Culture

b. Dependent Variable: Job Performance

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error			
1	(Constant)	1.363	.686		1.986	.053
	Innovative Culture	.061	.265	.050	.231	.818
	Bureaucratic Culture	.318	.261	.276	1.220	.228
	Supportive Culture	-.383	.237	-.342	-1.618	.112
	Job Satisfaction	.164	.172	.143	.957	.343
	Motivation	.171	.203	.158	.844	.403
	Organizational Commitment	.396	.195	.315	2.036	.047

a. Dependent Variable: Job Performance

The R-squared statistics in the model summary table reveal that the seven predictors account for 30.6% of the variance in job performance among workplace employees. Similar to regression models 1 and 2, the overall model in this analysis demonstrates statistical significance, as indicated by the Significance F statistics in the ANOVA table (Significance F = 0.005 < 0.05). The coefficients table indicates that only one factor predicts changes in job performance for workplace employees, namely organizational commitment. The findings indicate a positive and statistically significant relationship

between organizational commitment and job performance among workplace employees at a 95% confidence level ($r = 0.396$, $t = 2.036$, $p = 0.047 < 0.05$). These findings imply that an increase in organizational commitment among workplace employees enhances their job performance.

ANCOVA Analysis

According to the analysis, variances were homogeneously distributed. It means that data set is suitable for ANCOVA analysis.

Table 19. ANCOVA Analysis

Source	Mean square	F	Sig.
Innovative Culture	38,357	21,952	,284
Bureaucratic Culture	57,833	11,939	,010
Supportive Culture	21,384	12,495	,000
Job satisfaction	21,658	12,073	,483
Motivation	34,284	10,394	,203
Organizational commitment	46,829	11,384	,256

* Dependent Variable: Job Performance When job satisfaction, motivation and organizational commitment are taken under control, there is a significant difference in job performance in terms of Bureaucratic Culture ($p=0.010$; $p<0.05$) and Supportive Culture ($p=0.000$; $p<0.05$).

Table 20. ANCOVA Analysis

Source	Mean square	F	Sig.
Job satisfaction	49,849	53,283	,290
Innovative Culture	35,357	43,393	,446
Bureaucratic Culture	57,833	16,284	,310
Supportive Culture	21,567	12,495	,345
Motivation	433,235	12,344	,356
Organizational commitment	40,543	12,374	,441

* Dependent Variable: Job Performance When organizational culture, motivation and organizational commitment are taken under control, there is no relationship between job performance and job satisfaction.

Table 21. ANCOVA Analysis

Source	Mean square	F	Sig.
Motivation	45,278	30,387	,392
Innovative Culture	45,357	21,952	,548
Bureaucratic Culture	37,446	11,939	,464
Supportive Culture	543,384	12,495	,456
Job satisfaction	553,658	12,073	,442
Organizational commitment	25,449	11,384	,743

* Dependent Variable: Job Performance When organizational culture, job satisfaction and organizational commitment are taken under control, there is no relationship between motivation and job performance.

Table 22. ANCOVA Analysis

Source	Mean square	F	Sig.
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Organizational commitment	114,384	34,744	,000
Innovative Culture	134,373	24,952	,345
Bureaucratic Culture	11,294	22,939	,345
Supportive Culture	32,484	336,567	,546
Job satisfaction	24,587	12,464	,462
Motivation	34,284	10,394	,557

* Dependent Variable: Job Performance When organizational culture, job satisfaction and motivation are taken under control, there is a significant difference in job performance in terms of organizational commitment (p=0.00; p<0.05).

Hypothesis Testing

Table 23: Hypothesis Testing

H1	Motivation has a positive effect on job performance.	Rejected	No Effect
H2	Bureaucratic subculture has a negative effect on job performance.	Rejected	Positive Effect
H3	Innovative subculture has a positive effect on job performance.	Rejected	No Effect
H4	Supportive subculture has a positive effect on job performance.	Rejected	Negative Effect
H5	Organizational commitment has a positive effect on job performance.	Accepted	Positive Effect
H6	Job satisfaction has a positive effect on the job performance.	Rejected	No Effect

Discussion

In this study, it is evident that workplace employees perceive organizational culture within the banks as more bureaucratic compared to their remote counterparts. However, it is noteworthy that workplace employees also hold perceptions of the organizational culture as innovative and supportive, in contrast to remote employees. These findings underscore the divergence in the interpretations of organizational culture between workplace and remote employees. The literature posits that direct change in organizational culture is challenging, yet the study's results suggest that processes and behaviors, as advocated by Nalbantoğlu (2021), can effect cultural shifts. As Desson and Clouthier (2010) argue, as employees become informed, trained, and equipped to embrace new approaches, the culture naturally evolves. In this context, remote work, characterized by novel working methods, aligns with the principles articulated in the literature. Furthermore, the study revealed a statistically significant distinction between remote and

workplace employees, particularly concerning the influence of working style on job performance. The results demonstrate a significant and positive impact of working style on job performance, with remote employees exhibiting a notably greater mean difference compared to workplace employees. This finding corroborates existing literature, such as Baudot et al. (2020), which demonstrates the positive impact of remote work on productivity. These studies also concur that remote workers are more willing to invest additional time in their tasks while economizing on commuting time, findings consistent with Prasetyaningtyas et al. (2021).

However, aside from these findings, the t-test analyses did not yield statistically significant differences between remote and workplace employees regarding effect of job satisfaction and motivation on job performance. This contrasts with the findings in the literature. Some studies, such as Manocherhri and Pinkerton (2003), have observed a positive correlation between remote work and job satisfaction, while others, like Bailey and Kurland (2002), have noted a negative relation between remote work and job satisfaction. Likewise, O'Neill et al. (2009) found a positive association between motivation and remote working.

This study also unveiled a reverse and statistically significant relationship between supportive organizational culture and job performance among remote employees. This discovery is intriguing, as supportive organizational culture is typically expected to positively influence job performance (Odom et al., 1990). Conversely, a positive and statistically significant relationship was found between organizational commitment and job performance among all employees. Among workplace employees, only one factor, namely organizational commitment, predicted changes in job performance, indicating a positive and statistically significant relationship between organizational commitment and job performance. These results suggest that an increase in organizational commitment among remote employees enhances their job performance, while an increase in elements of a supportive organizational culture significantly impairs the performance of remote

employees. This finding aligns with established literature, where Price and Mueller (1981) and Vandenberg and Lance (1992) posit that organizational commitment contributes to job satisfaction, a proposition substantiated by the findings in this study. Numerous studies, for instance, have reported a positive relationship between remote work and organizational commitment (Chow and Keng-Howe, 2006; Gajendran and Harrison, 2007) as well.

Conclusion

In the ever-evolving landscape of work, organizations are continually faced with the challenge of understanding and optimizing the relationship between employee performance and various organizational factors. One such critical factor is the organizational culture, which encompasses the shared values, beliefs, and practices that shape employees' behaviors and attitudes within an organization. The emergence of remote work, particularly accentuated by the global COVID-19 pandemic, has added a new dimension to this discourse. As organizations grapple with the implications of remote work on employee motivation, job satisfaction, and ultimately job performance, it becomes imperative to delve deeper into the intricate interplay between organizational culture and the performance outcomes of remote and workplace workers.

The present study aims to contribute to this growing body of knowledge by investigating the relationship between organizational culture, motivation, job satisfaction, and job performance in the context of remote and workplace workers. Drawing upon insights obtained from a comprehensive employee survey conducted within Turkish banks, the study provides valuable insights into the work environment and sheds light on the hierarchical and compartmentalized structures prevalent in these institutions. Additionally, the study uncovers the power dynamics between management and employees, which underscores the inclination for employees to adhere to orders rather than exercising initiative and leveraging their creative capacities.

The findings reveal that the surveyed employees draw their motivation primarily from

non-monetary factors, such as favorable working conditions, job interestingness, and recognition of their work performance by supervisors. Job performance, as indicated by the study, assumes heightened significance for workplace employees, who prioritize task accuracy, adherence to elevated work standards, effective communication, teamwork, and resource management. In contrast, remote workers assign relatively less importance to job performance facets, with a stronger emphasis on effective planning and task execution. These nuanced findings emphasize the need to understand the distinct motivational factors and performance expectations that shape the experiences of remote and workplace employees. The findings derived from the employee survey offer valuable insights into the work environment within Turkish banks, shedding light on the hierarchical and compartmentalized structure prevalent in these institutions. The power-driven relationship between management and employees underscores the inclination for employees to adhere to orders rather than exercising initiative and leveraging their creative capacities. Moreover, the study reveals that workplace employees perceive the bureaucratic nature of banks more prominently than their remote counterparts, which calls for attention to the organizational structure and its impact on employee behavior and performance. Furthermore, the survey findings indicate that the surveyed employees draw their motivation primarily from non-monetary factors, including favorable working conditions, job interestingness, and recognition of their work performance by supervisors. Concerning job performance, workplace employees place a high emphasis on task accuracy and upholding elevated work standards. They demonstrate a strong commitment to fulfilling all required tasks, prioritize effective communication and teamwork, and exhibit attentiveness towards time and resource management. Higher scores in these dimensions reflect the capability of workplace employees to navigate diverse situations, exhibit self-initiative, require less supervision during task execution, and actively seek collaborative opportunities with colleagues to facilitate task completion.

In contrast, remote workers assign relatively less importance to job performance facets compared to their workplace counterparts, with a notable emphasis on effective planning as the most critical aspect of job performance, followed by the proper execution of tasks. The results of t-test analyses indicate a positive effect of working style on job performance, highlighting the influence of remote work arrangements on employees' performance outcomes. Regression analyses further reveal that the bureaucratic culture within banks and employees' organizational commitment positively influence changes in job performance, whereas a supportive culture exhibits an adverse impact on job performance. Moreover, the moderating effect of working style suggests that the relationship between organizational commitment and performance is stronger for remote employees compared to their workplace counterparts. These findings provide valuable insights for organizational leaders and managers seeking to optimize employee performance and adapt to the changing dynamics of remote work. In light of these significant findings, several avenues for future research emerge. Firstly, conducting comparative analyses across different industries or sectors would provide valuable insights into industry-specific determinants that shape employee performance and shed light on potential variations in organizational cultures. Secondly, employing longitudinal research designs would enable capturing the dynamic nature of employee perceptions and performance over time, offering a comprehensive understanding of the long-term effects of remote work. Lastly, integrating qualitative research methods, such as interviews or focus groups, alongside quantitative data, would enrich our understanding of the subjective experiences and underlying mechanisms that influence employee perceptions and behaviors within the context of organizational culture, motivation, job satisfaction, and job performance.

Limitations

While this study provides valuable insights into the relationship between organizational culture, motivation, job satisfaction, and job performance

in the context of remote and workplace workers within Turkish banks, it is essential to acknowledge its limitations. Firstly, the findings are based on data obtained from a specific industry and geographical region, which may limit the generalizability of the results to different industries or cultural contexts. Future research should aim to replicate these findings in diverse settings to enhance the external validity of the study.

Secondly, the data collected in this study relied primarily on self-report measures. While self-reports are a common method in survey research, they are subject to potential response biases, and they may not capture the full complexity of organizational culture, motivation, and job performance. Combining self-reports with objective performance metrics and qualitative data could provide a more comprehensive understanding of these relationships. Additionally, our study used a cross-sectional design, which is limited in its ability to establish causal relationships. Future research could employ longitudinal or experimental designs to explore the dynamic nature of these constructs and provide more robust evidence of causal links. Finally, the sample size, although adequate for the present analysis, could be expanded to increase statistical power and further enhance the study's generalizability. A larger sample would allow for more detailed subgroup analyses and a deeper exploration of potential moderators.

These limitations should be taken into consideration when interpreting the results, and they offer promising directions for future research to delve deeper into the complexities of organizational culture and employee performance.

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Sustainability of Higher Education in Emergencies: The Case of Turkey

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Abstract

The COVID-19 pandemic had devastating effects on higher education systems and necessitated policymakers to take immediate measures. While this period is an opportunity to correct imperfections in higher education systems, it is also a challenge in terms of planning new policies that necessitate digitalized equipment and personnel support that increased due to the pandemic. The study aims to examine which factors of higher education learning communities can help sustain higher education institutions during and beyond emergencies. Based on a qualitative study presenting views of Turkish faculty, major findings reflect the key components of higher education learning communities. These were spotted as; 'democratic and collaborative environments that target equitable student access to education, student success, as well as faculty professional development and well-being of faculty and students and examined through the lenses of critical pedagogy and transformational theory. Apart from the suggestions of the participants for sustainability, the author also presented some immediate-to-long-term policy suggestions for higher education decision-makers that prioritize equity, accountability, and quality, and the main principles of learning communities as collaboration and democracy, all of which are also important concepts for further development of society.

Keywords: COVID-19 Pandemic, Emergency Situations, Higher Education Learning Communities, Sustainability

Öz

COVID-19 pandemisinin yükseköğretim sistemlerine yıkıcı etkileri oldu ve politika yapıcıların acil önlemler almalarını gerektirdi. Bu kriz dönemi, yükseköğretim sistemindeki eksiklikleri gidermek için bir fırsat olsa da, aynı zamanda, salgın kaynaklı artış gösteren dijital ekipman temini ve personel desteğini gerektirecek yeni politikalar planlama açısından zorlayıcı bir durumdur. Bu çalışma, acil durumlarda ve acil durumların ötesinde, yükseköğretim öğrenme toplulukları prensiplerinden hangilerinin yükseköğretim kurumlarının sürdürülebilirliğine yardımcı olabileceğini incelemeyi amaçlamaktadır. Türk öğretim elemanlarının görüşlerini sunan nitel çalışmadaki başlıca bulgular, yükseköğretim öğrenme topluluklarının temel bileşenlerini yansıtmaktadır. Bunlar; 'öğrencilerin eğitime adil erişimini, öğrenci başarısını, aynı zamanda öğretim elemanlarının profesyonel gelişimini ve hem öğretim elemanı hem de öğrencinin iyi oluş halini hedefleyen, demokratik ve işbirlikçi ortamlar' olarak tespit edilmiş ve eleştirel pedagoji ve dönüşümsel teori bakış açısından incelenmiştir. Katılımcıların sürdürülebilirlik için olan önerilerinin yanında yazar da kısa ve uzun vadeye yönelik yükseköğretim karar vericileri için, hakkaniyet, hesapverilebilirlik ve kalite ve öğrenme topluluklarının temel prensiplerinden olan işbirliği ve demokrasiyi önceleyen politika önerilerinde bulunmuştur ki bunların hepsi toplumun ileri gitmesi için önemli kavramlardır.

Anahtar Kelimeler: COVID-19 Pandemisi, Olağanüstü Durumlar, Yükseköğretim Öğrenme Toplulukları, Sürdürülebilirlik

Introduction

Natural phenomena such as earthquakes or tornados have adverse consequences on a relatively limited area affecting the physical and mental health of individuals specific to that region. However, pandemics such as COVID-19 that influenced the world for about three years drag the attention to the health of the masses, their socialization, along with the unprecedented disruption of many businesses on a global scale. On the educational front, the COVID-19 pandemic led the world into a tunnel of unpredictability and frustration with months-long closures of higher education institutions (HEIs), as vital centers for education and teaching, production and dissemination of knowledge as well as service to society. Despite its burdens, the pandemic was an opportunity for many HEIs worldwide to see their weaknesses in many areas, ranging from infrastructure and teaching-learning methods to emergency leadership and inclusion of the disadvantaged. This enabled them to overcome hurdles with immediate-to-long-term measures. In this sense, HEIs shouldered an important role not only in the continuation of academic and psychological support during this emergency period.

With the increasing distance among individuals in society during the pandemic, some concepts like creativity, innovative thinking, empathy, and collaboration, the effects of which are hard to measure, almost lost ground as they can be practiced better nearby (Roose, 2020). Hence, with closures and social distancing, humanity was reminded of these kinds of concepts and feelings that can easily be found in learning communities (LCs). LCs are known for engagement with the community (Sefton-Green, 2020), collaboration (Zhao & Kuh, 2004) and democratic environments (Zmuda et al., 2004) that value equity, diversity (Nosaka & Novak, 2014) and social tolerance (Vogt, 1997). The latter values were less likely to be felt by the disadvantaged in society due to not only the mandatory transition to online education but also the already existing socio-economic gaps. As was also indicated by the International Organization for Migration, xenophobia and hate crimes led to social exclusion and well-being

deterioration (IOM, 2020) during this time. Thus, with the pandemic, not only inequalities in higher education (HE) (Farnell et al., 2021) but also inadequacies and irregularities in the education system and society intensified and became more apparent.

Despite the ongoing human-centered courses established on empathy and pedagogical problem-solving that were available to some (Baran & AlZoubi, 2020), more students were exposed to discrimination due to the digital divide (Karadağ & Yücel, 2020; UNESCO, 2020a; Young-Powell, 2020). In Turkey too, there have arisen issues such as inadequate technological equipment and access to internet, varying digital capacities of universities, setbacks in practice classes and laboratory works, and faculty distance education incompetency (TEDMEM, 2020). To resolve issues in higher education systems (HESs) globally, efforts were directed towards increasing access, maintaining equity and quality (The Global Platform, 2020), and helping with budget support and policy building (EC, 2019). In Turkey, Coronavirus Boards, distance education centers and open-access digital course material pools at universities served that purpose. However, as indicated in The Organization for Economic Cooperation and Development (OECD) report (2020) on COVID-19, very few policies targeted sustainability in the aftermath of the pandemic. Therefore, to close this gap, through Turkish faculty perspectives and the lens of critical pedagogy and transformational theory, this study aims to examine the factors that allow for HEIs, as important intellectual and social hubs, to sustain during and beyond emergencies for the development of students and faculty by practicing the principles of LCs. The guiding research questions (RQs) are as follows: 1. *What key concepts of LCs can help sustain HEIs during and beyond emergency periods?* 2. *What policies can be developed to sustain HEIs as LCs during and beyond emergency periods?*

Critical Pedagogy and Transformational Learning Theory

The main reason for employing *critical pedagogy* in the study is to raise awareness about and solve

equity-related issues in HE that tend to increase with emergencies in society. Addressing the needs of individuals or groups who have been exposed to marginalization due to oppressive situations or policies (Bradley-Levine & Carr, 2015) that risk their freedom and dignity (Biesta, 1998) constitutes the study area of critical pedagogy. Critical pedagogy, by suggesting solutions to issues in HESs through an inquiry-based approach (Denzin & Lincoln, 2011) can help empower institutions, students, and faculty during the COVID-19 crisis. Whereas *transformative theory* takes it one-step further by allowing one to, first, examine the difficulties experienced, and then restructure their position for new ways of behaving (Mezirow, 2000).

For individual or social transformation, which may also mean self-improvement and learning to realize, Brown (2004) suggests that there is a need for 'self-awareness, planning, skill, support, and discourse with others' (p. 85). As not every student is skillful, planned, and aware of the coping ways of the difficulties in emergencies, some individuals may need to feel supported and communicate in safe spaces. This can best happen in democratic communities where people can easily cooperate (Mezirow, 1995). This also brings to mind the democratic nature of HE LCs as convenient places for collective action where diverse perspectives are respected with kindness and tolerance. These make up the emotive features of transformative learning (Clark & Wilson, 1991; Mezirow, 2000) that guide faculty, students and administrators to check their behaviors and language toward each other. Considering that individual transformation cannot be realized in a dysfunctional social setting (Servage, 2008, p. 68), the supportive and/or guiding role of faculty towards students during the COVID-19 period is vital. To put it briefly, where critical pedagogy casts criticism of the current social practices (Bell & Schniedewind, 1987), transformative learning theory activates the change process aligned with the spotted problems by engaging the stakeholders to form LCs with shared practices.

The COVID-19 Pandemic in the Global Higher Education System

It was first in December 2019 that the world heard about the COVID-19 coronavirus. When the World Health Organization (WHO) announced the virus as a pandemic on March 11, 2020, there had already been 114 countries affected by it with 118,000 cases and 4291 deaths (WHO, 2020a). As of October 17, 2021, these numbers reached tremendous amounts with over 240 million cases and below 4.9 million deaths (WHO, 2020b). Although all people were exposed to severe consequences of the pandemic, students experienced additional disadvantages in their academic lives. For instance, at Stanford University, problems similar in other universities had been encountered. Kubota (2021), referring to the explanations of biologists and physicists at Stanford University stated that in labs, some experiments had to be prioritized or canceled. Another point that was underlined was the attention given to equity, inclusion, empathy and compassion in terms of minimizing the effects of the pandemic especially on the most vulnerable groups. It was added that to minimize the stress and make the transition to online teaching quicker, faculty shared all the materials developed. Harvard Medical School (n.d.), on the other hand, created the Massachusetts Consortium on Pathogen Readiness (MassCPR) in 2020 March. It collaborated with many scientists and health professionals from over 17 institutions to address the immediate and long-term challenges of the pandemic. According to the European Union (EU) NESET Report, about 220 million HE students worldwide were affected by the adverse consequences of COVID-19 (Farnell et al., 2021, p. 4).

Minorities and migrants were at risk during the pandemic in terms of becoming the targets of hate speech and racism in society (FRA, 2020; IOM, 2020). Because the origin of the COVID-19 virus was China, Asian students in the United States (US) drew more attention and abuse when coughing or sneezing in closed spaces like metros or classrooms (Iwai, 2020). The EU report reveals that American low-income and working-class students, racial minorities, first-generation

students, caregivers and LGBT students were among the most vulnerable groups both academically and mentally (Farnell et al., 2021). Based on the existing literature, issues that came up during the COVID-19 pandemic in the HES worldwide are multi-dimensional and can be examined under four main areas: academic, social, financial and health-related matters.

Academically, the digital divide caused by the transition to online learning was another reason for vulnerability, not only for students but also for faculty. A Turkish study reported that out of 17,939 Turkish undergraduate students enrolled in 163 state and foundation (non-profit private) universities, one-third did not have the internet or computers/tablets at home (Karadağ & Yücel, 2020). 37% of these students found accessibility of the online education system 'poor or very poor', and 51% said faculty teaching skills were again 'poor or very poor', leading students to discontinue their education. While for faculty, less technologically equipped ones could not execute their classes (Iwai, 2020). Similarly, according to the European Student Union's survey with 17,116 students from 41 European countries, almost half (47.43%) were not happy with their academic performance due to increased workload, challenges in access to the internet, technological equipment, and poor digital skills, despite being satisfied with the quality of teaching (Doolan et al., 2021). The World Bank report (Arnhold et al., 2020) outlined challenges experienced during COVID-19 as the internet connection, its expenses, and technological equipment.

Another change students had to get used to was the new assessment methods. While the majority of faculty preferred to give assignments (84%) (Demir et al., 2020, p. 2), presentations and/or projects were the other common ways of assessment. However, some students found assessment format changes and assignments a 'nightmare', as they required different software or expensive computers (Young-Powell, 2020). Access to resources and finding a quiet place to study became other concerns of students with the closure of on-campus libraries. This is in parallel with Aristovnik et al. (2020)'s study findings where it was reported that nearly half of the university students (30,383) from 62 countries

including Turkey lacked a quiet place to study. In the same study, it was also found that some students lacked computer skills and perceived their workload to be higher than before, which they believed affected their performance.

Socially, both students and faculty had to shift to new systems of communication through digital platforms. Students changed their routines and moved to their family homes leaving their student houses or dorms behind. This also necessitated waving goodbye to in-person contact with their friends and instructors at universities and social activities. It was found that despite the significant support students received from teaching staff and public relations services at universities, the adversities they experienced during the lockdown caused them to be concerned about their future careers (Aristovnik et al., 2020). Indeed, this is valid for faculty as well since many employees became unemployed due to the pandemic-related economic crisis.

Financially, students, who, at normal times covered their expenses, had to continue working if they had not already lost their jobs during the pandemic. Data from the UK suggests that when student loans were not enough to cover the cost of living and parents could not provide financial support, half of the graduates from low socio-economic backgrounds and 46% of the considerably affluent ones had to do paid work (Montacute, 2020, p. 12). Still others asked for tuition fee refunds (Lee, 2020) or even dropped out due to feeling lonely and dissatisfied with their academic environment and social life (Farnell et al., 2021).

All of these inevitably influenced the *emotional* and *mental health* of students negatively. Some students faced 'boredom, anxiety, frustration and anger' (Farnell et al., 2021, p. 5). A Swiss study (Elmer et al., 2020) examined undergraduate students' social networks and mental health in two different cohorts; the ones who did not experience the pandemic (N=54) and those who were exposed to it (N=212). The findings indicated that students interacted and came together to study less as a result of the pandemic and they had higher levels of stress, depression, anxiety and loneliness. Adverse consequences of the pandemic influenced the human-centered approach of LCs as well,

including empathy and the power to cope with the unknown (Henriksen et al., 2018).

This huge global change that transformed face-to-face education to virtual LCs necessitated HESs to re-examine their new roles and capabilities in responding to possible future challenges by sticking to the principles of equity, accountability, and quality. More than two decades ago, Tinto (1998) suggested that much would be gained from virtual campuses as LCs of the future, provided that they were carefully planned as to whom they would serve and what to be learned from interactions. Similarly, to overcome today's post-pandemic crisis, inquiries need to be made in HE with careful planning and coordination of policymakers.

Higher Education Institutions as Learning Communities

HEIs as LCs were built based on the idea of *learning organizations* of Senge (1990) and Boyer's (1987) principles of *purposeful* (shared goals), *just* (respect for diversity), *caring* (serve each other's well-being), *open* (free expression of opinions), *disciplined* (accept responsibilities for the common good) and *celebrative* (embrace the heritage and accept change for the future) communities. Lenning and Ebbers (1999) refer to LCs as student-centered groups that focus on a *common goal*, involve *planning*, *reflection* and *faculty support* as well as *allocation of resources* to students and staff. Bringing forth many aspects of LCs as such, Astin (1985, p. 161, as cited in Shapiro & Levine, 1999) states:

Such communities can be organized along curricular lines, common career interests, avocational interests, residential living areas, and so on. These can be used to build a sense of group identity, cohesiveness, and uniqueness; to encourage continuity and the integration of diverse curricular and co-curricular experiences; and to counteract the isolation that many students feel.

Especially in the US, these qualities of LCs continue to function in specially designed classes that bring clusters of students together who study, sometimes reside together, collaborate and socialize not only in the academic context but also

in sororities and fraternities. In Turkey, rather than a specifically formed group of students, a LC can be thought of as an umbrella term to refer to naturally formed student groups at universities uniting like-minded individuals around their common interests like sports or art. Such an interaction is known to increase the academic and social success of especially low-income and minority students (Johnson et al., 2020; White et al., 2019). There are also solidarity groups that aim to solve different problems in society and/or help disadvantaged groups, fulfilling the functions of LCs on different platforms. Whether in the US or Turkey, despite some differences in defining LCs, common themes refer to a *shared vision*, *commitment*, and a *sense of unity* and *collaboration* among major stakeholders such as students and faculty.

Tinto (1998) suggests that *shared knowledge* and *shared knowing* enable students to improve socially (also in Raaper & Brown, 2020) and intellectually, which in return yields increased learning, retention (also in Zhao & Kuh, 2004) and success (Tinto, 2012). Acknowledging these benefits, Lenning and Ebbers (1999) also refer to an improvement in satisfaction with university life, academic skills, development of empathy, self-esteem, cognition, and communication. It has been found that LCs are especially effective with historically underrepresented students who are not as recognized as the majority in the HES (Kuh et al., 2006; Nosaka & Novak, 2014).

Despite their power to resist the crisis (Lenning & Ebbers, 1999), LCs need to be supported as they are susceptible to the isolating and alienating post-modern threats and the competition-oriented neoliberal tendencies that have replaced the humane values of LCs. Collaboration of students through sharing other the best techniques that worked during the pandemic (Mitchell et al., 2021) has been a good example of this needed support. In the section below, measures taken worldwide in HE are discussed with a special focus on equity and quality.

Measures to Sustain Higher Education Learning Communities Beyond the COVID-19 Pandemic

HEIs and governments worldwide responded to the mandatory transition to online education differently depending on their organization and resource capacities. Even the more resourceful universities experienced problems in their response time and provision of equity-based opportunities to their students. Global responses given to needs in HESs are discussed below.

The Turkish Higher Education System Responses to the COVID-19 Pandemic

Like other countries, the Turkish government and HEIs have taken some measures to minimize the problems since the beginning of the pandemic. These measures targeted at providing support with internet technologies (IT), human resources (the number and capabilities of faculty), content (creating an online teaching material pool; opening the existing distance education materials of Anatolian, Atatürk and Istanbul Universities for the use of all), and implementation (running [synchronous](#) and asynchronous classes) (Council of Higher Education-CoHE, 2020a).

More specifically, some of the CoHE's emergency decisions and policies prioritizing the quality in HE were announced as follows: As of March 13, 2020, all HEIs, including associate degrees and undergraduate and graduate degrees, all internships and practical classes, excluding specialty graduate students in the schools of medicine, dentistry and pharmacology, would stop formal education for three weeks (CoHE, 2020b). As of June 15, 2020, universities would follow the academic calendar (CoHE, 2020c). OECD (2020, p. 20), and additional staff and research assistants would be assigned duties, do research and be trained in the new (20) and existing Distance Education Centers, only one of which would be available in both public and foundation universities. Later on, HE students were given the right to freeze their registration only for the 2019-20 spring semester (CoHE, 2020d), and offered free 6GB internet for online education (CoHE, 2020e). However, as this quota covered surfing, only on university and CoHE

websites but not the rest of the web, students could not improve their academic studies. Hence, CoHE's initiative did not benefit students fully. To support handicapped students, faculty were informed about actions to take based on the category and level of disablement (CoHE, 2020f). For graduate students at the thesis stage, a maximum two-semester-extension was given (CoHE, 2020g). Further decisions of CoHE included building a system that was designed to: (1) define the standards of online education, assessments and new programs; (2) monitor the execution of classes; (3) make process-based formative assessments; (4) encourage universities to establish online exam centers (CoHE, 2020h); (5) prioritize vaccination of students, academic and administrative staff; (6) prioritize social distancing and hygiene precautions; (7) continue with synchronized/unsynchronized online and face-to-face education; (8) keep class hours limited with no block lessons; and (9) continue working in laboratories, research centers and techno parks at campuses (CoHE, 2021).

The digital transformation of Turkish universities was discussed in the Times Higher Education (THE) and Coursera meeting in October 2020, and leaders of state and foundation universities indicated that they managed to respond to online teaching quickly (THE, 2020). The changes made included delivering the online curriculum through Zoom, having an online lab system and sending out lab test kits to students to be used at home synchronously with their professors, donating 'a limited number' of tablets and computers to students, having hybrid teaching by dividing the day into morning (hybrid), afternoon (face-to-face) and the increasingly preferred evening (online-only) classes, sharing best practices, organizing online internships in collaboration with the industry, and increasing collaborations between universities via teaching and learning centers. On the other hand, the challenges they faced were; limited access of students to digital gadgets, staff retraining, digital assessment, data security, finding data storage services, and sustaining international students in the country. Although collaborative activities of universities were suggestive of what LCs also prioritize, it should be noted that since only 13

universities (4 state as Ege, Uludağ, İstanbul Teknik, Erciyes, and 9 foundation as Bilkent, İstanbul Gelişim, Haliç, Maltepe, İstanbul Bilgi, İstanbul Medipol, MEF, İstanbul Aydın, Abdullah Gül) out of 207 in Turkey had joined this panel, the initiatives they took cannot be generalized to the Turkish HES as a whole. For instance, a study conducted with $n=8442$ faculty from state (68%) and foundation (32%) universities in Turkey revealed that 81.9% of them did not have any experience in distance education (Demir et al., 2020, p. 2), which means that most faculty were not adequately equipped and ready for online education.

In short, only Anatolian, Atatürk and İstanbul universities had already been equipped to offer distance education. This means that students, faculty, and administrative staff of the above-mentioned 13 universities and other universities that were not included in the study struggled immensely to cope with the unknown and the lack of preparation, despite their superior efforts. This reality is a warning signal for universities and the CoHE as it made clearer the already existing problems in the online education-related infrastructure of universities, the lack of human resources, and emergency leadership.

International Responses for Higher Education Systems in the Pandemic

International aid organizations put considerable effort during the COVID-19 pandemic to alleviate difficulties in all areas of life as well as HE. The Global Education Coalition, for instance, which had more than 175 members and 112 countries including Turkey as of 2021, as well as civil society, academia and the private sector, enabled the right to equitable education including gender parity, prioritized digital learning, and helped the youth to improve their employability skills and faculty with remote learning (UNESCO, 2021a, pp. 4-5). Another global initiative is the Education for Sustainable Development (ESD) 2030 of the United Nations (UN). ESD aims to transform societies under 17 Sustainable Development Goals (SDGs) focusing on 'cognitive, socio-emotional and behavioral dimensions of learning' including the development of learning environments, contents

and outcomes during 2020-30 (UNESCO, 2020b). The goals stated in the ESD Member State Initiatives necessitated the transformation of learning environments by capacity building, empowerment, monitoring educators and intellectual engagement in LCs (Holmes, 2020). Likewise, stakeholder collaboration of ESD at local and global levels is similar to cooperation and collaboration among staff in LCs. Lastly, communication-bound efforts for increased mobilization of resources can be associated with the inclusive education understanding in LCs. Hence, in terms of creating a supportive learning environment for students ranging from academic to emotional needs as well as providing them with resources and investing in the professional development of educators, LCs and international organizations aim at similar goals.

Promoting lifelong learning opportunities for students in emergencies and crises to serve the goal of equity in HE has specifically been targeted since 2015 in SDG 4.3 (The Global Platform, 2020, p. 48; UNESCO, n.d.). Given the added difficulties of the pandemic, the then promises of world leaders remain to be addressed. Target 4.7 refers to the acquirement of knowledge and skills for sustainable development in education, human rights and gender equality (also in SDG 5) that encourages peace, justice, strong institutions (also in SDG 16) and cultural diversity (UNESCO 2020b, p. 57). It also serves to sustain HE beyond the pandemic and is like the democratic environments of LCs that support dialogue, diversity, solidarity and empathy (Holmes, 2020; Zmuda et al., 2004). Hence, integrating SDGs into the HES quality attainment criteria can facilitate institutional performance evaluation and support many individuals in HE and society, especially in these difficult times.

To support the implementation of SDGs by universities, specifically with knowledge development, and transformative research and education strategies, UNESCO, in cooperation with the University of Bergen, has established the [Global Independent Expert Group on the Universities and the 2030 Agenda \(EGU2030\)](#), with supporting partners as The International Science Council and the International Association of Universities (UNESCO, n.d.). Turkey, being a

member of the UN since 1945 and the latter two organizations, has been contributing to the attainment of SDGs. However, at some levels like knowledge development and transformative research, more thoroughly planned initiatives need to be taken in the Turkish HES. For instance, as has been explained in the previous paragraphs of this section, the CoHE took some measures during the pandemic in 2020 but they remained limited at the supportive level. They ranged from educating and allocating more staff and providing extra resources to be of use to students to determining some standards for assessment and health protection.

Last but not least, the European Commission (EC) (EC, 2020) plans to recuperate from the coronavirus crisis in two main ways. One is by achieving the European Education Area by 2025, supported by Europe's Recovery Plan and the Erasmus+ Program (made use of in Turkey as well), which aims at contributing to member states' education and training needs with a focus on 'quality, inclusion, gender equality, green and digital transitions, teachers, higher education' (para. 3). The other is by building a 'high quality, inclusive and accessible digital education' ecosystem through Digital Education Action Plan (2021-27) (para. 5).

Contributing to narrowing the equity gap, refugee HE students were also supported by international organizations during the pandemic. The DAFI program showed support by promoting 'social, economic and gender equality' (p. 52), and giving scholarships and career training to university students in 2020 (UNHCR, 2020). SPARK offered scholarships, internships, education, skills training and work experience to HE students in the Middle East (SPARK, n.d.). Syrian refugee students in Turkey (7,551 students in 2020) received tuition fee support for state universities and scholarships covering the pandemic period from UNHCR partnering with The Presidency for Turks and Abroad Related Communities (YTB) and partners of the Regional Refugee Resilience Plan (3RP) (UNHCR, 2020-2021). Similarly, the Rapid Response Mechanism for Higher Education in Emergencies (RRM) provides academic opportunities for HE students affected by wars

and natural disasters and is aligned with the 2030 Agenda for Sustainable Development (The Global Platform, 2020, p. 64).

It is worth noting that Turkey hosts the largest number of Syrian refugees worldwide with 3,435,298 (March 30, 2023) since 2011 (DGMM, 2023). Out of the 395,264 Syrian refugees belonging to the 19-to-24 age group (March 16, 2023) that reside under temporary protection in Turkey (Mülteciler Derneği, 2023), 53,097 students are in registered status in HEIs as of 2021-22 academic year (CoHE, 2023). Hence, considering the additional number of students in the HES with the inclusion of refugees, the Turkish government needs to take sustainable measures to ensure quality education, as well as health and security in the country. Overall, regarding the increased use of IT during the pandemic, heightened efforts are needed to be put by policymakers including budget increases. This way, local, national and international goals can be attained aligned with the goals of HE LCs.

Methods

Built on a qualitative research design, the study aimed to explore faculty opinions and experiences about HE LCs and discuss the extent to which HEIs can be sustained beyond emergencies by prioritizing the values of LCs. Faculty, who were reached through snowball sampling, were selected considering the different backgrounds they came from to attain rich data. In snowball sampling, maintaining anonymity and confidentiality are important challenges that the researcher needs to address. To remedy this bias, participants were informed and their consent was taken. Another challenge in snowball sampling is the non-random selection of participants, which may introduce bias by lowering the representativeness of the data. This threat was tried to be overcome by including a high number of participants in the study with varying demographic characteristics.

Some criteria were considered for integrating the participants into the study. Accordingly, participants from both foundation and state universities that were in urban and rural cities in Turkey were chosen as it was thought that the

Table 1. Demographic Information of the Participants

Faculty	Nationality	Gender	Department	Work Title	Experience (Year)
P1	Turkish	M*	Educational Sciences	Asst. Prof.	9
P2	Turkish	F	Educational Sciences	PhD student; Res. Asst.	6.5
P3	Turkish	M	Physics	MA student; Instructor	5
P4	Turkish	M	Econ.& Admin. Sciences	Prof.; Dean	26
P5	Turkish	M	Engl. Lang. Teaching	Assoc. Prof.; Chair	25
P6	Turkish	F	Educational Sciences	Asst. Prof.	9
P7	Turkish	F	Engl. Lang. Teaching	Instructor (MA)	18
P8	Turkish	F	Educational Sciences	Prof.; Chair	28
P9	Turkish	F	Econ. & Admin. Sciences	Asst. Prof.; Vice Chair	22
P10	Turkish	F	Educational Sciences	PhD student; Res. Asst.	5
P11	Turkish	F	Engl. Lang. Teaching	Asst. Prof.	18
P12	Turkish	F	Educational Sciences	Asst. Prof.	8
P13	Turkish	F	Engl. Lang. Teaching	Asst. Prof.; Former Vice Chair	21
P14	Turkish	M	Engineering	Assoc. Prof.; Chair	20
P15	Turkish	M	Engineering	Asst. Prof.	6
P16	Turkish	F	Engl. Lang. Teaching	Instructor	21
P17	Turkish	F	Engl. Lang. Teaching	PhD Student; Instructor	21
P18	Turkish	F	Engl. Lang. Teaching	Instructor	20
P19	Turkish	M	Engl. Lang. Teaching	Asst. Prof.	17

experiences they had been through during the pandemic period could have been different based on the resources they were provided in different cities and university types. In addition, the

participants had varying years of experience, titles and gender, and worked in different departments (Table 1). This variety enabled the participants to approach the topics discussed during the interviews from a different angle, and

Table 1. Demographic Information of the Participants

Themes	Categories	Codes	Participants	Explanation	Research Questions
LC as a concept	Connotations of LCs	1. International quality standards	P1,P3,P6,P7,P9,P10, P11,P15,19	Lack of human, physical and financial resources;	1
	Professional Development and Commitment	2. Safe and democratic spaces for self-expression 3. Guidance and support for students 4. Skills and research quality improvement, cooperation, collaboration 5. Institutional commitment	P2,P3,P6,P13,P16, P19 P7,P10, P14 P1,P2,P3,P4,P5,P11, P12,P14,P15,P19 P1,P2,P3,P6,P9,P12, P13,P14,19	safety of students and faculty. Collaboration of faculty for their own and students' development, all serving increased belongingness	
Actions for Sustainability	University Level State, University and Faculty Level	6. Transparency and solution-orientedness 7. Needs analysis and restructuring 8. Faculty-student collaborative works	P1,P8,P10,P11,P13, P17,P18 P1,P3,P6,P9,P10, P14,P15 P3,P12,P14	Problem detection and support for students and faculty in and out of emergencies. Academic and financial support for students in faculty projects prioritizing students' improvement.	2

Note. M: Male, F: Female

hence, helped the researcher to achieve rich data. Some suggestions for sample size are available in the literature that ranged from 1-2 to 30-40 (Creswell, 2012). For the present study, the interviews continued till similar answers were started to be received from the participants. In addition, not all the interviews were satisfactory in providing the needed information. Eventually, the saturation point was reached with 19 participants, which also increased the quality and reliability of the data.

The Human Subjects Committee approval was obtained before starting the interviews (No: 80281877-050.99). The instrument was developed by the researcher and two expert opinions from Educational Sciences were received to examine the questions after which a pilot study was conducted. Researcher-led, voluntary-basis, typical 45-minute in-depth interviews were run both face-to-face and online during 2019-2020 both before and during the pandemic, and tape-recorded with the participants' permission.

Through inductive content analysis, numerous themes and codes were obtained and then they were narrowed down into a meaningful number. To prevent ethical issues, confidentiality was achieved by using codes (P1, P2, ...) instead of the

real names of the participants, and to ensure trustworthiness, member check was done by asking the participants to approve the data or make any necessary changes. For transferability purposes, population, time and context of data collection were specified. In this study, only a part of the interview results that were relevant to the topic of the present study are presented.

Results

Turkish faculty shared their observations and lived experiences about their institutions as LCs regarding the concepts of equity, accountability, and quality, and offered suggestions for the sustainability of HE with major stakeholders as students and faculty. The data analysis, which led to the findings below, indicated two themes, four categories, and eight codes in total (Table 2).

Table 2. Themes and Codes

Theme 1: Learning Community as a Concept

The first RQ explicates the key concepts of LCs under two categories: the 'connotations of LCs' for the participants and what 'professional development and commitment' means for them (Table 2). P10 described LCs as:

An organization or a small community where individuals learn from each other and transfer knowledge, the direction of which does not always have to be from the director to the employee but also from the employee to the director or students to the faculty.

The participants described the qualities of HE LCs as having contemporary *international quality standards* in teaching and learning facilities. Some participants said that as many faculty at different levels had been purged by the government intervention, some departments were left without any instructors and/or senior faculty, and this caused complaints among students as they would be graduating without having been assigned a professor to teach their classes. This issue, they believed, affected the quality of HEIs negatively. Faculty pointed out other shortcomings in HEIs as digitalization, quality library services, conferences with invited famous key-note speakers as a motivation factor for students, students' and faculty's need-based skills, knowledge development, productivity and students' critical thinking abilities. P7 and P9 said quality needed to be attained also through faculty attitudes towards teaching, i.e. renewing themselves, adapting the course to student needs and using cutting-edge technology that they said became even more necessary with sudden transition to online classes due to the COVID-19 pandemic. In LCs, faculty maintaining objectivity in assessments was stated to be another important aspect of quality, especially for courses with multiple sections and large student numbers. The participants said students complained about objectivity in assessments regarding certain faculty, which continued during online classes during the pandemic too (P7). Faculty wanted to feel *safe* not only through job security (P3) but also when *expressing themselves in a democratic environment* in academia and creating their course content freely (e.g. including sensitive topics for class discussions) (P2, P6).

Regarding emotional and mental well-being, it was deduced from the interviews that faculty acting as *supporting/guiding figures* for student security plays a vital role. P7 said they dealt with students having serious mental problems and drug addiction. For this reason, some faculty said that

they tried to get to know students to make them feel they were not alone, especially during the pandemic when students could not see their friends in person:

I spare my first two weeks to get to know students; where has he come from, where does he reside, what do his parents do, does he have a hobby. I do action teaching and this background information of students forms my inventory to help design my course (P7).

The interviewees pointed out that student improvement needed to go hand in hand with faculty *professional development*, i.e. *skills* and *research quality improvement*, *colleagues cooperating*, and *collaborating* on projects. Some comparably more novice faculty complained about their colleagues' uncooperative attitudes in academic work. P11, when compared to her international experiences, said: "*Turkish people work solo, don't want to share and do not trust each other. People who are this protective usually have an issue with this. I believe the more people are knowledgeable in one area, the more they get participative*". P12 explained it as:

In my university, there is almost no colleague that I can cooperate with although they come from big, reputable universities. There is no feeling of unity; maybe it is the local culture I don't know exactly why. There are a few colleagues I share and cooperate with who are from my previous university where I was a research assistant for a long time.

A minority of faculty collaborated by organizing learning days where expert speakers were invited and faculty shared best practices. They added that their directors' trustworthy, open and fair attitudes towards them were also ways for development as these approaches allowed for an increase in *institutional commitment*. Overall, the lack of trust, belongingness to the institution, and collaboration among novice faculty were among the issues in both state and foundation universities that needed to be addressed by middle and upper-level directors as well as faculty themselves.

Theme 2: Actions for Sustainability

'Actions for Sustainability' refers to the second RQ (Table 2). P1 was concerned about the sustainability of education at the university as

there was not enough faculty to teach and some divisions like the Human Subjects Committee did not exist then. As this was a provincial university, it could not offer many opportunities or facilities for development and prevented the university from being an attractive education hub. For the proper functioning of the university, 'institutionalization' was shown as a must by many participants, which, to them, necessitated being *transparent* and *solution-oriented*. Related to this, some faculty stressed that to prevent issues from building up and becoming a burden, regular, university-wide *needs analysis* be made for necessary *restructuring*. This, they said should include following international standards in teaching-learning, sparing quality time for guidance, and recruiting more faculty (because a great number of faculty had been purged due to the mass expulsion in 2016). The academic profession being measured by increasing quantification rather than quality was shown as the other reason for faculty sparing limited time for students, decreased student motivation and aspiration, and poor research and education quality. P14 exemplified this: *"Especially for graduate students, faculty should spend time with students; not treat them as workers like 'bring your thesis or article!'", but chat with them about certain topics, elicit their ideas, i.e. follow students' personal development.*" As a remedy to increase education quality, P3 suggested: *"an 'academic council' can be created made up of faculty of all levels, research assistants and alumni to especially guide students about career-orientation, proper course selection to serve their future careers, and inform students with industries in which they would work in the future"*. As a part of the restructuring, it was also suggested that universities be proactive and assume a guiding role in building university-industry cooperation. For restructuring on a minor scale, P3 added that more *faculty-student collaborations* needed to take place, like through faculty projects, where students needed to be supported financially and academically.

In summary, besides the well-intentioned initiatives of some faculty and universities, the problems in LCs in about half of the universities seemed to center around insufficient teaching-learning opportunities that could not live up to

international standards. Besides this, the lack of trust and commitment, and limited student-faculty and faculty-faculty collaboration also affected student learning, sense of belongingness and their future success, which eventually diminished prospects for sustainability in HE LCs. As for panaceas, the faculty suggested a transparent university administration making needs analysis for restructuring HEIs following the principles that correspond to those of LCs and taking initiative in industry-student connections.

Discussion

This study aimed to bring forth the distinctive qualities of HE LCs to explore the extent to which they can prevent HEIs from the draining effects of emergencies such as the COVID-19 pandemic, and transform the crisis into more effective LCs to go beyond it. This research also provided well-grounded practical implications from critical pedagogy and transformative theory perspectives, targeting worldwide stakeholders and policymakers in HE. The interview findings were obtained from 19 Turkish faculty from different cities in Turkey. By enriching the findings with a document analysis of policy reports, government briefs, survey findings and peer-reviewed journal articles, policy suggestions were offered.

One of the findings of the study referred to the necessity of attaining *international quality standards* during and beyond the pandemic. For this to be realized, universities need to develop a grounded approach to improve their *research capacities* and faculty and students' *digitalized skills*. The present study findings indicated that students and faculty had difficulties adapting to the online academic environment during the pandemic. Not only the abrupt transition made this period difficult but also the psychological effect of the pandemic, inadequate quality and availability of digital equipment and quality internet access. Related to this, a study reported that faculty and students experienced hardships in online learning and assessment during the pandemic (Lassoued et al., 2020). The latter may be due to the different kinds of competencies in assessments used in face-to-face and online learning. Other studies stated dissatisfaction about the difficulty of access to

online education due to the lack of IT equipment, infrastructure, faculty online teaching skills, and being unprepared for online education (Karadağ & Yücel, 2020; TEDMEM, 2020; UNESCO, 2020a; Young-Powell, 2020). Similarly, a pandemic report from a Turkish public university stated that 23% of 2781 students could not participate in online classes, 76% of whom said the reason was either limited or lack of internet connection (Kırşehir Ahi Evran Üniversitesi, 2020). In this sense, based on critical pedagogy and a change-driven approach of transformative theory, teaching and learning online environments need to be improved and bearing in mind social, cultural and economic differences among students, compensation strategies should be devised.

Improvement of LCs necessitates looking into the faculty's experiences and needs too. More than 6000 Turkish academicians' (most from provincial universities) expulsion from universities as of 2016 created a fear and censorship climate in HE (Kaya, 2018), causing values of *democracy* and *safety* in HE LCs to run down. As was observed during the interviews, this led to student dissatisfaction due to the lack of field-based faculty to teach their classes and inequity in the HES. Despite the 'violation of rights' decision of the Constitutional Court, the State of Emergency Commission denying the reinstatement of the purged faculty (Boztürk, 2021) suggested that the Turkish HES needs more time to internalize the meaning of human rights and quality education. In this context, unless more comprehensive policies are developed regarding the issues in the HES, providing (non)digital educational resources or addressing students' needs in online and face-to-face education, as were pointed out by faculty, will only be solutions to save the day.

The findings revealed that feeling *safe* was crucial for faculty and their students apart from physical, mental, financial, and social well-being. Likewise, a US study examining LCs in a medical school during the COVID-19 period found that adapting the curriculum to spare time to talk about the well-being of students and the challenges they faced helped students feel safer and reinforced the feeling of community support (Mitchell et al., 2021). Therefore, making a needs analysis at the university and state (the CoHE) level to detect

areas that make faculty and students feel unsafe can help solve their discomfort.

Whether there be possible future emergencies or not, regarding the continuation of online education, a study conducted with 8242 faculty indicated that 84.2% of faculty did not think that online education could be an alternative to face-to-face, despite its advantages (Demir et al., 2020, p. 2). This may be explained by the lack of readiness for online teaching as reflected by previous study findings. Although the same group expressed negative thoughts about online education, they (83.5%) still expected an increase in online academic facilities in the future. Despite the frustrating experiences in online education, the developments worldwide indicate the continuation of the same system together with hybrid education, signaling investments to be made in online learning tools and platforms as also suggested by the World Bank (2020).

Conclusion and Suggestions

The study explored the extent to which HE can be sustained during and beyond emergencies in society by practicing the qualities of LCs such as allowing self-expression without the fear of exclusion or labeling and encouraging collaboration, cooperation, institutional commitment and transparency. 19 Turkish faculty perspectives through one-on-one interviews were analyzed by grounding the discussions on critical pedagogy and transformational theory. Regarding the findings, policy suggestions as practical implications were offered.

The first group of findings referred to the principles of LCs from faculty perspectives. Initially, they pointed out that HE LCs were groups of faculty and directors that should update themselves with international quality standards through improved research capacities and digital skills, especially with the sudden transition to online teaching during the COVID-19 pandemic. Other qualities of LCs for faculty were democratic spaces that allowed for self-expression, as well as the provision of guidance and support for students, especially during and in post-emergency times. Faculty also pointed out the need for more professional development through cooperation

and collaboration with their colleagues and students to serve both faculty and student needs, which only a minority of faculty did voluntarily. Directors' being trustworthy, open and fair were other vital requirements mentioned that were said to increase institutional commitment.

The second group of findings explicated faculty suggestions for actions that would help sustain HE LCs. At the university level, faculty stressed the need for transparency, solution-orientedness and university-industry cooperation. Besides, they suggested doing needs analysis for restructuring, especially with the additional issues like the ones in the area of digitalization that became more apparent with the pandemic, as well as in teaching-learning, guidance, and recruitment areas. Faculty getting into more faculty-student collaboration was also seen as a need for students' improvement.

Based on faculty perspectives, it seems that while online education may not replace face-to-face education entirely, at least in the near future, a hybrid model may be adopted on a wider scale. Therefore, effective policies referring to HE teaching-learning alternatives both within and outside of emergencies need to be devised. For more comprehensive policies, policymakers should resort to academic study findings and also get views of all stakeholder groups about how to better manage crisis times like the COVID-19 pandemic. It may be a limitation of the study that only faculty and some directors' views were resorted to but not students and administrative staff whose views could add different perspectives.

Considering the limitations of this study, future researchers who would like to examine HE LCs may choose to explore different qualities of LCs than the ones in this study. They may resort to a variety and a larger size of stakeholders in HEIs. This can be done through a mixed method approach as the deficiencies of both qualitative and quantitative studies can complement each other.

Policy Suggestions as Practical Implications for Sustainable Higher Education Beyond Emergencies

Below can be found some immediate-to-long-term policy suggestions. They refer to different areas for

HE decision makers that prioritize equity, accountability and quality, and the main principles of LCs as collaboration, cooperation, and democracy. I believe that only with the improvement of these qualities can democratic societies flourish.

Finance

Immediate to middle-term measures: Universities and the CoHE of Turkey should detect disadvantaged students, donate computers and tablets, and/or present them with financially convenient conditions to buy computers. Institutional and statewide digital investments should be increased for quality teaching-learning in general. Special agreements with internet-providing companies should also be made to design affordable internet packages for students.

Middle to long-term measures: In a possible global recession, the better-off students will have more chances of being employed or staying in education to further their academic careers while the ones from lower socio-economic backgrounds will be facing the changes in the labor market and thus, will not be able to pursue postgraduate degrees and drop out. As compensation, students-at-risk should be encouraged to do further degrees in HE with the financial support of universities, and public and private organizations. Additionally, universities should prioritize university-industry collaborations considering the economic difficulties students are experiencing; banks should postpone student loan payments, and the states should encourage social mobility and equity-based recruitments like paid internships.

Health

Immediate to middle-term measures: During the pandemic, university counseling and guidance staff should make themselves more available to meet faculty and student needs. A part of the lectures should focus on strategies to cope with stress and unpredictability, which will not only create a sense of a safe community where students raise their concerns and back one another but also help detect students with depression or anxiety in advance. Government-HEI connection should be

intensified for effective, systematic and sustainable health services.

Academia

Immediate to middle-term measures: HEIs should adopt a flexible approach for course deliveries in terms of adopting interdisciplinary and modern curricula, and increased use of technology. Quality standards in assessments and integrity in learning need to be maintained, by supporting the latter via online protocols. In parallel with the collaboration and cooperation element of LCs, faculty-student, peer-to-peer contact in and out of the classroom should be increased, and active participation in learning should be encouraged. Diverse student talents should be detected by faculty and those students should be given chances of improvement via scientific faculty projects.

Social Inclusion and Diversity

Immediate to middle-term measures: Equity, quality and well-being-based strategies should be developed by state and university authorities for an inclusive academic climate. These may include identifying students at risk to remedy inequalities (UNESCO IESALC, 2020), providing quiet and hygienically safe study spaces for students, and adding anti-discrimination measures to university policies. A foreseeable risk to be addressed is the non-renewal of registration, especially by disadvantaged and international students. This anticipated risk is supported by survey findings of Studyportals (2020) that 40% of potential international students changed their plans about studying abroad due to the pandemic; 50% thought of postponing enrollment to the following year, 42% enrolling in an online program, 21% not going abroad and 11% not studying at all.

Administration and Coordination

Immediate to middle-term measures: Support centers made up of high-tech specialists and educational scientists can be built at universities to address teaching and assessment needs of faculty, student

and faculty IT-related needs/issues, help improve their digital capabilities, detect data security gaps, and manage ongoing campus facilities like the laboratories and needs in practical classes. Intra-university communication channels can be fostered for more collaboration. Universities, as large LCs, can purposefully create smaller communities to enhance their learning, encourage socializing, and focus on learning outcomes as they have the power to transform HEIs.

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Communication Competence and Stakeholder Communication as a Dimension of Distinctive Competence in Work Life: A Qualitative Research¹

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Abstract

This study was conducted with the aim of revealing employees' perception of competence and determining which competence domains and sub-components are most associated with competence. Adopting a qualitative research approach, the study was designed using a phenomenological pattern, and research data were collected through an in-depth interview method. The research findings were interpreted based on the responses provided by private sector employees to questions in line with their professional experiences, focusing on their perceptions of professional competence and the types of competencies they highlight as crucial for success in today's competitive business environment.

According to the findings, the perception of competence among private sector employees is categorized into three main themes, namely technical/functional, fundamental/managerial, and behavioral/personal, which align with the literature. The most significant research finding obtained within the scope of this study is the participants' emphasis on communication competence as the most crucial type of competence in today's context. Additionally, participants have further delineated sub-themes of communication competence by discussing various types of communication competencies within the realm of work life. Among all participants, 'stakeholder communication' stands out as the most highlighted type of communication competence. Following stakeholder communication is intra-team communication, effective communication skills, persuasive communication, social communication, and empathetic communication. Furthermore, network-focused communication, marketing communication, professional language in communication, listening-persuasion in communication, and trustworthiness in communication emerge as sub-themes highlighted within the overarching theme of communication competence in the work environment.

Keywords: Competence Perception, Communication Competence, Stakeholder Communication, Qualitative Research, Phenomenological Research.

Öz

Bu çalışma, çalışanların yetkinlik algısını ortaya koymak ve yetkinliğin en fazla hangi yetkinlik alanları ve alt bileşenleri ile ilişkilendirildiğini belirlemek amacıyla yürütülmüştür. Nitel araştırma yaklaşımının benimsendiği çalışma fenomenolojik desende tasarlanmış olup araştırma verileri derinlemesine görüşme yöntemi ile toplanmıştır. Araştırma bulguları, özel sektör çalışanlarının mesleki tecrübeleri doğrultusunda sorulara verdikleri cevaplar üzerinden mesleki yetkinlik algıları ve günümüz rekabetçi iş yaşamında başarılı olabilmek için öne çıkardıkları yetkinlik türleri üzerinden yorumlanmıştır.

Elde edilen bulgulara göre, özel sektör çalışanlarının yetkinlik algılarının literatürle paralel olarak teknik/fonksiyonel, temel/yönetimsel ve davranışsal/kişisel olmak üzere üç ana temada açıklandığı tespit edilmiştir. Araştırma kapsamında elde edilen en önemli araştırma bulgusu ise, katılımcılar tarafından günümüzde en önemli yetkinlik türünün iletişim yetkinliğine sahip olma olarak öne çıkarılmasıdır. Bununla birlikte katılımcılar, çalışma yaşamında iletişim yetkinliğinin farklı türlerinden bahsetmek sureti ile iletişim yetkinliğinin alt temalarını da belirginleştirmişlerdir. İletişim yetkinliği konusunda tüm katılımcılar tarafından "paydaş iletişiminin" en fazla öne çıkarılan iletişim yetkinlik türü olduğu görülmüştür. Paydaş iletişimini sırasıyla; ekip içi iletişim, etkili iletişim becerileri, ikna edici iletişim, sosyal iletişim ve empatik iletişim izlemektedir. Bunun yanı sıra; network odaklı iletişim, pazarlama iletişimi, mesleki dilde iletişim, iletişimde dinleme-ikna ve iletişimde güvenilir olma konuları çalışma yaşamında iletişim yetkinliği ana teması içerisinde öne çıkarılan alt temalardır.

Anahtar Kelimeler: Yetkinlik Algısı, İletişim Yetkinliği, Paydaş İletişimi, Nitel Araştırma, Fenomenolojik Araştırma.

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Introduction

In today's circumstances, the competitive nature that has become more pronounced in the workplace demands management approaches and employee recruitment that are increasingly competitive. For businesses, this situation presents itself as a necessity to maintain their existence and enhance growth through a more qualified and specialized workforce. Under contemporary perspectives, the concept that has emerged to address this viewpoint is the concept of 'competence.' Defined as possessing the qualifications necessary to perform a task, this concept has gained prominence for organizations that embrace a competence-based management approach. For these organizations, competence serves as the key to competitiveness, symbolizing the possession of qualified, highly committed, and proficient employees who not only deliver high-quality products and services but also align with the essential principles of competence-oriented management.

This approach emphasizes employee alignment with organizational policies and objectives, enhancing a company's competitive advantage. Consequently, enterprises have come to view employees equipped with mission-aligned competencies as an integral part of their intellectual capital. Thus, businesses have formulated human resource policies aimed at targeting and cultivating employees possessing such supportive competencies to achieve success and realize their organizational missions.

In the present, competence-based enterprises, rooted in this management approach, employ numerous human resource policies, including employee selection, placement, promotions, salary adjustments, rewards, training and development, and career management. The underlying rationale for the acceptance of competence-based management approach and human resource practices by businesses is the fact that, in a competitive market, the presence of qualified, highly committed, and proficient employees has become an indispensable prerequisite, in addition to delivering high-quality products and services, to differentiate themselves and make an impact.

For businesses rooted in today's competence-based management approach, shaped by employee competencies, another essential precondition for the success of this approach is the awareness of employees about the competencies required by their jobs and their willingness to enhance these competencies. In other words, an additional critical aspect for businesses is that the competencies deemed indispensable today must also be recognized by employees as determinants for aspects such as job selection, workplace choice, professional specialization, and career planning. Their awareness and efforts in this regard constitute another prominent dimension.

Taking the concept of competence from the employees' perspective necessitates exploring it from various determinants such as competition, job satisfaction, and professional success. It is not incorrect to state that individuals' occupations shape their societal position, way of life, attitudes, thoughts, and more. In this sense, individuals making the right career choices based on their competencies becomes a significant consideration for daily, societal, and professional harmony. Therefore, it is important to emphasize that individuals aligning their competencies with the focus of their work have a significant impact on their personal and professional lives.

In summary, the concept of competence is multidimensional, varies across different professions/industries, and is subject to constant change due to the evolving nature of professions, work methodologies, and diversified fields in today's world. These conditions underscore the necessity for interdisciplinary studies in the realm of competence, given that the concept necessitates an in-depth understanding. Consequently, in the current era, it becomes crucial to measure employees' perceptions of competence specific to their professions and identify the competence domains that come to the forefront due to changes. This practice facilitates individuals in planning the necessary levels of competence for their careers, updating their competencies according to career goals, and effectively aligning the workforce with competency-driven roles. In essence, this pursuit encompasses an important area of study.

With this purpose in mind, the present study has been conducted to elucidate employees'

perception of competence and determine the competence domains and sub-components most strongly associated with this perception. The study is structured into three main sections. The first section encompasses the definition of the competence concept, the dimensions of competence, and a review of the literature on related studies. In the second section, the methodology employed in the research to reveal employees' perception of competence and to identify the most significant competence domains and sub-components is explained. The third section presents the findings of the research, which are discussed in relation to the existing literature.

Literature Summary

The Concept of Competence

Competence is a term that has been borrowed from the English word 'competency' into our language (Güler, 2010, p.3). When examining the definitions related to the concept, it can be observed that the Turkish Language Association (TDK) defines competence as 'the state of being competent, maturity, excellence' (TDK, 2020). The derivation of the term 'competence' from the word 'competent,' which refers to an individual possessing the qualifications to carry out a task, provides a clue to the definition of the concept (Arat, 2008, p. 15). In the context of its broader application, competence encompasses not only knowledge, skills, attitudes, and behaviors but also related abilities concerning organizations and processes that enhance an individual's performance, representing the observable aspects of behavioral dimensions (Demircan, 2020, p. 11). According to another similar definition, competence refers to the knowledge and skills of an individual and team concerning job performance in the context of the organization, necessary knowledge and skills for future success, individual and team examples of mental and behavioral successes aimed at exceptional performance, and abilities related to processes that enhance organizational or job performance. Furthermore, it represents new ways of thinking and behaving that provide a specific competitive

advantage, embodying particular abilities (Uyargil, 2017, p. 59).

A common perception regarding competence is that its definition and measurement are challenging. In contemporary times, efforts have frequently been directed toward shifting this concept from an abstract plane to a tangible standpoint by focusing on behavioral patterns. Therefore, studies related to competence aim to identify significant factors contributing to the success of employees in performing their tasks within an organization. Following the identification of these behaviors, a distinction emerges between successful employees and those who are unsuccessful or mediocre. In other words, even when two employees possess the same skills and perform the same tasks, differences in competence lead to variations in their achievements. Thus, in the realm of professional success, focusing solely on the requisite knowledge and skills is insufficient. Equipping one's knowledge and skills with competence serves as the most crucial benchmark for success (Yves, 1997, p. 53).

According to Uyargil (2004), competence models are defined as tools that determine the abilities, knowledge, skills, and behaviors required by employees to perform their job roles effectively, enabling the organization to achieve its strategic objectives. These competence models are essentially expressed through three fundamental approaches. The first approach, research-based, suggests gathering data from employees who exhibit effective performance in relation to competencies. The second approach, strategy-based, aims to ensure that the necessary competencies in personnel are provided to enact the business strategy. Lastly, the values-based approach emphasizes the opinions of managers within organizations, asserting that the consideration of managerial insights plays a critical role in achieving success."

When examining the development of the competence concept, it is observed that it was initially used by White (1959); however, the concept found its primary place in the field of human resources with McClelland's article published in 1973 (cited from Kierstead, 1988, as cited in Bayraktar, 2018, p. 302). Another

significant contribution to the competence concept is Bandura's scientific work titled 'Self-Efficacy: Toward a Unifying Theory of Behavioral Change', published in 1977. Bandura's definition of competence revolves around the belief in one's ability to perform a skill in various situations and contexts rather than just measuring the extent of an individual's skill level. Between 1986 and 1995, Bandura defined competence as the self-belief in one's capability to execute any skill across different situations and goals. In another definition in 1997, Bandura described competence as the organizational capability individuals need to possess to achieve desired outcomes in the face of responsibility, coupled with the belief in actualizing it (Çelikaleli and Akbay, 2013, p. 239).

In subsequent years, practical studies conducted by Boyatzis, Spencer, and Spencer further enriched the content of the competence concept, enhancing its essence (cited from Kierstead, 1988, as cited in Bayraktar, 2018, p. 302). Over the years, the collective efforts and applications related to competence have played a crucial role in the evolution of the concept, shaping its current understanding.

Dimensions and Sub-components of Competence

Fundamentally, when examined in the literature, the concept of competence is defined within three sub-dimensions: fundamental/managerial, behavioral/personal, and functional (technical) (Görer, 2019, p. 35). In addition to this, each of the three sub-dimensions of competence is further detailed with its own sub-components.

Fundamental/Managerial Competencies

The first sub-dimension is classified as fundamental/managerial competencies. This dimension consists of sub-competency components referred to as communication competence, openness to development and learning (lifelong learning), teamwork, analytical thinking, change focus/innovativeness, and conflict management/crisis management. This competency dimension is considered at the top of the hierarchy and a mandatory type of competence

for individuals to succeed in their professions. Distinct from the functionally/technically developed competencies in a professional sense, this dimension denotes the foundational skills that precede the acquisition of those competencies.

Communication: Communication can be defined as the sharing of ideas, information, attitudes, emotions, and skills with the aim of inducing behavioral change (Çilenti, 1984, p. 43). Alternatively, it can be characterized as a psychosocial process where at least two individuals mutually exchange information, emotions, and thoughts through specific methods (Kaya, 2017).

Openness to Development-Learning: Continuously progressing, planned activity (Demiralp, 2016) that supports the acquisition of knowledge and skills necessary for individuals and the entire society to succeed in professional and social contexts.

Teamwork: Teamwork is distinct from individual performance and involves the ability to collaborate with others, being open to communication, sharing knowledge and skills, and fostering mutual development (Tanyeri, 2015).

Analytical thinking: An individual's ability to view problems from multiple perspectives, make accurate decisions, comprehend problems, and implement solutions (Turhanlar, 2021).

Change focus/innovativeness: Employees systematically review and renew their goals and expectations for adapting to changing conditions in the workplace (Akgeyik, 2001).

Conflict management/crisis management: Able to foresee the possibility of a crisis/conflict occurring or by analyzing the ongoing crisis/conflict process, addressing the emerging problems, and navigating through the process with minimal damage (Küçük and Bayuk, 2007).

Behavioral/Personal Competencies

The second sub-dimension is classified as behavioral/personal competencies. This dimension consists of sub-competency components referred to as taking responsibility/using initiative, information search/openness to new information, achievement orientation/focus, organizational commitment/corporate loyalty, work ethics and

integrity, self-control (self-management/self-efficacy), self-confidence, and empathy. Behavioral competencies encompass behavioral traits that contribute to individuals' professional success.

Able to take responsibility/use initiative: The individual's capability to assume responsibility beyond their designated role and adapt their job description according to internal organizational circumstances (Akin, 2014).

Information search/openness to new information: Identifying the most suitable information among various sources to address needs and making a selection (Najjari, 2010).

Achievement orientation/focus: A strong belief and emotional state toward factors that emerge to achieve goals (DeShon and Gillespie, 2005).

Organizational commitment/corporate loyalty: Demonstrating a strong belief and acceptance of the organization's goals and values, a willingness to expend significant effort for the organization, and a strong desire to continue working for the organization (Mowday, Porter, and Steers, 1982).

Work ethics and integrity: Inclination to adhere to ethical and legal norms that guide what to do in situations encountered during the execution of a specific profession (İyi and Tepe, 2019).

Self-control (self-management/self-efficacy): The ability to suppress or alter destructive emotions and impulses that arise internally (Goleman, 2000).

Self-confidence: One's belief in their ability to successfully perform an activity, having confidence in their inherent abilities and decisions (Feltz, 1988).

Empathy: Being able to place oneself in another's shoes and have an understanding from their perspective (Dökmen, 2013).

Functional/Technical Competencies

The third dimension is classified as functional/technical competencies. This dimension consists of sub-competency components referred to as knowledge, skills, and experiences. This type of competency should not be compared to the basic skill requirements expressed as fundamental competencies for any career. Functional/technical competencies are more specific attributes that

stand out within professions and their respective operational fields.

Methodology

This study is grounded in a qualitative research approach with the aim of determining the perceptions of competence among private sector professionals and identifying the competency domains most strongly associated with competence. The qualitative research approach involves an essential methodology for deeply investigating and comprehending social phenomena and events within their contextual environment (Yıldırım and Şimşek, 2013, p. 45). The study is designed within the framework of the phenomenological (phenomenon-based) research design, which is one of the patterns used in qualitative research approaches. Phenomenological research design focuses on investigating phenomena (events, experiences, orientations, perceptions, situations, concepts, etc.) that we are familiar with but lack a thorough and detailed understanding of, making it suitable for studies aiming to explore these phenomena (Yıldırım and Şimşek, 2013). The phenomenon-based design involves descriptive research that centers on individuals' subjective experiences, emphasizing detailed descriptions of phenomena rather than making generalizations (Akturan and Esen, 2008). Within the scope of this phenomenological design study, the aim is to uncover the perceptions of professional competence by examining participants' responses to questions based on their professional experiences.

To ensure the validity and reliability of the research, a thorough research approach was adopted throughout the processes of formulating the data collection instrument, gathering data, analyzing data, and interpreting findings. When determining the study group for the research, the purposive sampling method of maximum diversity sampling was employed as the basis.

In phenomenological research, the process of determining the sample focuses on selecting individuals who have experienced the phenomenon under investigation within the scope of the study and can describe their experience

(Yıldırım and Şimşek, 2008). In other words, selecting participants who can provide the most accurate answers to the researcher's questions and contribute to achieving the research objectives is a crucial aspect (Creswell, 2017, p. 189). The current study, which aims to identify the competence perceptions of private sector employees, is based on a study group consisting of private sector employees from the İzmir province.

For phenomenological research, the number of participants for interviews is typically indicated to be between 6 and 8 individuals. Within these limits, the research sample was determined based on the principles of data saturation and representation of various professions, using a purposive sampling method relying on volunteers. A total of 132 participants were interviewed, representing different professions, genders, age groups, levels of experience, and educational backgrounds (Table 1).

Table 1. Distribution of Participants by Demographic Characteristics

Sector	N	Age	N
Transportation & Logistics	9	21-34	59
Health	24	35-50	52
Financ	8	51+	21
Training & Consultancy	16		
Energy	9	Experience	N
Industry	13	1-15	80
Tourism	11	16-30	41
Information Technologies	9	31 ve üstü	11
Communication Services	20		
Construction/Real Estate	13		
		Education	N
Gender	N	High school	7
Female	48	Undergraduate	89
Male	84	Postgraduate	36
TOTAL	132		

The distribution of participants in the sample with respect to various demographic variables is as follows:

- 48 of them are female, and 84 are male.
- 59 fall within the age range of 21-34, 52 are between 35-50, and 21 are 51 years or older.
- 80 have 1-15 years of experience, 41 have 16-30 years, 11 have 31 years or more of experience.
- 7 have completed high school, 89 hold a bachelor's degree, and 36 possess a master's degree.

- 9 of them are from transportation and logistics, 24 are from health, 8 are from finance, 16 are from education and consultancy, 9 are from energy, 13 are from industry, 11 are from tourism, 9 are from information technologies, 20 are from communication services and 13 are from construction/real estate sectors.

In the study designed within the phenomenological framework, which is based on a qualitative research approach, the interview technique was employed for data collection. A semi-structured interview guide was utilized to uncover the perceptions of professional experts regarding the phenomenon of competence. The aim was to gather detailed information from the opinions of these experts. The formulation of the semi-structured interview guide drew from relevant literature on the subject. The interviews were conducted with participants' consent and were also recorded for accuracy.

For data coding and analysis, the MAXQDA qualitative analysis software was utilized, and the content analysis technique was applied to analyze the data. Through the established coding process, categories, subthemes, and main themes were successively derived and identified.

To collect data from participants, Ethics Committee Approval was obtained on 10 August 2020 from the Beykent University Ethics Committee for Social and Humanities Sciences Publications Ethics. Voluntary consent was also obtained from each participant.

Results

The study findings were analyzed using the content analysis method. The results were interpreted under two main headings: 'competency perception theme and sub-theme analysis' and 'communication competency perception theme analysis'.

Competency Perception Themes and Sub-Themes

Participants' perceptions of the competency concept were evaluated around three main themes, namely 'fundamental/managerial,'

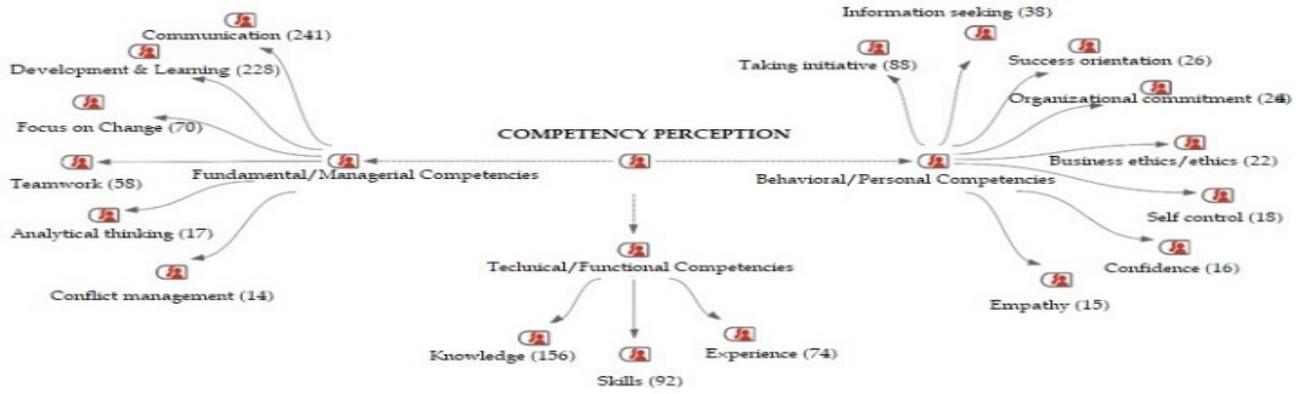


Figure 1. Competency Perception Theme and Sub-Theme Analysis

'behavioral/personal,' and 'technical/functional,' in line with the literature. Furthermore, each competency theme includes its own sub-themes (Figure 1).

Perceptions of Fundamental/Managerial Competencies

As depicted in Figure 1, participants' perceptions of possessing fundamental/managerial competencies are aligned with the literature and encompass six sub-themes. Participants predominantly highlighted the essential fundamental/managerial sub-competencies (respectively): communication, openness to growth and learning, change focus, teamwork, analytical thinking, and conflict management (Table 2).

Table 2. Views on Fundamental/Managerial Competencies

Sub-Theme	Participant Perspectives	Frequencies
Communication	"In my profession, if we talk about it, the most important competency, in my opinion, is communication skills. Because a person with communication skills knows how to communicate in mutual interactions. It provides ease in understanding each other." (Female, Insurance Agent, 29).	f=241
	"You need to be open to improvement and exploration. When you try a product and fail a couple of times, you shouldn't give up. It might take ten or a hundred attempts, but you should never give up until you reach what you've planned. From a progress perspective, it's the same for students; I tell them, 'Don't say I'm the boss; be open to development, be open to exploration. Don't say I'm done.'" (Male, Chef, 49).	
Development and Learning		f=228

Focus on Change f=70
 In our country, we see that learning ends with school. Unfortunately, there's a widespread belief like that, although real learning actually begins after school. Because conditions are changing very rapidly in the world, and what you've learned today may not be sufficient or valid tomorrow. Therefore, you need to constantly learn new things. You need to experience new things. You need to be ready for changes at any moment. This also means learning new things every day." (Female, Foreign Trade, 56).

Teamwork f=58
 "Printing is an exceptionally broad field. Therefore, when creating that box, every single detail must be meticulously planned. It should be highly organized to ensure a favorable outcome. This is entirely a team effort. Excellently executing the printing or neatly folding the box doesn't automatically guarantee the box will be of excellent quality. True excellence emerges when all the skilled individuals come together. Hence, a predisposition for teamwork is extremely crucial." (Male, Graphic Designer, 51).

Analytical thinking f=17
 "...Analytical thinking has become increasingly important... Human Resources is a social function, but it's gradually becoming data-driven with the advancement of technology. We talk about things like Big Data and artificial intelligence... Industry 5.0 is being discussed now, as Industry 4.0 is coming to an end. That's why an HR professional needs to have a high level of analytical intelligence" (Female, HR Specialist, 28).

Conflict management f=14
 "Firstly, solution-orientedness and the ability to think in a solution-oriented manner are very important to me. Life will always present us with problems. It's the same in this job and in personal life. If a person has a mindset based on solving problems, they will generate and find solutions. But if not, they will constantly be in a complaining state." (Female, Child Development Specialist, 45).

Perceptions of Behavioral/Personal Competencies

As can be observed from Figure 1, possessing behavioral/personal competency, from the participants' perspective, has been explained

through eight sub-themes similar to the literature. The participants primarily identified the behavioral/personal sub-competencies that need to be possessed as follows: "taking initiative, information seeking/openness, achievement orientation, organizational commitment, work ethics/ethics, self-control, self-confidence, and empathy," as indicated in Table 3.

Table 3. Perspectives on Behavioral/Personal Competencies

Sub-Theme	Participant Perspectives
Self control f=18	"Especially stress management. Now, with the decreasing number of candidates in the final stages of recruitment and the need to select one out of two, making a very accurate decision is crucial. Similarly, when downsizing the workforce, unfortunately, one must set aside personal emotions and conduct the process within the framework of necessary ethical standards." (Female, HR Specialist, 28).
Confidence f=16	"A person with self-confidence is already a person with professional competence. A manager with good self-confidence is a successful manager. Completing self-confidence is also a professional competence," (Male, Technician, 45).
Empathy f=15	"If we consider the processes, they really need to have control over their nerves. Putting ourselves in their shoes, they also need to show a bit of empathy," (Male, Health Officer, 40).
Taking initiative f=88	"Being able to work in harmony with team members within the team while also being capable of taking on some of the tasks from their supervisor, having the capacity to truly independently manage all tasks that align with one's job description – these are all really important within the professional context," (Female, HR Specialist, 35).
Information seeking f=38	"You will be curious without a doubt. If you're curious, you can learn things. Sometimes, even though I am experienced, they mention a word, and I don't know what it is... What do I do? I immediately look up the word on the internet to find out what it means, and then I act accordingly after learning about that word. So, you can learn something new every day... You can't know everything. But we should be curious. We have the internet at our fingertips. I say, let's keep researching, let's stay curious," (Male, OHS Specialist, 54).
Success orientation f=26	"Sustainability shouldn't be perceived solely in terms of environmental aspects or other dimensions. At the same time, we can view it as focusing on sustainable success when considering it as a competency... In this sense, one of the important concepts for us is focusing on sustainable success, but doing so with the help of a person's internal motivators" (Male, HR Specialist, 34).
Organizational commitment f=24	"Professional competencies, in a way, well, if you love this job, if you want to engage in this profession, considering the current conditions, they have to do this job continuously for 30-40 years. In order to retire and continue their lives, in this regard, first and foremost, continuity and passion for the work are absolutely essential." (Female, Biologist, 47).
Business ethics/ethics f=22	"When considering all fields of work, ethical values are highly valuable. One should not operate outside of ethical values." (Male, Biologist, 31).

Perceptions of Technical/Functional Competencies

As can be observed from Figure 1, possessing technical/functional competency, from the participants' perspective, has been explained through six sub-themes similar to the literature. The participants primarily identified the technical/functional sub-competencies that need to be possessed as follows: knowledge, skill, and experience.

Since participant opinions regarding technical/functional sub-competencies vary significantly across different fields, they are not detailed in the table. Participant opinions have been summarized by categorizing them under sub-themes. In this context, participants have indicated:

Possessing professional knowledge; includes knowledge of regulations, familiarity with occupational safety instructions, program knowledge, legal understanding, knowledge of personal data protection, understanding of official correspondence procedures, and the ability to comprehend and follow them, etc.

Possessing professional skills; entails proficiency in foreign languages, technological aptitude, project management, risk management, organizational skills, etc.

Possessing professional experience; encompasses mastery of the field and attainment of professional expertise.

Communication Competence in Work Life and Communication with Stakeholders

Among the competence sub-themes, participants have highlighted communication competence the most. Communication competence has been emphasized by participants 241 times, and in contrast to the sub-themes of themes, participants have provided detailed insights into the sub-components of communication competence.

When it comes to communication competence, "stakeholder communication" is the most prominently highlighted type of communication by all participants. Following stakeholder communication is, respectively intra-team communication, effective communication skills, persuasive communication, social communication, and empathetic communication. Additionally, network-focused communication, marketing communication, communication in professional language, listening-persuasion in communication, and being trustworthy in communication have also been expressed by participants as aspects of communication competence. Table 4 presents some of the communication types that participants have emphasized in terms of communication sub-competencies and includes some of the participant' opinions.

Table 4. Perspectives on Communication Competence Sub-Themes

Sub-Theme	Participant Perspectives
Frequencies	
Stakeholder Communication f=75	"Let's say this person will work in an office. In that office, they will interact with the truck driver, they will learn the language of the truck driver, they will have conversations with the bus driver and with customers, they will establish communication with the people there, and they will be able to speak their language" (Male, Journalist, 45).
Team communication f=52	"Communication is extremely important. Cinema is a collaborative effort. Therefore, it is crucial for the coordination among the team members" (Male, Video Production, 56).
Effective communication f=42	"Actually, communication is crucial not only in terms of profession but for all human relationships. If we talk about our profession, being able to convey a task in written and verbal form or explaining a problem in written and verbal ways is a very important concept. Communicating with the other person to reach a solution is essential" (Male, Mechanical Engineer, 32).

Persuasive communication
f=28

"I mean, similar to doctors, we know the illness, we know the solution, but if we can't convince the patient, it's meaningless. Just like if we create a great design or if we have a fantastic idea in the field of restoration, if we can't convince the necessary individuals or institutions through our communication, then it doesn't make any sense" (Female, Architect, 40).

social communication
f=25

"It's highly important. The work we do and the projects we undertake will influence the environment and society beyond ourselves. Therefore, since we are engaged in artistic and societal endeavors, it's not possible to carry out that work without communicating with other individuals in society and having a completely independent mindset" (Male, Producer, 64).

empathic communication
f=19

"In communication, our job is not just words, it's communication. Words account for only one-fourth of communication. Body language, focus, the energy you emit, the emotions you convey to the other person, that's 95% of our job" (Male, Public Relations, 45).

Results and Discussion

Due to reasons such as technological advancements, globalization, and accelerated competition, professional competencies have become a significant determinant of success in today's evolving business world. Therefore, the utilization of individuals' technical competencies; which encompass their professional knowledge, skills, and experiences, their fundamental competencies that encompass general knowledge and skills, and their behavioral competencies that include personal attributes, has become more crucial than ever in their careers. In the realm of professional life, technical competencies determine how tasks are performed, fundamental competencies influence how work is managed, and behavioral competencies shape how work is perceived and work relationships are formed. The balanced integration of these three types of competencies ensures an individual's sustainable success in the business world.

In this research, conducted with the aim of revealing employees' perceptions of competence and determining which competency areas and sub-components are most strongly associated with competence, the first step was to identify the perception of being competent. The findings obtained from in-depth interviews with private sector employees revealed that employees

evaluate their competence status with a holistic perspective in three main themes: fundamental/managerial, technical, and functional/behavioral competencies, which are similar to the literature. One notable aspect is that employees' perception of professional competence is most focused on "fundamental/managerial" competencies. Following this, perceptions related to technical and functional competencies are observed. Consistent with the current research findings, Yetkin (2006) emphasized the significance of fundamental competencies, which signify the ability to perform a job alongside the acquired knowledge to be competent in a particular area. He highlighted that possessing technical expertise alone, without the ability to apply that knowledge (fundamental competencies), is insufficient. Furthermore, he underscored the presence of functional competencies as a prerequisite for the transformation of professional technical competencies into observable behaviors. In his study evaluating individual performance through competencies, Mansfield (1996) emphasized that assessing competence solely based on technical knowledge and skills is inadequate. Instead, he emphasized that individuals should primarily possess basic competencies that allow them to acquire professional technical knowledge and should incorporate behavioral traits that distinguish them from peers with similar knowledge into their work processes, as this behavioral dimension sets them apart.

After uncovering employees' perceptions of competencies through thematic analysis, the second objective of the study is to determine the association between the main themes of competence and the types of competencies. In this context, sub-theme analysis has been conducted for the themes of fundamental/managerial, behavioral/personal, and technical/functional competencies.

The results of the sub-theme analysis indicated that possessing fundamental/managerial competency is described by participants in terms of six sub-themes, namely communication, development and learning, teamwork, analytical thinking, change orientation, and conflict management.

Having the behavioral/personal competency, which is the second main competency area, is primarily emphasized by participants in terms of taking initiative. The association between being competent in the behavioral/personal aspect and taking initiative is supported by numerous studies in the literature. Many studies that examine the relationship between taking initiative and job performance (Wihler et al., 2017, p. 1388; Rooks, Sserwanga, & Frese, 2016, p. 99; Frese & Zapf, 1994, p. 271) have determined that individuals who can take initiative in the workplace exhibit higher performance. Lisbona et al. (2018, p. 89) have investigated the impact of initiative-taking on work engagement and self-efficacy. Herrmann and Felfe (2014, p. 209) have conducted research on the influence of leadership style, creativity techniques, and taking initiative on employee creativity. Demir and Arslan (2018, p. 103) have examined the relationship between organizational trust and taking initiative. Hakanen, Perhoniemi, and Toppinen-Tanner (2008, p. 78) have found that work engagement and using initiative will affect innovation within work units.

The sub-themes of taking initiative include information search/openness, achievement orientation, organizational commitment, work ethics/ethics, self-control, self-confidence, and empathy.

Lastly, the technical/functional competency, which encompasses more specific characteristics highlighting employees' professions and the areas of their activities, is described with three sub-competency themes: knowledge, skills, and experience.

Possessing professional knowledge is perceived as having familiarity with regulations, knowledge of occupational safety instructions, familiarity with software programs, legal knowledge, understanding of personal data protection, awareness of official correspondence procedures, and the ability to follow them.

The second aspect, possessing professional skills, is defined as foreign language proficiency, technological aptitude, project management, risk management, and organizational skills.

Finally, possessing professional experience is expressed as domain expertise and access to professional specialization.

The most significant research finding obtained from the study is that participants from all occupational groups highlighted communication competency as the most crucial competency area for achieving professional success. Regarding communication competency, all participants have emphasized "stakeholder communication" as the most prominent communication type. Following stakeholder communication, the hierarchy includes team communication, effective communication skills, persuasive communication, social communication, and empathetic communication. Additionally, network-focused communication, marketing communication, communication in professional language, listening-persuasion in communication, and being trustworthy in communication have been expressed by participants as components of communication competency. Similar studies on competency (Demirtaş-Madran, 2018; Buluş, Atan, & Sarıkaya, 2017) have also defined communication competency through various communication types such as effective communication, persuasive communication, being trustworthy in communication, and building empathy.

In addition to communication competency being prominently emphasized by participants as the most significant component of their competency perception, another notable finding is that communication competency is expressed as a key component of numerous other competency types. In line with this finding, Konuk's study (2017) confirms that possessing communication competency is associated with having an inclination toward teamwork. Another competency type that participants associate with communication competency in the study is change management. In the literature, communication and interpersonal relationship development skills are counted among the necessary competency requirements for effectively managing change (Akgeyik, 2001, pp. 118-119), aligning with the results of this study.

In conclusion, in parallel with the evolving business world and modes of operation, communication competency stands out as a unique and indispensable skill, distinct from other competency types. Supported by the findings of

this research, communication competency manifests itself as a differentiating factor for individuals in their professional lives, serving as a catalyst for the effectiveness of other competency types and weaving together various abilities for advancement. As technology continues to advance and global connections deepen, the ability to clearly convey ideas, exhibit empathy towards different perspectives, and adapt communication styles becomes increasingly vital. In this sense, unlike other abilities, communication competency not only drives professional success for individuals but also encourages richer personal relationships and sustains organizational progress. Given these aspects, it would not be incorrect to state that communication competency requires multidimensional and interdisciplinary studies to fully comprehend its intricacies.

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RESEARCH ARTICLE

Exploring the Emotional Intelligence and Transformational Leadership Relation in Organizations through a Meta-Analysis Study in the Context of Turkey

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Abstract

In cases where radical changes are needed, the existence of transformational leaders who will lead this change is important for corporations. The relationship of these leaders with the achievements of various types of intelligence has also been discussed by both academics and practitioners. In addition to intellectual intelligence, the relationship between social intelligence and emotional intelligence, one of its subsets, whose importance began to be grasped at the end of the 19th century, with business relations and leadership behaviors is also investigated within this framework. From this point of view, there are many studies in the academic literature examining the existence of the relationship between emotional intelligence and transformational leadership. Considering the large number of these studies, the importance of complying with the results of the study and examining them within the scope of a single analysis has been determined. With the meta-analysis study carried out in this direction, studies that reveal the relationship between emotional intelligence and transformational leadership variables with correlation analysis in the context of Turkey were examined. As a result of the study, it was concluded that there was a moderate statistically significant relationship between the variables. This study is important in that it represents a sample of 2102 people obtained as a result of 12 studies, and it has a very high level of generalizability and is a summary of studies examining the relationship between variables in the context of Turkey.

Keywords: Emotional Intelligence, Transformational Leadership, Meta-Analysis

Öz

Köklü değişikliklere ihtiyaç duyulan durumlarda bu değişime öncülük edecek dönüştürücü liderlerin varlığı işletmeler açısından önem taşımaktadır. Bu liderlerin çeşitli türlerdeki zekâ düzeylerinin başarıları ile olan ilişkileri de hem akademisyenler hem uygulayıcılar tarafından tartışılmaktadır. Entelektüel zekaya ek olarak önemi 19.yüzyılın sonlarında kavranmaya başlanan sosyal zekâ ve alt kümelerinden biri olan duygusal zekanın iş ilişkileri ve liderlik davranışları ile olan ilişkileri de bu çerçevede araştırılmaktadır. Buradan hareketle akademik yazında duygusal zekâ ve dönüştürücü liderlik arasındaki ilişkinin varlığını irdeleyen çok sayıda çalışma yapılmaktadır. Bu çalışmaların sayıca çokluğu dikkate alındığında çalışma sonuçlarının derlenerek tek bir analiz kapsamında irdelemesinin önemi tespit edilmiştir. Bu doğrultuda gerçekleştirilen meta analiz çalışması ile Türkiye bağlamında duygusal zekâ ve dönüştürücü liderlik değişkenleri arasındaki ilişkiyi korelasyon analizi ile ortaya koyan çalışmalar irdelemiştir. Çalışma sonucunda değişkenler arası orta düzeyde istatistiksel olarak anlamlı ilişki olduğu sonucuna ulaşılmıştır. Çalışmanın 12 araştırma sonucunda elde edilen 2102 kişilik örnekleme temsil etmesi sayesinde genellebilirlik düzeyinin oldukça yüksek olması ve değişkenler arası ilişkiyi Türkiye bağlamında inceleyen çalışmaların bir özeti olma niteliği taşıması açısından önem taşıdığı düşünülmektedir.

Anahtar Kelimeler: Duygusal Zekâ, Dönüştürücü Liderlik, Meta-Analiz

Introduction

The argument that emotional intelligence affects leadership behaviors is widely covered in the literature. Relationships between various types of leadership and emotional intelligence have been demonstrated by many studies (Kim & Kim 2017, Goleman, 1998; Cooper & Sawaf, 1997; Yaşlıoğlu et al., 2013). On the other hand, in studies on transformational leadership, many findings show that variables such as empathy, motivation, self-awareness, and self-confidence affect the leader's behavior. The existence of a positive relationship between motivation and transformational leadership behavior has been widely revealed in the literature. Motivation, one of the dimensions of emotional intelligence, takes its place in the literature as the most valuable power of transformational leaders (Mandell & Pherwani, 2003).

The great amount of study outcomes indicating a connection between emotional intelligence and transformational leadership has necessitated the building of a general framework for this hypothesis. Meta-analysis studies aim to gather the answers given to the research questions that have been studied extensively in the literature, to reach a larger sample size, and to reach results with stronger generalizability. This study is aimed to support the research hypothesis that there is a relationship between emotional intelligence and transformational leadership variables, which is observed in the literature, with a larger sample. The meta-analysis study and the studies examining the relationship between the two variables in the context of Turkey were brought together in line with the inclusion criteria and a result with a much higher generalizability power was reached.

In line with the purpose of the study, first of all, emotional intelligence and transformational leadership variables were revealed in terms of their conceptual frameworks, and then the effect size data, meta-analysis model, and publication bias test method adopted for the meta-analysis study were mentioned. In the analysis phase of the study, the findings and results of the meta-analysis were considered.

Conceptual Framework

In this section, the definitions of the concepts of emotional intelligence and transformational leadership, their development processes in the literature, and their dimensions in the context of accepted models regarding variables are given. From this point of view, it is aimed to determine 'what' is meant when the terms 'emotional intelligence' and 'transformational leadership' are used throughout the study under the title of conceptual framework and convey them to the reader.

Emotional Intelligence

With the discovery of various types of intelligence in the late 19th century, the concept of emotional intelligence as a subset of social intelligence began to be examined, and the concept gained popularity in academic literature with Goleman's book 'Working with Emotional Intelligence' (Schutte et al., 1998). The concept of emotional intelligence, which has been widely defined since then, has been examined within the scope of various models and is now in its current form.

Salovey and Mayer, whose publications are important building blocks in emotional intelligence literature, evaluated emotional intelligence as a part of social intelligence and made the first definition of the concept as "a subset of social intelligence that includes the ability to observe one's own and others' feelings and emotions, to distinguish one's own and other's feelings, and to use this information to guide their thoughts and actions" (Salovey et al. Mayer, 1990). Cooper & Sawaf, who signed lots of landmark research in the field, argued that emotional intelligence is "the ability to perceive, understand and effectively apply the power and sharpness of emotions as the source of human energy, knowledge, connection, and influence" (Cooper & Sawaf, 1998). Emotional intelligence, like almost every concept in social sciences, has been defined in many different ways since the day it was first defined, and the concept has been discussed from various angles. Considering the studies, the importance of emotional intelligence for businesses is emphasized. Goleman, in his book on which the concept of emotional intelligence is

based, puts emotions at the center of life and argues that emotions gain the ability to make a difference in business life and that those who lack this skill are unsuccessful in relationship management. Goleman mentions that in the absence of emotional intelligence, which he emphasizes in business life, physical problems will increase due to the inability to manage toxic emotions (Goleman, 2009). It observed that a technically competent employee with a high level of emotional intelligence acts more easily, skillfully, and faster than others on organizational problems that need to be resolved and conflict management (Cooper & Sawaf, 1998).

Emotional intelligence, whose importance in business life began to be emphasized with the laying of its first foundations, has been dimensioned within the scope of various models since the day it entered the literature, and its measurement has developed in this direction.

Mayer and Salovey (1990) categorized the concept under three dimensions in their first study in which they defined emotional intelligence. According to the researchers, the concept of emotional intelligence is the appraisal and expression of emotion, regulation of emotion, and utilization of emotion. As Mayer and Salovey (1997) deepened their work in the field of emotional intelligence and improved dimensions as; the dimensions of the concept; regulating emotions, understanding emotions, assimilating emotion in toto, perceiving and expressing emotion (Mayer et al., 1997).

Focusing on the measurement of emotional intelligence and achieving successful results in this direction, Bar-On; first measured emotional intelligence in ten dimensions, by defining the term as "a set of interrelated emotional, personal, and social abilities that affect our ability to deal actively and effectively with daily demands and pressures." As a result of his factor analysis, its dimensions are; self-regard, emotional self-awareness, assertiveness, empathy, interpersonal relationship, stress tolerance, impulse control, reality testing, flexibility, and problem-solving, Bar-On (2000) then reduced the measurement material to five dimensions. In the last case, Bar-On's emotional intelligence measurement tool's

dimensions are stated as; intrapersonal, interpersonal, adaptability, stress management, and general mood components (Mishar & Bangun, 2014).

Another important model of emotional intelligence; Goleman's model, considers the variable to consist of five dimensions, these dimensions are self-awareness, self-regulation, motivation, empathy, and social skills. Goleman et al. defines emotional intelligence as "a person's ability to show the competencies that constitute self-awareness, self-management, social awareness, and social skills in order to be effective in a situation" and includes 25 different sub-dimensions under these five dimensions (Boatzis et al., 2000).

Transformational Leadership

Transformational leadership occurs when a leader inspires or changes his followers to trust the leader and perform at a higher level to achieve organizational goals (Loon et al., 2012). The first theoretical definition of the concept is based on Downton's definition of rebel leadership in 1973. Downton (1973) first introduced a transactional, charismatic, and inspirational theory of leadership in the context of the rebel political leader. Along with this study, Burns made the first concrete contribution to the theoretical foundations of the concept with his work defining transactional and transformational leadership in 1978 (Day & Antonakis, 2012). The most important studies that strengthened the theoretical foundations of the concept were carried out under the leadership of Bernard Bass.

Burns (1978) argued that transformational leadership derives its fundamental power from a moral perspective, and it has a transformative effect on both sides by raising the level of human behavior and ethical aspirations of both the leader and his followers. To put it another way, this type of leadership is rooted in morality and brings both parties together.

Bernard Bass (1990) revealed that transformational leadership, which he described as superior leadership performance, occurs when "leaders expand and leverage the interests of their

employees, create awareness and acceptance of the goals and mission of the group, and encourage their employees to look beyond their interests for the group's sake". Transformational leaders can achieve these goals in several ways;

They can be charismatic to their followers and therefore inspire them; they can meet the emotional needs of each employee and/or stimulate them intellectually.

Charismatic leaders impart significant persuasion skills. Followers who find the leader charismatic are attached to him with a high degree of trust. In addition to being charismatic, another distinguishing power of transformational leaders is that they deal with their followers individually and treat them in line with their differences. Employees' special attention to the problems they encounter and suggesting solutions other than routine solutions make employees feel special and connect to the leader even more (Bass, 1990).

From this point of view, transformational leadership characteristics are categorized under four dimensions; idealized influence, individualized attention, inspirational motivation, and intellectual stimulation (Bass, 1998 cited in Krishinan, 2005; Avolio et al., 1999; Bass et al., 2003). The idealized effect can be further divided into two sub-factors; attributed idealized influence and idealized influence behavior. Thus, it is possible to talk about five dimensions related to the formation of the concept (Bass et al., 2003; Krishinan, 2005; Loon et al., 2012);

Attributed idealized influence: Transformational leaders instill confidence in their followers and inspire them through feelings of dignity, honesty, dedication, and respect. Followers identify with and emulate their leaders. One of the things a leader does to gain credibility with his followers is to consider the needs of his followers more than his own.

Idealized influence behavior: Transformational leaders are goal-oriented and promote work completion based on a collective sense of belief, value, purpose, and mission.

Individualized attention: Transformational leaders have a goal and encourage the completion of their work based on a shared sense of belief, value, and purpose. Leaders consider the individual's need for success and growth.

Followers develop their potential performance over time. A supportive climate is created and learning opportunities are created. Individual differences are taken into account in terms of needs and wishes.

Inspirational motivation: Transformational leaders are optimistic, visionary, and passionate about business. Leader awakens team spirit, enthusiasm, and optimism are displayed.

Intellectual stimulation: Transformational leaders foster innovation and creative problem-solving. By questioning assumptions, reframing problems, and approaching old situations in new ways, leaders encourage followers' efforts to be innovative and creative.

Within the framework of transformational leadership theory, the leader and the follower seem to be inseparable as a whole and mutually harmonious relationship, but they assume different roles from each other in the process. The leader takes the initiative regarding the process; it is the leader who creates the connections that enable communication and exchange to take place. It is the leader who balances the factors affecting the followers' motivation in the process, makes predictions about their attitudes, and organizes these necessary balances in line with the purpose. The most important feature that distinguishes the transformational leader from other followers and leader types is that they address the wishes, needs, and other motivations of their followers as well as their priorities, and thus they have the power to change the structure of the motivational bases of their followers (Burns, 1978). Transformational leadership improves leader-follower ultimate value system harmony, followers' identification with the organization, and followers' commitment and emotional commitment to the organization (Krishinan, 2005).

While transformational leaders are thought to be successful in making sense of and controlling their own emotions, they can also direct their followers toward individual attention and empathy. When both variables are evaluated within the scope of their subdimensions, they contain points that support each other. Transformational leaders motivate and mobilize their teammates through their inspiring vision. Studies have shown that leaders with high EI

levels of emotional intelligence have transformational leadership characteristics. On the other hand, researchers such as Avolio and Gardner (2005) have pointed out that transformational leadership can improve emotional intelligence skills by increasing leaders' self-awareness. Within the scope of this study, the level of the relationship between the two variables in the Turkish context was considered, and the research hypothesis created in this direction is given below.

H₁: A correlation between emotional intelligence and transformational leadership variables exists.

Methodology

The argument that leaders with a high level of emotional intelligence also have a high potential for transformational leadership has led to many studies on the relationship between the two variables. The fact that there are many studies on the level and direction of the relationship between the variables associated with their various dimensions confuses and it becomes necessary to compile these studies into a single conclusion. The aim of the study on the determination of this requirement was to examine the relationship between emotional intelligence and transformational leadership within the scope of the studies carried out in the context of Turkey, and to connect the results of the quantitative studies to a clear general result by analyzing the meta-analysis method. With the meta-analysis study conducted in this direction, the relationship between the two variables was handled within the scope of studies conducted in the context of Turkey. I

As in all academic studies, the necessity to impose a limitation on the sample has arisen within the scope of this study. DERGİPARK-ULAKBİM, EBSCHO, EMERALD, GOOGLE SCHOLAR, SAGE JOURNALS, SCIENCE DIRECT, SCOPUS, WEB OF SCIENCE, YÖKTEZ databases were scanned in line with the determined keywords. Studies in the context of Turkey examining the relationship between variables were included in the research dataset without looking for language and year restrictions. The data set of the meta-analysis study was created by including

quantitative studies containing correlation data, in line with the inclusion criteria and the requirement of the research hypothesis.

Inclusion-Exclusion criteria of the study

Studies examining the relationship between emotional intelligence and transformational leadership and containing quantitative data were included in the research to be evaluated within the scope of the meta-analysis study.

No restrictions were placed on the studies included in the research in terms of sample characteristics. There are no restrictions in terms of publication year and geographical region.

Studies whose publication languages were English and Turkish were included in the study so that the researcher could make an evaluation.

Correlation was preferred as the effect size of the meta-analysis study. Accordingly, studies obtained in the literature review on the subject that did not contain "Pearson correlation value" data were excluded from the analysis.

Studies containing the Pearson correlation value for the general relationship of the variables, not on the basis of the dimensions of the variables, were included in the research.

In line with the research purpose, studies carried out in the context of Turkey were included in the analysis.

Results of 12 studies that met the inclusion criteria constitute the research dataset (The table which includes the dataset's details is available in Appendix 1). The meta-analysis carried out within the scope of the research was carried out within the working practice of the CMA package program. A detailed explanation of the effect size data, meta-analysis model, and the preferred method regarding publication bias used within the framework of the meta-analysis carried out in line with the purpose of the study is given in this section.

Effect Size Data

Lipsey and Wilson (2001) defined effect size within the scope of meta-analysis as "a statistic that encodes critical quantitative information obtained from the findings of each study included in the study". Within the scope of this study, the research

hypothesis aims to reveal the relationship between two variables. For this reason, correlation value was appropriate for and preferred as meta-analysis effect size data.

Meta-Analysis Model

Fixed effect and random effects models are two statistical methods used in meta-analysis studies (Hedges & Vevea, 1998). The fixed effect is used for inferences regarding the observed effect coefficients, and the random effects model is used to infer the distribution of the effect coefficients (Borenstein et al ., 2009). The distribution of the effect sizes of the studies included in the study is associated with the model. According to Hedges and Vevea (1998), a fixed effect model should be used when effect sizes are homogeneously distributed, and random effects model should be used when heterogeneously distributed. In this study, the random effects model was used because of the structure of the data set and the aim of achieving generalizable results. The accuracy of the selected model was confirmed when the homogeneity test of the studies included in the data set was performed.

Publication Bias

The publication bias problem, which is the general problem of meta-analysis studies, is due to the higher publication rate of studies with a high effect size. On the other hand, this problem is not only valid for meta-analysis studies (Borenstein et al ., 2009). Not publishing studies with low effect size or lack of significance results in publication bias as a file drawer problem (Card, 2015). Within the scope of meta-analysis studies, there are various analysis methods to eliminate publication bias. Within the scope of the CMA package program, there are lots of methods like; forest plot, funnel plot, Begg and Mazumdar rank test, Egger test, Rosenthal's Safe N, Orwin's Safe N, Duval, and Tweedie's Cut and Add Methods (Üstün & Eryılmaz, 2014). In this study, the funnel plot and the Begg and Mazumdar rank test findings were used to detect and eliminate publication bias.

Findings

Fixed and Random Effects Models

The first step in meta-analysis studies is the determination of the analysis model. Within the scope of this study, the random effects model, which is the second of the fixed effects and random effects models, was chosen. The reason for this is, primarily the random effects model suitable for the purpose of the study, and the Hedges Q homogeneity test findings also support the selection of the random effects model (Hedges & Vevea, 1998).

Table 1. Meta-Analysis Model

Model	95% Confidence Interval					heterogeneity				
	k	effect size	lower limit	Upper limit	Z	P	Q value	df	P	I ²
Fixed Effect	12	0.329	0.290	0.367	15,544	0,000	157,772	11	0,000	93,028
Random Effects	12	0.343	0.186	0.482	4,150	0,000				

When the analysis findings of the fixed effect and random effects models (Table 1), which were revealed in line with the data set, are evaluated, it is seen that the Q test is significant ($p \leq 0.05$). This finding means that it is appropriate to use the random effects model in the interpretation of the data set. In line with the findings, it was seen that a heterogeneous data set was studied, and if the I² value was greater than 75%, the amount of heterogeneity was high (Higgins & Thompson, 2002).

Within the scope of this study, the use of the random effects model was deemed appropriate since it was aimed to generalize the research results and the studies included in the meta-analysis were taken from the published literature. As a result of the analysis, it was seen that the effect

sizes of the studies in the sample were distributed heterogeneously, and random effects were observed. The accuracy of choosing the model was also confirmed by the analysis findings. Based on this finding, random effects model was used in the meta-analysis.

Publication Bias

The selection of the data set, the constraints on reaching the publications, and the existence of various problems in obtaining the data set are important constraints for all meta-analysis studies. In order not to allow this limitation to damage the validity and reliability of the study, analyses regarding the absence of publication bias are carried out, and studies that cause bias are removed from the data set. In the scope of the study, publication bias was examined with the funnel plot and the Begg and Mazumdar rank correlation test.

Table 2. Publication Bias Statistics- Begg & Mazumdar Rank Correlation Test

Tau	0.030
Z value	0.137
p value	0.890

As in the Begg and Mazumdar rank correlation analysis findings, the insignificance of the tau coefficient ($p > .05$) means that there is no publication bias. With this analysis finding, the hypothesis regarding the publication bias in the data set was rejected. The hypothesis regarding the bias of the data set analyzed using the random effects model was rejected with the Kendall τ (tau) coefficient to be insignificant ($p > .05$) (Bakioğlu & Özcan, 2016).

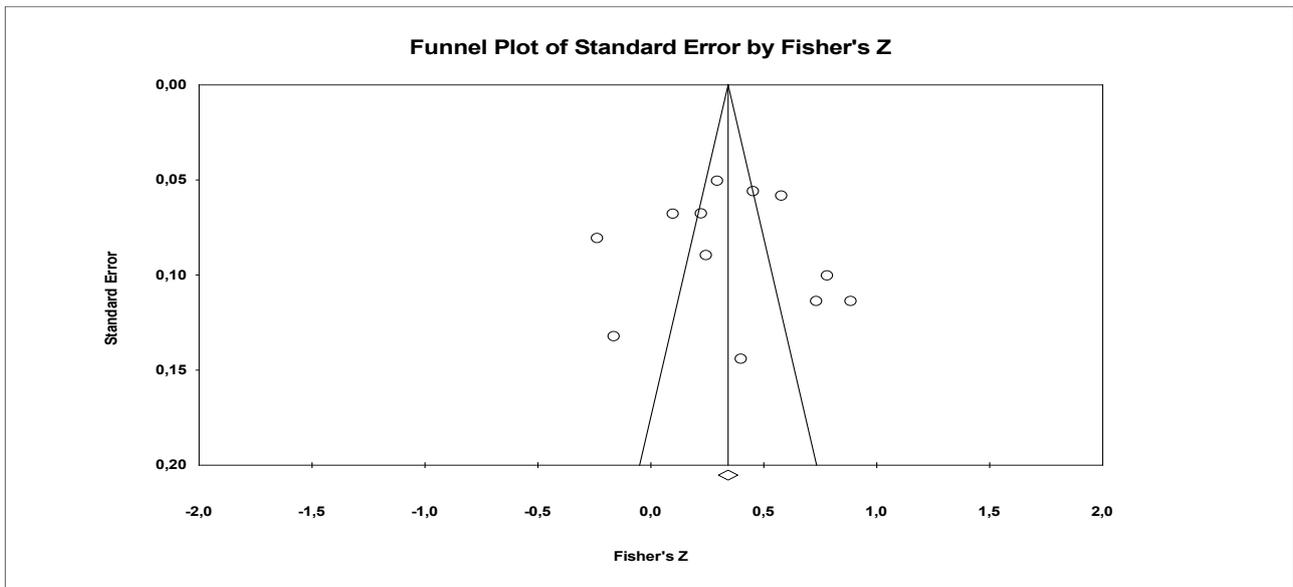


Figure 1. Emotional Intelligence and Transformational Leadership Relation Funnel Plot

In the funnel plot, it is observed that the scattering of the data set is not at a level to cause publication bias. However, Begg and Mazumdar rank correlation analysis of the data set was also performed in order to equalize the risk of making a subjective judgment with the help of only a visual graphic (table 2).

Effect Size Analysis

The study aims to reveal the relationship between the variables of emotional intelligence and transformational leadership in organizations in line with the studies conducted in the context of Turkey. The results of 12 studies obtained with the

inclusion criteria determined in line with this goal were examined and the findings regarding the

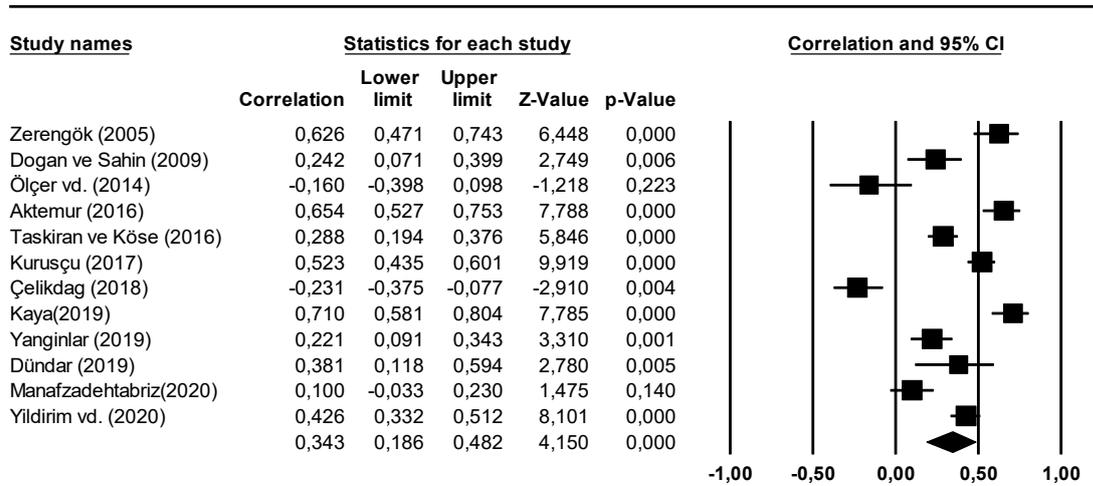


Figure 2 . Emotional Intelligence and Transformational Leadership Relation Forest Graph

relationship between the variables were reached. The research hypothesis created in line with the purpose of the research was tested at the 95% confidence interval and the findings were presented in the meta-analysis forest graph (Figure 2).

In line with the studies conducted in the context of Turkey, the effect sizes calculated on the relationship between emotional intelligence and transformational leadership variables vary between -0.231 and 0.710. The Z statistic of the meta-analysis test created within the framework of the random effects model was found to be significant. The fact that the Z statistic is significant ($p \leq .05$) reveals that the relationship between the two variables included in the analysis is statistically significant. As a result of the meta-analysis findings carried out with the random effects model, it was concluded that there was a significant relationship between the emotional intelligence and transformational leadership variables at the 95% confidence interval and the effect size was 0.343. When this relationship is interpreted by Cohen's meta-analysis effect sizes classification, it is considered a moderate relationship (Cohen, 1988).

Conclusion

The realization of the fact that intellectual intelligence alone is not adequate to conduct social relations in business life came with the discovery of social intelligence and its subsets. Studies on the leadership characteristics of managers and various intelligence types have reached various results between different dimensions and types. Emotional intelligence, which has an undeniable importance in corporate life, and the relationship of this type of intelligence with transformational leadership have also been the subject of many studies. The dimensions of emotional intelligence can be described as concepts that enrich the transformational leader's hand.

By the way, the purpose of this study is to test the hypothesis of the existence of a relationship between the two variables with the meta-analysis method. In line with the purpose of the study, the results of studies examining the relationship between emotional intelligence and transformational leadership variables in the context of Turkey with correlation analysis were included in the research data set. The meta-analysis was carried out with the random effects model determined in line with the purpose of the study. The suitability of the data set for the model determined for the purpose was confirmed by the Hedges Q homogeneity test findings. Analysis of the absence of publication bias in the created data set; was tested with the help of a funnel plot and

the Begg and Mazumdar rank correlation test. The results obtained from these analyzes revealed that there was no publication bias problem in the meta-analysis study. As a consequence of the results obtained from 12 studies in the context of research inclusion criteria, it was concluded that there was a significant relationship at the level of 0.343 in the 95% confidence interval in the relationship between the variables. When evaluated according to Cohen's effect size classification; There is a moderately significant relationship between emotional intelligence and transformational leadership variables.

Revealing the moderate relationship between emotional intelligence and transformational leadership in the Turkish context in this meta-analysis shows that there is a certain level of connection between leaders' and employees' EI skills and transformational leadership in the Turkish context. A leader's emotional intelligence skills shape his leadership style and interact with transformational leadership characteristics. The relationship between transformational leadership and emotional intelligence enables a leader to be an effective transformational leader using emotional intelligence skills. This can increase the emotional intelligence level of both the leader and team members, thus creating a healthier and more effective work environment.

The limitations of this study include the accessibility of published studies within the scope of the study and the inability to obtain sufficient data in line with these dimensions. It is thought that as the number of studies examining the relationship between two variables increases, the data will become richer, and thus, the data constraint will decrease.

This study reveals the existence of a moderately positive relationship between the variables, representing a sample of 2102 individuals obtained from the 12 included studies. The study is considered to be important in terms of academic literature since it represents a much larger sample than other studies examining the relationship between emotional intelligence and transformational leadership variables. In terms of future research, it is thought that it would be beneficial for other meta-analysis studies to be

carried out on the subject by imposing restrictions on different contexts, enabling inter-context comparisons. In this way, it will be possible to reach findings on the importance of cultural elements in the relationship between the two variables. The study draws attention to the emotional intelligence levels of the employees who will be assigned to these positions in cases where transformational leadership is required. It is thought that the results obtained within the study are also important in terms of corporate life with this aspect.

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- *These papers were used to generate data for the meta-analysis conducted within the study.

APPENDIX 1. Dataset Details

	Author-Publication Year	Study Type	Language of Study	Sample Size	Correlation Coefficients
1	Zerengök (2005)	dissertation	Turkish	80	0,626
2	Doğan ve Şahin (2009)	article	Turkish	127	0,242
3	Ölçer vd. (2014)	article	English	60	-0,160
4	Aktemur (2016)	dissertation	Turkish	102	0,654
5	Taşkıran ve Köse (2016)	article	Turkish	392	0,288
6	Kuruşçu (2017)	dissertation	Turkish	295	0,523
7	Çelikdağ (2018)	dissertation	Turkish	156	-0,231
8	Kaya(2019)	dissertation	Turkish	80	0,710
9	Yangınlar (2019)	article	Turkish	220	0,221
10	Dündar (2019)	dissertation	Turkish	51	0,381
11	Manafzadehtabriz(2020)	dissertation	Turkish	219	0,100
12	Yıldırım vd. (2020)	article	English	320	0,426

RESEARCH ARTICLE

The Mediating Role of Country of Origin Effect in the Effect of Consumer Ethnocentrism on Cafe Preference

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Abstract

This research aims to investigate the mediating role of the country of origin effect (COO) in the relationship between consumer ethnocentrism (CE) and cafe preference. Consumer ethnocentrism refers to the extent to which consumers exhibit a preference for domestic products over foreign ones. The country of origin effect suggests that consumers' evaluations and perceptions of a product are influenced by its country of origin. In the context of the cafe industry, this study examines whether consumer ethnocentrism influences Turkish/American cafe preference, and whether this relationship is mediated by the country of origin effect for Turkish consumers who live in Rize. The findings revealed that CE has an effect on both COO and cafe preference. COO has a direct effect on cafe preference and mediation role in the effect of consumer ethnocentrism on cafe preference. The result indicating that the country of origin effect of Turkish consumers has a positive impact on both Turkish and American cafe preferences suggests that Turkish consumers may have a favorable view of both Turkish and American cafes based on their perceived country of origin.

Keywords: Consumer Ethnocentrism, Cafe Preference, Country Of Origin Effect, Turkish Cafes, American Cafes.

Öz

Bu çalışma, tüketici etnosentrizm ile kafe tercihi arasındaki ilişkide menşe ülke etkisinin aracı rolünü araştırmayı amaçlamaktadır. Tüketici etnosentrizmi, tüketicilerin yerli ürünleri yabancı ürünlere tercih etme derecesini ifade etmektedir. Menşe ülke etkisi, tüketicilerin bir ürüne ilişkin değerlendirmelerinin ve algılarının menşe ülkesinden etkilendiğini öne sürmektedir. Bu çalışma, kafe sektörü bağlamında, Rize'de yaşayan bireyler için tüketici etnosentrizminin Türk/Amerikan kafe tercihini etkileyip etkilemediğini ve bu ilişkiye menşe ülke etkisinin aracılık edip etmediğini incelemektedir. Bulgular, tüketici etnosentrizminin hem köken ülke etkisi hem de kafe tercihi üzerinde etkisi olduğunu ortaya koymuştur. Menşe ülke etkisinin kafe tercihi üzerinde doğrudan etkisi vardır ve tüketici etnosentrizminin kafe tercihi üzerindeki etkisinde aracılık rolüne sahiptir. Türk tüketicilerin menşe ülke etkisinin hem Türk hem de Amerikan kafe tercihlerini olumlu yönde etkilediğini gösteren sonuç, Türk tüketicilerin algıladıkları menşe ülkeye bağlı olarak hem Türk hem de Amerikan kafeleri hakkında olumlu bir görüşe sahip olabileceklerini göstermektedir.

Anahtar Kelimeler: : Tüketici Etnosentrizmi, Cafe Tercihi, Menşe Ülke Etkisi, Mediation, Turk Kafeler, Amerikan Kafeler.

Introduction

The significance of the country of origin (COO) in consumer decision-making and marketing is rooted in various reasons. The COO can impact how consumers perceive the quality, craftsmanship, and reliability of a product. Different countries are often associated with specific industries or product expertise, shaping consumers' expectations and evaluations. A positive country image can enhance consumers' trust and willingness to purchase products from that country. Consumers may also associate certain cultural values, traditions, or symbols with specific countries, influencing their preferences and choices. Furthermore, the COO can add authenticity and uniqueness to a product, satisfying consumers' desire for genuine experiences and cultural identities. Consumers with different levels of product knowledge tend to make use of COO cues in their product evaluation in different ways (Lee & Lee, 2009). Businesses must understand and manage the COO effect to align with consumers' expectations and preferences in their target markets (Papadopoulos & Heslop, 2002).

Consumer ethnocentrism (CE), on the other hand, refers to the inclination of consumers to favor domestic products over foreign alternatives. It stems from national or cultural identity, impacting consumer choices. Ethnocentric consumers believe that products made in their own country are superior to those from other countries (Cleveland et al., 2009). This bias is driven by patriotism, cultural pride, and loyalty towards domestic industries. Ethnocentric consumers tend to evaluate products based on their COO rather than objective attributes, perceiving domestic products as more reliable, trustworthy, or culturally suitable. Understanding CE is vital for marketers, as they must consider its impact on consumer behavior and tailor their marketing strategies accordingly (Balabanis & Diamantopoulos, 2008; Maheswaran & Chen, 2006).

Cafe preference refers to the specific choices individuals make when selecting and visiting cafes. It encompasses various factors, including ambiance, menu offerings, food and beverage

quality, service, location, and overall experience. Cafe preference is subjective and varies based on personal preferences, cultural background, lifestyle, and specific needs. Factors such as atmosphere, décor, music, seating options, and available amenities like Wi-Fi or outdoor seating influence cafe preference. Additionally, considerations such as atmospherics (Spence et al., 2014) coffee and tea variety, food choices, pricing, and customer service contribute to individuals' preferences when choosing a restaurant (Ryu et al., 2012).

Gaining insights into how CE and the COO effect impact cafe preference is essential for comprehending the intricate decision-making process when choosing a cafe. By examining these factors, the study aims to uncover the potential role of CE and the COO effect in shaping cafe preference. Specifically, CE influences individuals' choices of cafes, as those with ethnocentric tendencies tend to favor domestic restaurants over foreign ones (Oh et al., 2020; Kavak & Gumusluoglu, 2007; Bi et al., 2012). Besides, the COO effect may act as a mediator by influencing how CE influences cafe selection (Wei et al., 2021). For instance, if consumers perceive cafes from their own country as authentic or superior, their ethnocentric beliefs may drive a preference for domestic cafes. By exploring the potential mediating role of the COO effect in the relationship between CE and cafe selection, this study seeks to deepen the understanding of the underlying mechanisms and dynamics involved. These insights can contribute to a more comprehensive understanding of how consumer preferences form and help cafe owners and marketers develop effective strategies that cater to ethnocentric tendencies and the influence of the COO effect.

This research focuses on Turkish consumers and their preferences when choosing between five cafes: "Starbucks, Gloria Jeans" as American cafes, and "Mado, Gönül Kahvesi, Kahve Dünyası", as Turkish cafes. These five cafes are located in the shopping mall in Rize/Türkiye. The aim of the study is to examine the factors influencing Turkish consumers' cafe preferences and explore any potential differences in their choices between the international brands and the local brands. By investigating the decision-making process of

Turkish consumers in this context, the study aims to provide insights into the factors that shape their preferences and shed light on the interplay between CE, and the COO effect.

Hypotheses Development

The significance of the COO effect in consumer behavior and marketing is a crucial research area. The reviewed studies underscore the role of the COO effect in shaping consumer preferences, evaluations, and purchase decisions. Understanding the underlying mechanisms and marketing implications associated with the COO effect can enable companies to develop effective strategies that leverage this phenomenon to enhance brand positioning in the global marketplace. It is worth noting that the COO effect can elicit both positive and negative responses from consumers, depending on their preexisting notions and beliefs about specific countries and products. Numerous factors, such as product category, CE, knowledge, brand reputation, cultural congruence, and individual differences, have been identified as influential in determining the strength and extent of the COO effect (Aktan & Anjam, 2022). Various mechanisms, including signaling theory, stereotype and schema activation theory, and cognitive categorization processes, have been proposed to elucidate how the COO effect operates. Given its implications, companies can capitalize on the COO effect to enhance brand image, differentiate products, and foster trust and credibility. Effective communication of a product's COO, emphasizing positive country associations, and aligning the brand image with the perceived attributes of that country are pivotal strategies for maximizing the benefits derived from the COO effect (Pegan et al., 2022).

CE and the COO effect are interconnected concepts, yet they possess unique meanings and implications within the realm of consumer behavior. CE pertains to the inclination of consumers to prefer domestic products over foreign alternatives, stemming from sentiments of national or cultural pride, loyalty, and a belief in the superiority of domestic goods. Consumers with ethnocentric tendencies exhibit a bias toward products originating from their own country or

cultural group, perceiving them as more reliable, trustworthy, and better aligned with their cultural preferences. CE influences their evaluations, purchase decisions, and brand preferences, thus shaping their overall consumer behavior. In contrast, the COO effect concerns the influence that a product's COO exerts on consumers' perceptions, attitudes, and purchase decisions. It encapsulates how consumers perceive the quality, reliability, and desirability of a product based on its associated country (Camacho et al., 2021; Arslandere & Yusuf, 2020).

The COO effect suggests that consumers form judgments and expectations predicated on the COO, leading to the formation of positive or negative associations that impact consumer evaluations and purchase intentions. Essentially, the COO effect investigates how the COO functions as a cue or signal for consumers to deduce product attributes and make inferences regarding its quality and value. CE predominantly revolves around consumer biases and preferences favoring domestic products, thereby reflecting national or cultural pride. Conversely, the COO effect places its focus on the influence of a product's COO on consumer perceptions and evaluations. Although CE can influence the COO effect, these two concepts possess distinct focuses and implications. CE directly reflects consumer biases and preferences, while the COO effect delves into how the COO shapes consumer perceptions and evaluations of products. Both concepts contribute to the comprehension of consumer behavior and hold implications for marketing strategies and branding decisions (Naeimi, 2022).

CE has a significant impact on the COO effect, shaping how consumers perceive and evaluate products based on their COO. Ethnocentric bias affects their perception of the COO effect, leading to a stronger preference for domestic products and a tendency to attribute positive qualities to products from their own country. Ethnocentric beliefs and attitudes influence how consumers interpret and attribute meaning to the COO information. Consumers with ethnocentric tendencies may rely heavily on the COO as a cue to infer product quality and attribute positive or

negative qualities based on their preconceived notions about the COO (Rodrigo et al., 2023).

Nguyen and Nguyen (2020) conducted a study focusing on the impact of CE on the COO effect. Their research explored how ethnocentric tendencies among consumers influenced their perceptions and evaluations of products based on their COO. The study provided insights into how CE can shape the COO effect and influence consumer responses to products from different countries. Han and Terpstra (1988) conducted a study examining the COO effect for products originating from a single country or multiple countries. Their research explored how CE influenced consumers' evaluations and preferences for products based on their COO. The study demonstrated that ethnocentric consumers exhibited a stronger preference for products from their own country, indicating the influence of CE on the COO effect. These studies collectively contribute to our understanding of the effect of CE on the COO effect. They highlight the role of ethnocentric tendencies in shaping consumer perceptions, evaluations, and preferences for products based on their COO. Understanding this relationship is crucial for marketers and businesses aiming to effectively position their products in different markets and cater to ethnocentric tendencies. Therefore, H1 is developed:

H1: Consumer ethnocentrism (CE) has a positive impact on country of origin (COO) effect.

CE can have an impact on cafe preference. When it comes to choosing cafes, consumers with ethnocentric tendencies may exhibit a preference for domestic cafes over those originating from other countries. This preference is driven by feelings of national pride, cultural loyalty, and a belief in the superiority of domestic establishments. The effect of CE on cafe preference manifests in several ways. Firstly, ethnocentric consumers may perceive domestic cafes as more authentic and representative of their cultural identity. They may prefer the ambiance, menu offerings, and overall experience of cafes that align with their cultural preferences and traditions. This preference for familiar cultural elements and an affinity for the local cuisine can lead to a higher inclination towards domestic cafes. Secondly, CE can influence perceptions of product quality and

trustworthiness. Ethnocentric consumers may perceive cafes from their own country as more reliable, as they believe that domestic establishments adhere to higher standards and better understand their specific preferences. This bias can shape their evaluations and willingness to choose domestic cafes over foreign ones. Furthermore, CE can extend to supporting the local economy. Ethnocentric consumers prioritize contributing to their domestic economy by patronizing domestic cafes, as it aligns with their sense of national pride and loyalty (Hong et al., 2023; Zhang et al., 2023). This preference for supporting local businesses reinforces their preference for domestic cafes and influences their cafe selection.

Steenkamp and de Jong (2010) conducted a study exploring consumer attitudes toward global and local products. They found that ethnocentric consumers exhibited a stronger preference for local products, perceiving them as more aligned with their cultural identity and preferences. The research emphasized the influence CE on local products, highlighting the inclination for ethnocentric consumers to favor products associated with their own country. Many studies collectively provide evidence for the effect of CE on product preference. They consistently demonstrate that ethnocentric consumers tend to exhibit a stronger preference for domestic products, perceiving them as more authentic, culturally aligned, and in line with their preferences. These findings contribute to a deeper understanding of the role of CE in shaping product preference and have implications for marketers in catering to ethnocentric consumer segments. Therefore, H2 is developed:

H2: Consumer ethnocentrism (CE) has a positive impact on cafe preference.

The COO of a cafe can evoke certain associations and expectations in consumers' minds. For example, cafes originating from countries known for their coffee culture, such as Italy, Türkiye or Ethiopia, may be perceived as offering an authentic coffee experience. Similarly, cafes associated with countries known for their culinary traditions or specific food and beverage specialties may be perceived as offering unique and desirable menu options. The COO effect

influences cafe preference in several ways. Firstly, consumers may have preconceived notions or stereotypes about the quality, authenticity, and expertise of cafes from specific countries. These perceptions can shape their preferences and incline them towards cafes from those countries. Secondly, the COO effect can influence consumers' expectations regarding the overall experience they anticipate at a cafe. For example, consumers may associate cafes from certain countries with a particular ambiance, decor, music, or seating arrangements. These associations can influence their preference for cafes that align with their desired atmosphere or cultural experience. Additionally, the COO effect can affect consumers' perceptions of the quality and taste of the food and beverages offered at a coffee shop (Li et al., 2022).

Consumers may attribute certain characteristics or traits to cafes from specific countries, such as superior coffee or pastry craftsmanship. Turkish coffee has gained a notable reputation on a global scale due to its unique characteristics, cultural significance, and historical significance. Turkish coffee is renowned for its distinct preparation method and the rich cultural heritage associated with its consumption. It has been a symbol of hospitality, socialization, and tradition for centuries (Keskin & Güneş, 2021). Furthermore, the COO effect may also evoke feelings of familiarity or novelty, depending on the consumer's exposure to different countries' cafe cultures. Consumers may seek out cafes from foreign countries to experience something new and different, or they may prefer domestic cafes that provide a sense of familiarity and comfort. These studies collectively provide evidence for the effect of the COO on cafe preference. They highlight how the COO, as an influential factor, influences consumer evaluations, perceptions, and preferences within the cafe industry. Therefore, H3 is developed as follows:

H3: Country of origin (COO) effect has a positive impact on cafe preference.

Bayır and others (2022) conducted a research in Türkiye who had at least one dose of vaccination against COVID-19. Some consumers were found to be prejudiced toward vaccines due to perceived distrust, hesitation, and lack of product information. The COO and product judgment of

the vaccine were found to have a significant mediating effect on the intention to recommend. H4 posits that the impact of CE on cafe preference is influenced by the perceived COO of the cafes in question, suggesting that consumers' ethnocentric tendencies may be a key factor in shaping their preferences for cafes with different national origins.

H4: Country of origin (COO) plays a mediating role in the effect of consumer ethnocentrism (CE) on cafe preference.

Methodology

Using convenience sampling, an online questionnaire was distributed in February 2023, with a total of 306 participants who live in Rize/Türkiye. Confirmatory Factor Analysis (CFA) was used to examine the structural validity of the scale variables, and Cronbach's Alpha reliability analyses were conducted to determine their reliability levels. The questionnaire consisted of four parts. The first section included the CE scale (adapted from Shimp and Sharma, 1987), the second section contained the cafe preference scale (adapted from Smith and others, 2010), the third section comprised the COO effect scale (adapted from Arı and Madran, 2011), and the final section included seven categorical questions regarding personal characteristics. Exploratory Factor Analysis (EFA) was employed to test the structural validity of the scale variables, while Cronbach's Alpha reliability analyses were used to assess the reliability levels. Prior to the validity and reliability analyses, the data set was examined for missing values and outliers. No missing values were observed in the data set, but it was found that 5 out of 311 observations had Z-score values exceeding 3.29 for different variables. As this Z-score value is known to indicate outliers, these observations were excluded from the study. The presence of a small number of observations with outliers, which accounted for less than 5% of the total observations, did not raise concerns about manipulation (Tabachnick & Fidell, 2013).

Exploratory Factor Analysis is a statistical technique used when the researcher is interested in discovering which variables in a single data set form relatively independent subsets from one

another. Variables that are related to each other but largely independent from other subsets of variables are combined as factors. Factors are believed to reflect the underlying processes that create correlations among the variables (Tabachnick & Fidell, 2013). Prior to conducting exploratory factor analysis, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were examined. The Kaiser-Meyer-Olkin measure assesses the adequacy of the sample to measure the phenomenon with a scale consisting of k items. Scales comprising a large number of different questions can be developed to measure a phenomenon. The measure indicates where the existing scale stands on this scale. The Kaiser-Meyer-Olkin measure of sampling adequacy is a value that demonstrates the adequacy of the existing sample, consisting of k items, to measure the phenomenon compared to its counterparts. The value should be greater than 0.5. As the value approaches 1, it indicates that the existing scale is highly adequate in measuring the phenomenon. On the other hand, the Bartlett's test of sphericity determines whether the items in the existing scale are related to each other and whether the scale consists of one or more sub-dimensions. If the probability value (p) is greater than 0.05, it means that the items in the scale are independent of each other or not sufficiently correlated. A significance level of $\text{sig.} < 0.05$ means that the scale is effective in measuring the sub-dimensions of the phenomenon (Özdamar, 2016).

Findings

Cronbach's Alpha reliability analyses were applied to assess the reliability levels of the scale and sub-dimensions. In the first factor analysis applied to the scale with Varimax rotation, it was seen that the scale had 2 factors. Varimax rotation was repeated by forcing the scale to a single factor in its original structure. The findings of the factor analysis performed by forcing the scale to a single factor, together with the findings of Cronbach's Alpha Reliability Analysis are presented in Table 1.

Table 1. Validity and Reliability Analysis Findings of Consumer Ethnocentrism (CE) Scale

Item	Factor Loadings CE
1. Restrictions should be placed on the import of foreign products.	0.822
2. It is not right to prefer foreign brands.	0.816
3. A real Turk should prefer local products.	0.812
4. It is an unbecoming behavior for Turks to buy foreign branded products.	0.799
5. Foreign branded products should not be purchased in order to prevent damage to the country's economy and trade.	0.789
6. It is always best to prefer domestic products.	0.759
7. Turkish people should always make their choice in favor of domestic products.	0.757
8. Consumers who prefer foreign branded products are responsible for the unemployment of Turkish workers.	0.747
9. Instead of allowing other countries to become rich through our country, it is necessary to buy products made in Türkiye.	0.745
10. Foreign products should not be purchased unless it is necessary.	0.738
11. Foreign enterprises should be prevented from entering our markets.	0.737
12. Even though the domestic product I will buy is more costly in the long run, I prefer the domestic product.	0.734
13. Only products not available in Türkiye must be purchased from other countries.	0.727
14. Purchasing domestic products helps to eliminate the unemployment problem in Türkiye.	0.712
15. A high rate of tax should be applied to foreign products in order to make entry into Türkiye more difficult.	0.702
16. Products produced in Türkiye are always at the forefront for me.	0.564
17. Only products that are not produced in Türkiye should be imported.	0.471
Diagnostic Statistics	
KMO Sampling Adequacy Criterion	KMO=0.906
Bartlett Test of Sphericity	$\chi^2(136)=4129.064^*$ [0.000]
Ratio of Total Variance Explained (%)	%54.235
Scale Cronbach's Alpha	r=0.944

* Indicates statistical significance at the (5%) significance level, χ^2 : Chi-square test statistic, (includes the test degrees of freedom in brackets.) [the test in brackets includes the significance (p) value], ≈ Indicates that the value was calculated approximately.

Based on the findings of the factor analysis, considering the slope scree plot and the explained total variance ratios, it was observed that the second factor had a significantly lower eigenvalue and explanatory power. Therefore, it was decided that the scale can be represented by a single factor

structure. The KMO (Kaiser-Meyer-Olkin) measure of sampling adequacy indicated that the scale had a high level of sampling adequacy (KMO > 0.9). Additionally, the results of the Bartlett's test of sphericity indicated that the scale items had a sufficient level of intercorrelation at the 0.05 significance level ($\chi^2(136) \approx 4129.064$, $p < 0.05$). For the single-factor structure, it was found that the scale accounted for 54.235% of the total variance. This proportion being above 50% is a positive indication of the scale's measurement power. Upon examining the factor loadings of the scale items, it was observed that all but one had loadings above 0.5, with one loading at 0.471. Due to the desire to maintain the original structure and the favorable findings of the scale, it was decided to keep the item within the scale. The calculated Cronbach's Alpha coefficient for scale reliability indicated that the scale is an instrument with excellent reliability. ($0.9 \leq r$) The item analysis related to the scale reliability is presented in the appendix. Based on the findings of the structural validity and reliability analysis of the "Consumer Ethnocentrism (CE) Scale", it was concluded that the scale, with all its items, is a valid and highly reliable instrument for measuring CE. In the first factor analysis applied to the "Cafe Preference Scale" with the Varimax rotation technique, it was seen that the scale produced 2 factors: Turkish cafe preference (TCP) and American cafe preference (ACP). The ratios of variance explained by the factors were examined with the scree plots. It has been observed that the scale has a two-factor structure in line with both the slope fallout graph and the explained variance rates. The validity and reliability analysis findings of the cafe preference scale are as in Table 2.

Table 2. Results of the Validity and Reliability Analysis of the Turkish Cafe Preference (TCP) and American Cafe Preference (ACP) Scale

Item	Factor Loadings		Explained Variance (%)	r
	TCP	ACP		
1. When I go to the mall, I mostly prefer Mado. (Turkish)	0.896		%46.642	0.854
2. When I go to the mall, I mostly prefer Gönül Kahvesi. (Turkish)	0.891			
3. When I go to the mall, I mostly	0.849			

prefer Kahve Dünyası. (Turkish)			
1. When I go to the mall, I mostly prefer Starbucks. (American)	0.962	%37.409	0.924
2. When I go to the mall, I mostly prefer Gloria Jeans. (American)	0.958		
Diagnostic Statistics			
KMO Sampling Adequacy Criterion		KMO=0.636	
Bartlett Test of Sphericity		$\chi^2(10) \approx 843.251^*$	[0.000]
Ratio of Total Variance Explained (%)		%84.051	
Scale Cronbach's Alpha		r=0.741	

* Indicates statistical significance at the (5%) significance level, χ^2 : Chi-square test statistic, (includes the degree of freedom of the test in brackets.) [the test in square brackets includes the significance (p) value], \approx Indicates that the value was calculated approximately, F1: Turkish Cafe Preference, F2: American Cafe Preference

When Table 2 is examined, it can be seen that the scale has sufficient sampling adequacy (KMO>0.6) and the level of relationship between the scale items is significant at a 5% level of significance to explain the higher-order latent structures ($\chi^2(10) \approx 843.251$, $p < 0.05$). While the cumulative variance explained by two factors for the scale is approximately 84%, the first factor accounts for about 47% of the total variance, and the second factor explains about 37% of the total variance. The cumulative variance explained being well above 50% is interpreted as a positive indication in terms of measurement power. When examining the factor loadings calculated for the scale items, it is observed that all of them are above the desired level of 0.5, and some even exceed 0.8. Based on these coefficients, it can be stated that the scale items contribute significantly to the measurement function of the scale. When examining the reliability levels for the scale and factors, it can be seen that the Turkish cafe preference factor is very good ($0.8 < r \leq 0.9$), the American cafe preference factor is excellent ($0.9 < r$), and the entire scale is a reliable measurement tool at a good level ($0.7 < r \leq 0.8$). Based on the findings of the structural validity and reliability analysis of the Cafe Preference Scale, it is decided that the scale, with all its items, is structurally valid and has high

Table 3. Validity and Reliability Analysis Findings for the Country of Origin (COO) Influence Scale

Item		Factor Loadings
		COO
1. I look at the country of origin of the products I buy.		0.941
2. When buying an imported product, I pay attention to the country of origin.		0.935
3. Country of origin is the determinant of quality.		0.898
4. When I buy an expensive product, I check in which country it was produced.		0.888
5. If I don't know about the product, I look at the country of origin when making a decision.		0.860
Diagnostic Statistics		
KMO Sampling Adequacy Criterion	KMO=0.854	
Bartlett Test of Sphericity	$\chi^2(10)\approx 1634.728$	[0.000]
Ratio of Total Variance Explained (%)	%81.894	
Scale Cronbach's Alpha	r=0.943	

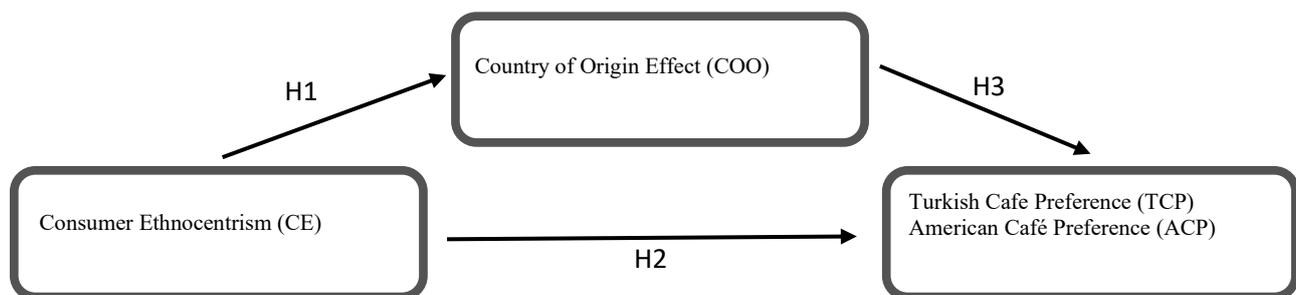
* Indicates statistical significance at the (5%) significance level, χ^2 : Chi-square test statistic, (includes the degree of freedom of the test in brackets.) [the test in square brackets includes the significance (p) value], \approx Indicates that the value was calculated approximately.

reliability as a measurement tool in two dimensions. In the initial factor analysis of the "Country of Origin Effect Scale" (COO) using the Varimax rotation technique, it was observed that the scale yielded a single factor. The scree plots and the variance explained by the factors indicate that a one-factor structure is ideal for the scale. The validity and reliability analysis findings for the COO are as presented in Table 3.

When Table 3 is examined, it can be seen that the scale has a significantly high level of sampling adequacy ($KMO > 0.8$) and the level of relationship between the scale items is sufficient at a 5% level of significance to explain the higher-order latent structures ($\chi^2(10) \approx 1634.728$, $p < 0.05$). The variance

function of the scale. When examining the reliability coefficient calculated for the COO Scale,

it is observed that the scale is an excellent and reliable measurement tool. Scale item analyses are presented in the appendices. Based on the findings of the structural validity and reliability analysis of the COO Scale, it is decided that the scale, with all its items, is structurally valid in a single dimension and has a high level of reliability as a measurement tool. When considering the research hypotheses and research objectives for the study conducted in the statistical screening model, the research model (H4 being the possible mediation of country of origin effect) can be visualized as shown in Figure 1.

**Figure 1.** Research Model

explained for the scale is approximately 81%. This ratio is a highly positive finding in terms of measurement power. When examining the factor loadings calculated for the scale items, it is observed that all of them are above 0.5, and some are even greater than 0.8. Based on the magnitudes of these coefficients, it can be stated that the scale items contribute significantly to the measurement

The data was transferred to the Microsoft Excel software package, where numerical coding was performed as needed. Subsequently, the analysis was conducted using IBM SPSS version 25.0. Baron and Kenny (1986) introduced the concept of mediated effects in the literature. They proposed mediated effects as a mechanism involving a series of statistical analyses aimed at explaining the reasons behind the relationship between

independent and dependent variables. In other words, mediated effect analysis investigates the existence of a relational mechanism that mediates the potential impact of the independent variable on the dependent variable.

In addition, Hayes (2018) developed a method known as modern mediation analysis, which focuses on calculating the coefficient of indirect effect and making inferences based on this coefficient. In this method, the significance of the indirect effect coefficient is assessed using bootstrap confidence intervals obtained from thousands of resamples, effectively addressing the strict and asymmetric assumptions of the Sobel test. In Hayes's (2018) modern mediation analysis, the mediation relationship relies on the significance of the indirect effect coefficient ($a*b$), rather than the first three conditions outlined by Baron and Kenny (1986). The Bootstrap method provides reliable confidence intervals for determining the significance of this coefficient, taking into account its asymmetric properties.

Demographic and Descriptive Findings

Demographic and descriptive statistics of the sample included in the study are presented in Table 4.

Table 4. Demographic Characteristics

Item	Category	Frequency (n)	Percentage (%)
Gender	Female	153	50.0%
	Male	153	50.0%
	Total	306	100.0%
Age	20-30	183	59.8%
	31-40	115	37.6%
	41-50	7	2.3%
	51 and over	1	0.3%
	Total	306	100.0%
Education	High School	134	43.8%
	University	145	47.4%
	Masters	26	8.5%
	PhD	1	0.3%
Total	306	100.0%	
Marital Status	Married	106	34.6%
	Single	200	65.4%
	Total	306	100.0%
Number of kids	None	222	72.5%
	1	46	15.0%
	2	36	11.8%
	3 and over	2	0.7%
	Total	306	100.0%
Monthly net income of household	8.000-15.000 TL	196	64.1%
	15.001-20.000 TL	79	25.8%
	20.001-25.000 TL	14	4.6%
	25.001 TL and over	17	5.6%
Total	306	100.0%	

Table 4. Demographic Characteristics

Item	Category	Frequency (n)	Percentage (%)
Number of visits to a cafe (Mado, Gönül Kahvesi, Kahve Dünyası, Starbucks or Gloria Jeans in the shopping mall in Rize) in the last month	None	21	6.9%
	1-5	208	68.0%
	6-10	77	25.2%
Total		306	100.0%

Considering the research hypotheses, it was decided to exclude the 21 participants who never go to a cafe from the subsequent analyses subject to hypothesis testing. Therefore, following tables show the result of 285 participants who have at least been to a café (Starbucks, Gloria Jeans, Mado, Gönül Kahvesi or Kahve Dünyası) in the shopping mall in Rize at least once in the last month. The descriptive statistics, calculated based on the standardized values ranging from 1 to 5 by dividing the total score of the questions in the scale and factors are presented in Table 5.

Table 5. Variable Descriptive Statistics

Variable	N	Minimum	Maximum	Mean (X̄)	S.D
Consumer Ethnocentrism (CE)	28	2.176	5.000	4.01	0.75
American Cafe Preference (ACP)	28	1.000	5.000	2.49	1.45
Turkish Cafe Preference (TCP)	28	1.000	5.000	3.93	1.05
Country of Origin Effect (COO)	28	1.000	5.000	3.82	1.05
	5			9	0

X̄: Mean, S.D: Standard Deviation

The Kolmogorov-Smirnov and Shapiro-Wilk normal distribution tests calculated for the variables and the skewness (S) and kurtosis (K) values are presented in Table 6.

Table 6. Variable Normal Distribution Test Statistics

Variable	Kolmogorov-Smirnov		Shapiro-Wilk		S	K
	W	[p]	D	[p]		
Consumer Ethnocentrism (CE)	W(285)= 0.118*	[0.000]	D(285)= 0.933*	[0.000]	0.329	-0.48
American Cafe Preference (ACP)	W(285)= 0.206*	[0.000]	D(285)= 0.847*	[0.000]	0.486	-1.138
Turkish Cafe Preference (TCP)	W(285)= 0.191*	[0.000]	D(285)= 0.870*	[0.000]	0.791	-0.66

Country of Origin Effect (COO)	W(285)= 0.170*	[0.000]	D(285)= 0.892*	[0.000]	- 0.469	- 0.636
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*(%5) statistically significant. W: Kolmogorov-Smirnov Normality Test Statistic, D: Shapiro-Wilk Normality Test Statistic, The numbers inside parentheses indicate the degrees of freedom for the test, The numbers inside square brackets represent the p-value for the test.

When examining Table 6, the calculated normality test statistics for all variables do not adhere to the normal distribution based on the significance values ($p < 0.05$). It is known that achieving normal distribution through normality tests for data collected using scales in social sciences is a rarely observed ideal condition. In the literature, it is suggested that for such data, examining the skewness coefficients and assuming normal distribution when there is no significant skewness would be appropriate (Tabachnick & Fidell, 2013). Upon examining the skewness coefficients of the variables in the study, it was determined that all of them have an absolute value less than 1.5, indicating that the variables do not have significant skewness ($|S| < 1.5$) (Hair, 2013). This absence of significant skewness makes the use of parametric tests reliable for the analysis of differences (Karagöz, 2016). The correlation matrix between variables is presented in Table 7.

Table 7. Correlation Matrix

	Consumer Ethnocentrism	American Cafe Preference	Turkish Cafe Preference	Country of Origin Effect
Consumer Ethnocentrism (CE)	1.000	0.162*	0.474*	0.439*
American Cafe Preference (ACP)	-	[0.006]	[0.000]	[0.000]
Turkish Cafe Preference (TCP)		1.000	0.092	0.342*
Country of Origin Effect (COO)		-	[0.121]	[0.000]

* (%5) statistically significant, [brackets contain test significance values]

Upon examining Table 7, it can be observed that there is a very weak correlation between CE and ACP, a weak correlation between CE and TCP, and a weak correlation between CE and COO. These

correlations are statistically significant and positive at the 5% level of significance ($p < 0.05$). There is no statistically significant correlation between American cafe preference and Turkish cafe preference ($p > 0.05$). However, there is a statistically significant, weak, and positive correlation between American cafe preference and COO at the 5% level of significance ($p < 0.05$). Additionally, there is a statistically significant and moderately strong positive correlation between Turkish cafe preference and COO at the 5% level of significance ($p < 0.05$).

Hypotheses Testing

The findings of the direct effect and mediator effect models in which the American cafe preference is the dependent variable are as in Table 8.

Table 8. Findings of Direct and Mediation Models 1 (American Cafe Preference)

Dependent Variable: American Cafe Preference (ACP)							
Independent variable	β	St d. β	S. E	t	p	Lower S.L.	Upper S.L.
Consumer Ethnocentrism (CE)	0.312	0.162	0.128	2.437*	[0.015]	0.059	0.563
Fixed Term	1.245	-	0.497	2.503*	[0.012]	0.266	2.224
Diagnostic Statistics							
F Test	F(1, 283)=15.635*		[0.000]				
Determination	R ² =0.026		D.R ² =0.023				
Autocorrelation	D.W=1.092						
White Test	$\chi^2(02)=103.653*$		[0.000]				
Dependent Variable: Country of Origin Effect (COO)							
Independent variable	β	St d. β	S. E	t	p	Lower S.L.	Upper S.L.
Consumer Ethnocentrism (CE)	0.612	0.439	0.081	7.531	[0.000]	0.452	0.772
Fixed Term	1.372	-	0.356	3.853	[0.000]	0.671	2.074
Diagnostic Statistics							
F Test	F(1, 283)=67.667*		[0.000]				
Determination	R ² =0.193		D.R ² =0.190				
Autocorrelation	D.W=1.224						
White Test	$\chi^2(02)=34.239*$		[0.000]				
Dependent Variable: American Cafe Preference (ACP) -Baron and Kenny-							

Independent variable	β	Std. β	S.E.	t	P	Lower S.L.	Upper S.L.
Consumer Ethnocentrism (CE)	0.027	0.014	0.119	0.229	[0.819]	-0.286	1.502
Country of Origin (COO)	0.464	0.036	0.075	6.179*	[0.000]	0.316	0.612
Fixed Term	0.608	-	0.454	1.339	[0.182]	-0.286	1.501
Sobel Test			t(02)= 4.777*	[0.000]			
Bootstrap Indirect Impact Coefficient Findings							
Bootstrap Indirect Impact Coefficient	Bootstrap Standard Error	t	[p]	Lower S.L.	Upper S.L.		
0.148	0.027	5.444*	[0.000]	0.096	0.202		
Diagnostic Statistics							
F Test	F(2, 282)=18.672*		[0.000]				
Determination	R ² =0.117		D.R ² =0.111				
Autocorrelation	D.W=1.247						
White Test	$\chi^2(05)=128.261*$		[0.000]				

* Indicates statistical significance at (5%) significance level, Std. β : Standardized coefficient, S.E: Standard Error, [includes test significance values in square brackets] χ^2 : Chi-square test statistic, (in brackets includes test degrees of freedom.) S.L: Significant Level, Indirect effect coefficient confidence intervals were obtained by Bootstrap method with 2000 resamples. The indirect effect value number is fully standardized. DW: Durbin Watson Statistics moving away from the value 2 is a sign of a serious autocorrelation problem. In this study, it was interpreted that there was an autocorrelation problem for D.W statistics outside the range of 1.900 and 2.100 with a difference of 0.100 (Gujarati & Porter, 2009).

The findings of three separate regression models and the indirect effect coefficient, along with the 2000 resampled Bootstrap results for each model, are presented in Table 8. The findings were evaluated first within the framework of Baron and Kenny's (1986) mediation procedure and then in the context of the modern method known as the indirect effect coefficient. Standardized coefficients were used for the evaluation.

In the direct effect model, where CE is the independent variable and ACP is the dependent variable, it was found that CE has a statistically significant and positive effect on ACP at the 5% level of significance ($c_1=0.162$, $p<0.05$). In other words, an increase/decrease in consumers' ethnocentrism levels leads to an increase/decrease in their preference for American cafes. Therefore, H2 was accepted for ACP model. The model was found to have issues of autocorrelation

(D.W=1.092) and heteroscedasticity, as indicated by the chi-square test ($\chi^2(02)=103.653$, $p<0.05$). To prevent efficiency losses that may arise from autocorrelation and heteroscedasticity, the model was estimated using robust standard errors.

In the direct effect model, where CE is the independent variable and COO is the dependent variable, it was found that CE has a statistically significant and positive effect on COO at the 5% level of significance ($a=0.439$, $p<0.05$). In other words, an increase/decrease in consumers' ethnocentrism levels leads to an increase/decrease in COO effect. Therefore, H1 was accepted. The model was found to have issues of autocorrelation (D.W=1.224) and heteroscedasticity, as indicated by the chi-square test ($\chi^2(02)=34.239$, $p<0.05$). To prevent efficiency losses that may arise from autocorrelation and heteroscedasticity, the model was estimated using robust standard errors.

In the mediation model, where CE is the independent variable, ACP and COO are the dependent variables, it was found that the mediating variable, COO, has a statistically significant and positive effect on the dependent variable, ACP, at the 5% level of significance ($b_1=0.464$, $p<0.05$). In other words, an increase/decrease in the level of COO effect leads to an increase/decrease in consumers' preference for American cafes. Therefore, H3 was accepted for ACP model. The model was found to have issues of autocorrelation (D.W=1.247) and heteroscedasticity, as indicated by the chi-square test ($\chi^2(05)=128.261$, $p<0.05$). To prevent efficiency losses that may arise from autocorrelation and heteroscedasticity, the model was estimated using robust standard errors.

Lastly, when comparing the coefficients of CE in the first direct effect model with the mediation model, it is observed that the coefficient that is statistically significant at the 5% level ($c_1=0.162$, $p<0.05$) in the direct effect model is statistically insignificant in the mediation model ($c'_1=0.014$, $p>0.05$). This suggests that complete mediation is present within the framework of Baron and Kenny's (1986) mediation procedure, and it can be said that the entire effect of CE on ACP is realized through the mediating effect of COO. According to the Sobel test statistics for the mediating effect, the

mediation relationship is statistically significant at the 5% level.

As observed, both within the framework of Baron and Kenny’s (1986) mediation procedure and the Modern Hayes (2018) causal steps procedure, the mediating role of COO in the effect of CE on American cafe preference has been identified. Although different approaches yield different findings, it is evident that both mediation effects are substantial. Therefore, H4 was accepted for ACP model. The findings for the direct effect and mediation models, where TCP is the dependent variable, are presented in Table 9.

Table 9. Findings of Direct and Mediation Models 2 (Turkish Cafe Preference)

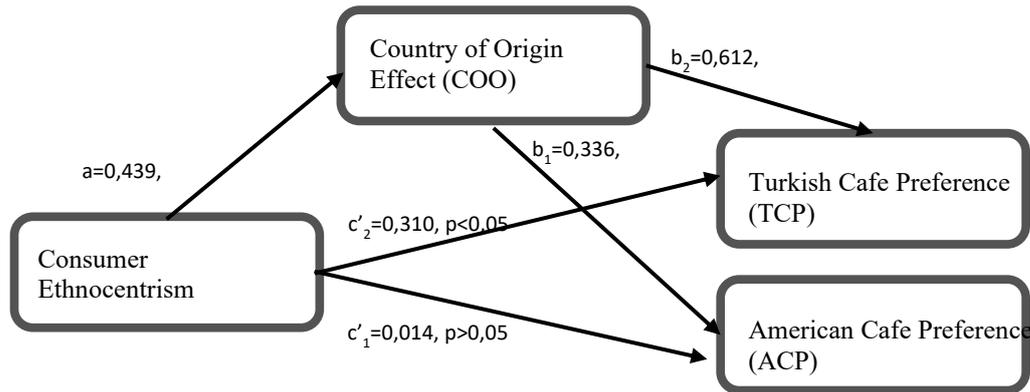
Dependent Variable: Turkish Cafe Preference (TCP)							
Independent variable	β	Std. β	S.E	t	p	Lower S.L.	Upper S.L.
Consumer Ethnocentrism (c)	0.664	0.473	0.061	10.960*	[0.000]	0.544	0.783
Fixed Term	1.273	-	0.244	5.222*	[0.000]	0.793	1.753
Diagnostic Statistics							
F Test	F(1, 283)=81.820*			[0.000]			
Determination	R ² =0.224			D.R ² =0.222			
Autocorrelation	D.W=1.832						
White Test	$\chi^2(02)=5.899$			[0.052]			
Dependent Variable: Country of Origin Effect (COO)							
Independent variable	β	Std. β	S.E	t	p	Lower S.L.	Upper S.L.
Consumer Ethnocentrism (a)	0.612	0.439	0.081	7.531*	[0.000]	0.425	0.772
Fixed Term	1.372	-	0.356	3.853*	[0.000]	0.671	2.073
Diagnostic Statistics							
F Test	F(1, 283)=56.711*			[0.000]			
Determination	R ² =0.193			D.R ² =0.190			
Autocorrelation	D.W=1.224						
White Test	$\chi^2(02)=34.239*$			[0.000]			
Dependent Variable: Turkish Cafe Preference (TCP) –Baron and Kenny-							
Independent variable	β	Std. β	S.E	t	p	Lower S.L.	Upper S.L.
Consumer Ethnocentrism (c')	0.435	0.310	0.071	6.121*	[0.000]	0.295	0.575
Country of Origin Effect (b)	0.374	0.372	0.052	7.200*	[0.000]	0.272	0.476
Fixed Term	0.760	-	0.203	3.746*	[0.000]	0.361	1.159
Bootstrap Indirect Impact Coefficient Findings							

Bootstrap Indirect Impact Coefficient	Bootstrap Standard Error	t	[p]	Lower S.L.	Upper S.L.
a.b	0.163	5.433*	[0.000]	0.111	0.228
Diagnostic Statistics					
F Test	F(2, 282)=71.279*		[0.000]		
Determination	R ² =0.336		D.R ² =0.331		
Autocorrelation	D.W=1.895				
White Test	$\chi^2(05)=54.203*$		[0.000]		

* Indicates statistical significance at (5%) significance level, Std. β : Standardized coefficient, S.E: Standard Error, [includes test significance values in square brackets] χ^2 : Chi-square test statistic, (in brackets includes test degrees of freedom.) S.L: Significant Level, Indirect effect coefficient confidence intervals were obtained by Bootstrap method with 2000 resamples. The indirect effect value number is fully standardized.

In the direct effect model, where CE is the independent variable and TCP is the dependent variable, it is observed that CE has a statistically significant and positive effect on TCP at a 5% significance level (c2=0.473, p<0.05). In other words, an increase/decrease in consumers’ ethnocentrism levels leads to an increase/decrease in their preference for Turkish cafes. Therefore, H2 was also accepted for TCP model. Therefore, it can be said that the first condition of Baron and Kenny’s (1986) mediation procedure is met. Diagnostic statistics indicate the presence of autocorrelation (D.W=1.832), but no issue of heteroscedasticity is detected ($\chi^2(02)=5.899$, p>0.05). To prevent efficiency losses due to autocorrelation, the model is estimated using robust standard errors.

In the mediation model, where CE and COO are the independent variables and TCP is the dependent variable, it is observed that the mediating variable of COO has a statistically significant and positive effect on the dependent



AT=1,245+0,162TE	TT=1,273+0,474TE
KE=1,372+0,439TE	KE=1,372+0,439TE
AT=0,608+0,014TE+0,336KE	TT=0,760+0,310TE+0,372KE
ab1=0,148	ab2=0,163
c1=0,162	c1=0,473

Figure 2. Mediation Effects

variable of Turkish cafe preference at a 5% significance level ($b_2=0.372, p<0.05$). In other words, an increase/decrease in COO leads to an increase/decrease in TCP. Therefore, H3 was also accepted for TCP model. It can be said that the third condition of Baron and Kenny's (1986) mediation procedure is met. Diagnostic statistics indicate the presence of autocorrelation ($D.W=1.895$) and heteroscedasticity issues ($\chi^2(05)=54.203, p<0.05$). To prevent efficiency losses due to autocorrelation and heteroscedasticity, the model is estimated using robust standard errors. Finally, when comparing the coefficients of CE in the direct effect model and the mediation model, it is observed that the coefficient that is statistically significant at a 5% significance level in the direct effect model ($c_2=0.473, p<0.05$) becomes statistically significant but decreases in the mediation model ($c'_2=0.310, p<0.05$). Therefore, it can be said that partial mediation is present within the framework of Baron and Kenny's (1986) mediation procedure, indicating that a portion of the effect of CE on Turkish cafe preference occurs through the mediating role of COO. According to the Sobel test statistics for the mediation effect, the

mediation relationship is statistically significant at a 5% significance level ($t(2)=4.749, p<0.05$).

When examining the modern Hayes (2018) indirect effect coefficients, it is observed that the indirect effect coefficient is statistically significant and positive at a 5% significance level, as indicated by both the bootstrap confidence intervals not containing zero ($0<Lower\ C.I.=0.111<Upper\ C.I.=0.228$) and the t statistic based on bootstrap standard errors ($a.b_2=0.163, p<0.05$). Therefore, within the framework of the Modern Hayes (2018) procedure, it can be said that there is a moderate to high-level indirect effect, with a substantial portion of the effect of CE on TCP occurring through the mediating role of COO.

The direct and indirect effects examined within the scope of the study are presented in Figure 2 along with the corresponding equations.

Table 10 summarizes the results for the suggested hypotheses in this study.

Table 10. Hypotheses Results

Hypotheses	Results for Turkish Cafe Preference	Results for American Cafe Preference
H1: Consumer ethnocentrism has an impact on country of origin effect.	supported	supported
H2: Consumer ethnocentrism has an impact on cafe preference.	supported	supported
H3: Country of origin effect has an impact on cafe preference.	supported	supported
H4: Country of origin plays a mediating role in	moderate/high mediation	full mediation

Discussion and Conclusion

The main aim of the research is to determine the impact of CE on Turkish and American cafe preference and to ascertain whether the COO effect plays a mediating role in this potential impact. Understanding the interplay between CE and the COO effect is crucial for marketers seeking to cater to consumer preferences, develop effective marketing strategies, and position their products in the global marketplace. Marketers can leverage ethnocentric tendencies by emphasizing the domestic origin of their products and highlighting the cultural values, heritage, or traditions associated with the COO. By aligning their marketing messages with ethnocentric beliefs, marketers can enhance the perceived value and attractiveness of their products. It's crucial to consider that the effect of CE on the COO effect can vary across cultures and countries. Ethnocentric tendencies and the importance of the COO differ among consumers from different cultural backgrounds. Factors such as historical context, national identity, economic development, and exposure to foreign influences shape the degree of CE and its impact on the COO effect in different consumer populations.

The supported hypothesis that "CE has an impact on the COO" effect suggests that consumers with strong ethnocentric attitudes are more likely to favor products or brands from their own country and have a higher preference for domestically produced goods. They may perceive products from their own country as superior or more suitable for their needs compared to foreign products. The COO effect can shape consumers' perceptions of quality, reliability, authenticity, and cultural alignment with their preferences. From a marketing perspective, companies that operate in international markets need to consider the ethnocentric tendencies of their target consumers and adapt their marketing strategies accordingly. By emphasizing the domestic origin of their products, leveraging cultural symbolism, and highlighting the alignment with consumers' values and preferences, companies can potentially

capitalize on the COO effect and attract ethnocentric consumers.

The finding "CE has an impact on cafe preference" suggests that individuals' ethnocentric tendencies influence their choices and preferences when it comes to selecting a cafe. In the context of cafe preference, it means that individuals with higher levels of ethnocentrism are more likely to prefer domestic cafes over foreign ones. This finding highlights the role of cultural identity, patriotism, and loyalty towards domestic businesses in shaping individuals' cafe preferences. Ethnocentric consumers tend to perceive domestic cafes as more reliable, trustworthy, or culturally suitable, which influences their decision-making process. They may associate specific cultural values, traditions, or symbols with domestic cafes, leading to a preference for those establishments. From a practical standpoint, cafe owners and marketers need to consider the influence of CE on cafe preference. They can tailor their marketing strategies to resonate with ethnocentric consumers by emphasizing the local or national characteristics of their cafe, showcasing authentic cultural elements, or highlighting connections to the local community. This can help attract and retain customers who value their cultural identity and have a preference for domestic establishments.

The result indicating that consumer ethnocentrism of Turkish consumers has a positive impact on both Turkish and American cafe preferences may seem counterintuitive at first, but it can be explained by considering various factors. Turkish consumers with strong ethnocentric tendencies may have a preference for Turkish cafes because they view them as a way to support local businesses and promote Turkish culture and identity. Turkish consumers who are ethnocentric may feel more comfortable and familiar with Turkish cafes. These cafes are likely to offer traditional Turkish food, beverages, and ambiance, which resonate with their cultural preferences and experiences. This sense of familiarity can lead to a preference for Turkish cafes. Interestingly, Turkish consumers' ethnocentrism positively impacting American cafe preferences can be explained by a desire for cultural exchange. Some Turkish consumers may view American cafes as an opportunity to experience foreign cultures and

tastes. They might see American cafes as a way to diversify their culinary experiences without rejecting their Turkish identity. In an increasingly globalized world, Turkish consumers may be exposed to American cafe chains and associate them with modernity and cosmopolitanism. This can make American cafes attractive to those who want to embrace both their Turkish identity and a globalized lifestyle. Consumer preferences are highly individual. While ethnocentrism might have a positive impact on cafe preferences for some Turkish consumers, others may prioritize factors like taste, price, or convenience, which could lead them to prefer American cafes which is similar to the findings of Hong and others (2023). They conducted a research on Chinese customers. They found that with a high degree of ethnocentrism will not pay attention to a foreign brand unless they have a love for that particular brand.

The finding "COO has an impact on cafe preference" suggests that consumers' perceptions and evaluations of cafes are influenced by the country in which the cafe originates. This finding highlights the importance of managing the COO image for cafe owners and marketers. Creating a positive country image associated with the cafe's origin can enhance consumers' trust, credibility, and willingness to choose that cafe. Marketing strategies can leverage the positive attributes or cultural associations associated with a particular country to attract and retain customers. It may involve showcasing the heritage, traditions, or unique features of the café's COO in branding, menu descriptions, or interior design. The result indicating that the country of origin effect of Turkish consumers has a positive impact on both Turkish and American cafe preferences suggests that Turkish consumers may have a favorable view of both Turkish and American cafes based on their perceived country of origin. Turkish consumers may associate cafes from their own country (Turkish cafes) and American cafes with high-quality standards. These perceptions of quality can positively influence their preferences for both types of cafes. American cafe chains, such as Starbucks and Gloria Jeans, are well-known globally. Turkish consumers may view these American cafe brands as symbols of international

quality and consistency. Familiarity with these brands, along with their global presence, can positively impact their preferences for American cafes. Effective marketing strategies employed by both Turkish and American cafe chains can create positive associations and appeal to Turkish consumers. Bruwer and Buller (2012) found that consumers with higher levels of objective knowledge do not use the COO cue more than consumers with lower knowledge. Wine consumers view taste, variety and price as the most important buying cues and are influenced by the recommendations of people around them.

The finding "COO plays a mediating role in the relationship between CE and cafe preference" implies that consumers' ethnocentric beliefs influence their cafe preference through their perceptions of the country from which the cafe originates. When consumers perceive cafes from their own country as authentic, reliable, or culturally suitable, their ethnocentric beliefs may drive a preference for domestic cafes. On the other hand, if consumers perceive cafes from foreign countries as inferior or less suitable to their preferences, their ethnocentric tendencies may lead them to avoid or have a lower preference for such cafes. The findings are limited to the respondents' answers and cannot be generalized to all Turkish citizens of people who live in Rize. Cilingir and Basfirinci (2014) conducted a research in Türkiye and found that moderating effects of CE, product involvement, and product knowledge were also explored. Their findings showed that COO cues have a significant main effect on the product-evaluation process.

The mediating role of the COO effect may be influenced by other factors such as consumer demographics, cultural diversity, and globalization. Additionally, the strength and significance of the mediating effect may vary depending on the specific context and characteristics of the cafe market being studied. Further research can explore these nuances and provide a more comprehensive understanding of the interplay between CE, COO effect, and cafe preference. Cafe preference is a complex and multifaceted concept influenced by various factors beyond ethnocentrism. The impact of the COO on cafe preference may vary across different

consumer segments and cultural contexts. Factors such as individual preferences, cultural diversity, and globalization can influence the extent to which consumers consider the COO when selecting a cafe. Therefore, further research is needed to understand the specific mechanisms and nuances of the COO on cafe preference in different markets and consumer groups. Factors such as atmosphere, menu offerings, food and beverage quality, service, location, and overall experience can also play significant roles. Therefore, it is important to consider these additional factors and conduct further research to gain a more comprehensive understanding of the dynamics between CE, COO and cafe preference in different cultural contexts and consumer segments. Future studies might address these issues.

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STEM Based Innovative Thinking Skills and Attitudes towards Digital Technology in Robotic Coding and 3D Printer Applications

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Abstract

The aim of this study is to determine STEM-based innovative thinking skills and attitudes towards digital technology in robotic coding and 3D printer applications with 45 teacher candidates participating in the research. Quantitative research method was used. The research lasted 12 weeks. Innovative thinking skills scale and attitude scales towards digital technology were used. The research was conducted in the form of pretest and posttest. It is seen that there is a significant positive difference in the innovative thinking skills of the teacher candidates and their attitudes towards digital technology. In the STEM-based research, robotic coding and 3D printing training was given. In this context, three different applications were made regarding traffic lights. In robotic coding applications, Tinkercad, Arduino IDE and Fritzing programs for circuit diagrams, Tinkercad 3D in 3D printing applications and Zaxe PLA for slicing were taught. (SPSS-21.00) program was used to analyze the data and t test was applied for dependent samples. It was determined that the teacher candidates had innovative thinking skills attitudes ($t=23.33$; $p<0.05$) and attitudes towards digital technology ($t=21.58$; $p<0.05$). As a result of the research, it is seen that face-to-face workshop training activities in areas such as 3D design and smart devices are important to carry out robotics, coding and 3D design activities for teacher candidates in order to provide them with informatics production skills in STEM-based studies, and interdisciplinary applications for teacher candidates. It is seen that teacher candidates exhibit positive attitudes in the studies conducted.

Keywords: STEM Education, Digital Technology, Robotic Coding, 3D Printer, Innovative Thinking skills,

Öz

Bu çalışmanın amacı, araştırmaya katılan 45 öğretmen adayı ile Robotik kodlama ve 3B yazıcı uygulamalarında STEM temelli inovatif düşünme becerileri ve dijital teknolojiye yönelik tutumlarını belirlemektir. Nicel araştırma yöntemi kullanılmıştır. Araştırma 12 hafta sürmüştür. İnovatif düşünme becerileri ölçeği ve Dijital teknolojiye yönelik tutum ölçekleri kullanılmıştır. Araştırma öntest ve sontest şeklinde yapılmıştır. Öğretmen adayların inovatif düşünme becerileri ve dijital teknolojiye yönelik tutumlarında olumlu yönde anlamlı fark çıktığı görülmektedir. STEM temelli yapılan araştırmada robotik kodlama ve 3B yazıcı eğitimleri verilmiştir. Bu kapsamda trafik lambaları ile ilgili üç farklı uygulama yapılmıştır. Robotik kodlama uygulamalarında Tinkercad, Arduino IDE ve devre şeması için Fritzing programları, 3B yazıcı uygulamalarında Tinkercad 3B ve dilimleme için Zaxe PLA öğretilmiştir. Verilerin analizlerinde (SPSS-21.00) programı kullanılmış ve bağımlı örneklem için t testi uygulanmıştır. Öğretmen adayların inovatif düşünme becerileri tutumlarının ($t=23,33$; $p<0,05$) ve dijital teknolojiye yönelik tutumlarının ($t=21,58$; $p<0,05$) olduğu belirlenmiştir. Araştırmanın neticesinde öğretmen adaylarına STEM temelli çalışmalarda bilişimle üretim becerileri kazandırmaya yönelik olarak robotik, kodlama ve 3B tasarım etkinliklerinin yürütülmesi ve öğretmen adaylarına disiplinler arası uygulamalar yapması, 3B tasarım ve akıllı cihaz gibi alanlarda yüz yüze atölye eğitim faaliyetlerin önem arz ettiği görülmektedir. Öğretmen adayların yapılan çalışmalarda olumlu tutum sergilediği görülmektedir.

Anahtar Kelimeler: STEM Eğitimi, Dijital Teknoloji, Robotik Kodlama, 3B Yazıcı, İnovatif Düşünme becerileri,

Introduction

The most distinctive feature of developed and developing societies is that they adapt to the scientific and technological changes experienced at the global level by updating their education systems. Countries that attach importance to the education system have moved away from the traditional understanding of education and searched for new understandings of education. The new approach known as STEM education has emerged with the concept of integration of disciplines, which is one of the concepts in the focus of countries (Akgündüz, 2018). Thanks to STEM education, it has now become possible to teach children programming, which develops systematic and innovative thinking skills and enables them to see the connection between events, as both entertaining and instructive.

Countries that will have a say in the world in the 21st century, are able to master programming languages, solve problems with their own methods, raise generations equipped with creative, 21st century skills, and develop skills such as robotics, coding and 3D design with STEM (Science, Technology, Engineering and Mathematics) education (Göksoy & Yılmaz, 2018; Güleriyüz, 2023; Karataş, 2021). They are those who have succeeded in making the education that requires education a part of their education system by starting from early childhood.

In the 21st century, it is seen that students are trying to raise them as individuals who ask questions, define problems, encourage innovative thinking, have an entrepreneurial spirit, have lifelong learning skills and are sensitive to society. In order for Türkiye to increase its scientific research and technological development capacity, social and economic development, and to compete with other countries, it should offer opportunities to students, especially at young ages, to develop these features. STEM education is important in this sense (Güleriyüz & Dilber, 2022b). By integrating concepts and skills in STEM fields with each other and applying them to a real-life problem or event, it provides an opportunity for students to learn these concepts and skills more meaningfully. In our age, the way to be ahead in all international

fields is to make new inventions, in other words, to innovate.

The premise of innovation is to think innovatively. Innovations and inventions found with innovative thinking can be used by finding application areas. Innovative thinking is an important element that forms the basis of all innovations and inventions and has direct effects on the development and competitiveness of countries. However, researches focus on creative thinking, which is included in innovative thinking. The rapid change and development in the field of technology manifests itself in all areas of socio-economic life, and the changes and developments experienced are also reflected in the belief and value systems of societies. The education system and educational institutions are also affected by this process. In line with the changes and developments experienced, it has become necessary to make innovations in the field of education. The necessities of the change in the social field together with the technological developments have enabled the innovation process to start in the education sector (Sevinç & Uyangör, 2021).

Innovative Thinking Skills

It means transforming knowledge usefully and economically for the benefit of society. For this reason, it is in a number of processes technically, socially and economically. In order to do this, we need to have a culture that is willing to change, open to innovations and has an entrepreneurial spirit. Generating new ideas, brainstorming, mind maps, learning, etc. It is necessary to know the theories well, and then it remains only to implement our innovations and ideas. In the current age, students are expected to continue their skills throughout their life and to be creative individuals. In order to raise such individuals, an understanding based on knowledge production has developed within the framework of developing educational understandings. In order to produce knowledge, individuals must have certain skills. For example, it is seen that people who do research, are creative, catch up with the age by using information technologies, are not problem-solving, but solve problems, produce

solutions, take responsibility, are determined, have personal values, have strong communication, and have leadership qualities are more beneficial for themselves and their country known.

STEM education, which was created as a result of long studies in order to catch up with the era, it was predicted that it would be more accurate and more meaningful to provide students with some basic skills in the direction described in the paragraph above, as well as learning areas and achievements. With these basic skills, students can gain a love and habit of reading, develop their vocabulary, thus use Turkish correctly, effectively and beautifully, make inquiries, think critically, analyze and synthesize, think creatively, establish a healthy communication with their environment, do research when necessary, and do research while doing research. It is aimed to use scientific methods, to use information technologies such as the internet and mass media, to be entrepreneurs, to solve problems, to make decisions when necessary, to establish meaning between texts, and to attach importance to personal and social values. Thus, it is thought that students will be modern individuals who have knowledge and have the capacity to produce knowledge, away from memorization (Özatalay, 2007: 72). In this context, in this part of the research, thinking and thinking skills are explained first, and the importance of the teacher in effective thinking and the teaching of thinking skills are included in the transition to innovative thinking skills.

Innovative Thinking Process

Innovative thinking is a process that emerges as a result of certain stages. The healthy realization of each stage can ensure that the product to be produced has the desired properties. In this direction, Wallas (1926) examined the innovative thinking process in four stages as preparation, incubation, enlightenment and validation (Starko, 2001). Although the four-stage process in question seems to be systematic, the individual can wander between the stages during the application (Yıldırım, 2003).

Preparation: In this step, the elements of the problem are tried to be determined, and the information that individuals will acquire in order

to find a solution is revealed (Baki, 2004: 156). In this step, the thoughts on the problem are revived and the relations between the theory and hypotheses are examined (Rıza, 2001:10-14; as cited in Özden 1997, Demirci, 2007: 66). It is stated that the more information about the existing material and the new subject, the easier it will be to develop creative thinking (Yıldırım, 2003). Here the problem is identified, explained, relevant data is collected and the material is checked. Requirements for the solution of the problem are examined, different dimensions of the problem and previous solution proposals are discussed. (Özden, 2005).

Incubation: In the incubation phase, the individual does not think consciously about the problem. Meanwhile, the individual's mind continues to think about the problem, while the individual is caught up in other activities. This stage is considered as the stage in which the individual does nothing to solve the problem (Demirci, 2007: 66-67; Sünbül, 2011). This stage is considered as the stage in which the individual does nothing to solve the problem (Özden, 2005; Demirci, 2007: 66-67).

Enlightenment: Ideas, thoughts and feelings suddenly fit together and the solution becomes clear. The stage in which the thought required for the solution suddenly emerges is called "enlightenment" or "comprehension". The stage in question is not one that occurs out of nowhere (Demirci, 2007: 67; Sünbül, 2000: 82; Üstündağ, 2009:10). At the moment in question, this formation is instantly recorded in the brain, rapid oscillations occur between the lower part of the left hemisphere of the brain and the upper part of the right hemisphere, and the result makes it possible to pass the verification stage (Üstündağ, 2009: 10).

Evaluation: It consists of a series of activities carried out in order to show whether the result that emerges during the enlightenment phase will meet the needs and whether it will comply with the criteria determined during the preparation phase (Sünbül, 2000). Sometimes, the ideas developed during the enlightenment phase, the solutions that are realized, may not include the solution of the problem. In this case, the individual returns to the incubation stage and participates in the process of developing new solutions (Bulut, 2014: 5). At this

stage, the solution of the problem is evaluated in terms of practicality, relevance and validity. Weaknesses in ideas are identified and some changes are made when necessary in order to implement the solution (Starko, 2001).

Digital technology is defined as applications that display, store and transmit information electronically on a screen. Digital technology plays an effective and active role in educational environments as well as in all areas of life. It is thought that determining students' attitudes towards digital technologies will have an impact on the design and organization of teaching environments (Gokhale, Brauchle & Machina, 2013).

STEM, which is based on technology, innovation and innovative thinking, aims to solve problems within this framework by providing students with the ability of experiential learning. With STEM, students can remove the boundaries of their concrete and abstract worlds, as well as have skills such as critical thinking and problem solving. It is seen that students who receive education with the STEM education model adapt much more easily to the change in the business world and new roles in the 21st century. The importance of these STEM-based studies is to develop innovative thinking, entrepreneurship and scientific thinking skills, to encourage technology learning and production, to increase the permanence of knowledge through learning by experience, to make students love 3D design, robotics and coding, and software technologies and science.

Importance of Research

The way to say that I am in all international fields can be realized by making new inventions and inventions, in other words, by innovating. The premise of innovation is to think innovatively and keep up with the digital age. Innovations and inventions found with innovative thinking can be used by finding application areas. Innovative thinking is an important element that forms the basis of all inventions and innovations. Rapid change and development takes place in the field of technology. These changes and developments are also affecting educational institutions and the

education system. In line with the changes and developments experienced, it has become necessary to make innovations in the field of education. In this study, it was predicted that STEM-based robotic coding and 3D design applications and effective teaching strategies could be effective on prospective teachers' innovative thinking skills and attitudes towards digital technology.

Purpose of the research

The purpose of this research is to examine how pre-service teachers use their competencies and skills by coding and 3D design in the science curriculum, in robotic coding and 3D printing applications, and their STEM-based innovative thinking skills and their attitudes towards digital technology.

For these purposes, answers were sought for the following sub-problems:

- 1- What are STEM-based innovative thinking skills in robotic coding applications?
- 2- What are their attitudes towards STEM-based digital technology in robotic coding applications?
- 3- What are STEM-based innovative thinking skills in 3D Printer applications?
- 4- What are their attitudes towards STEM-based digital technology in 3D Printer applications?

Research Problem

What are STEM-based innovative thinking skills and attitudes towards digital technology in robotic coding and 3D Printer applications?

Method

Research Method

In this study, quantitative research method was applied. Quantitative research method, Quantitative research is defined as the systematic investigation of phenomena by collecting quantitative data and applying statistical, mathematical or computational techniques. By using sampling methods and sending online surveys to current and potential customers collecting quantitative research information,

survey results can be depicted in numerical form. After carefully understanding these numbers, it is predicting the future of a product or service and making changes accordingly. In the analysis of quantitative data, t-test was used for related samples. The related samples t test is used to test whether the difference between the two averages obtained from the related sample is statistically significant (Büyüköztürk, et al. 2013). The research conducted to measure STEM-based innovative thinking skills and attitudes towards digital technology, in which robotic coding and 3D printer applications are used, was conducted in the form of pre-test and post-test.

Sample

45 pre-service teachers participated in the research. Teacher candidates participated in the research on a voluntary basis.

Application

In this study, STEM-Based Innovative Thinking Skills and Attitude Scales towards Digital Technology, which are prepared for pre-service teachers and use robotic coding and 3D printer applications that make the education process simple and fun, were applied. This program was implemented for 12 weeks and for a total of 48 hours (2+2) hours per week. In STEM Based activities with robotic coding and 3D printer, Tinkercad-Arduino program for Robotic coding and circuit diagram was taught on Tinkercad portal. Zaxe (Desktop) PLA programs for Tinkercad-3D design and slicing were taught in 3D Printer activities on Tinkercad portal. A brief summary of the STEM Based Innovative Thinking application using robotic coding and 3D printer applications is given below and the work schedule is shown in Table 1.

A Brief Summary of the Study on Innovative Thinking Skills and Digital Technology of STEM Based Activities Made with Robotic Coding and 3D Printer:

- ✓ Pre-service teachers' readiness for STEM-based activities has been determined.

Detailed information about STEM-based applications is given for the activities to be done.

- ✓ In the second week, pre-service teachers were informed about their innovative thinking skills.
- ✓ In the third week, pre-service teachers were informed about Digital Technology.
- ✓ In the fourth and fifth weeks, detailed information was given about the Tinkercad-3D design portal.
- ✓ In the sixth and seventh weeks, detailed information was given about the Tinkercad-Robotic coding portal.
- ✓ In the eighth week, Zaxe PLA program, which is one of the slicing programs, was taught to 3D print the designs made on the Tinkercad-3D design portal.
- ✓ In the ninth week, a Traffic Light was designed on the Tinkercad-3D design portal (Figure 4).
- ✓ In the tenth week, the designs made on the Tinkercad-3D design portal were printed with Zaxe PLA and 3D printers (Figure 6).
- ✓ In the eleventh week, Arduino codes and circuit diagram of Traffic light application were made in Tinkercad-Robotic coding portal (Figure 5, Figure7).
- ✓ Three different applications were made in the twelfth week. The first application with Arduino via Tinkercad, the second application of robotic coding with the traffic light module with Arduino, and then the third application was completed by providing the wireless connection between the traffic light application and the mobile phone, together with the traffic lamp printing made with 3D design (Figure 1, Figure 2, Figure 3, Figure,8), (Appendix-1).

Table 1. STEM activity program with robotic coding and 3d printer

Week	Subject
Week 1	STEM Education and STEM-Based Applications
Week 2	About Innovative Thinking Skills
Week 3	About Digital Technology

Week 4	Tinkercad-3D Design
Week 5	Tinkercad-3D Design
Week 6	Tinkercad-Robotic Coding
Week 7	Tinkercad-Robotic Coding
Week 8	Teaching the Slice Program; Zaxe (Desktop) PLA
Week 9	Tinkercad-3D Traffic Light Drawing
Week 10	3D Printing of Traffic Light from 3D Printer
Week 11	Arduino Circuit Construction of Tinkercad-Robotic Coding Traffic Lamp Application
Week 12	Robotic Coding; Three Different Applications about Traffic Lights

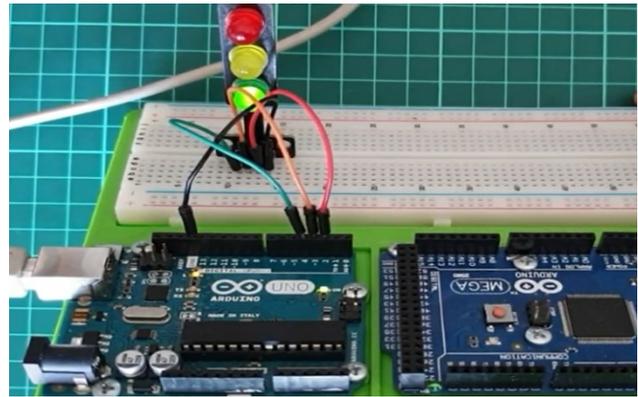


Figure 3. Robotic Coding-2. Traffic Lamp Module Application

The 3d design of the traffic lamp model over the Tinkercad portal is shown in figure 4.

Robotic coding-1 traffic light application was made in Figure-1 by using Arduino Ide program on Tinkercad portal.

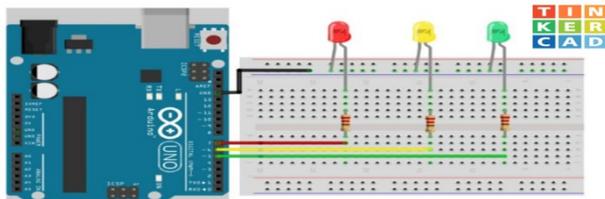


Figure 1. Robotic Coding-1. Tinkercad Traffic Lamp Application



Figure 4. Tinkercad – 3D Design Application

The traffic light module to be used in the robotic coding-2 application is shown in figure 2.



Figure 2. Traffic Light Module

The Arduino circuit diagram in the Robotic coding-2 application made with the traffic light module is shown in figure 3.

The traffic light circuit diagram of the robotic coding-3 application made over the Tinkercad portal is shown in figure 5.

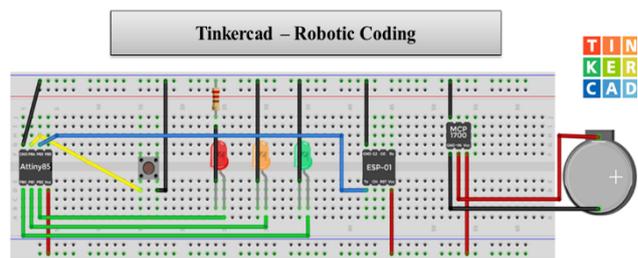


Figure 5. Robotic Coding-3 Tinkercad Traffic Light Circuit Diagram

The application of the traffic light was printed from the 3d printer and the assembly process was made. This application is shown in figure 6.



Figure 6. Three-dimensional Printing and Combination of the Traffic Light

The Arduino circuit diagram of the traffic light robotic coding-3 application is shown in figure 7.

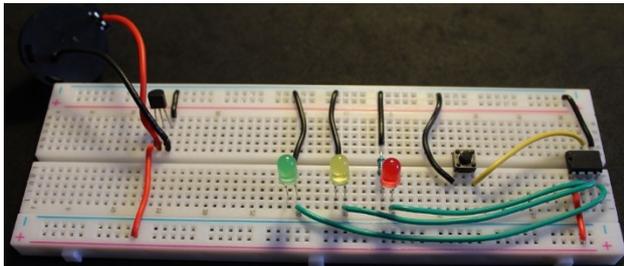


Figure 7. Robotic Coding-3 Traffic Light Circuit Diagram

The final stage of the traffic light robotic coding-3 application is shown in figure 8. At this stage, all the necessary parts were combined, codes were added and the traffic light application was made successfully with the mobile phone.

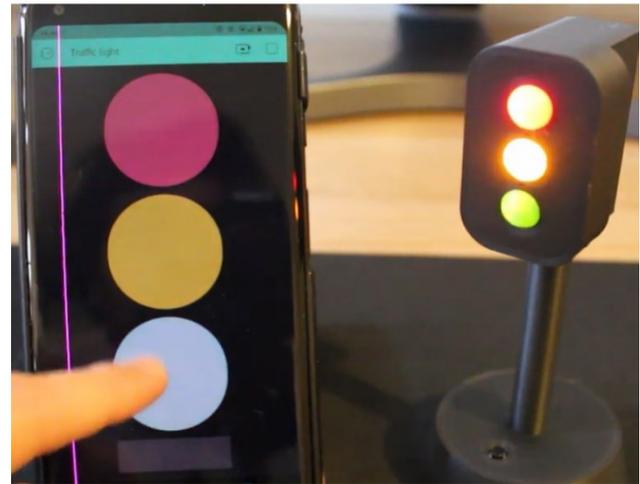


Figure 8. Robotic Coding-3 Traffic Light Application

Data Collection Tools

Innovative Thinking Skills Scale; Sevinç & Uyangör developed an Innovative Thinking Skills Scale in 2020. They developed a scale for vocational high school students. This scale consists of 13 three-dimensional items. The scale was prepared according to a 5-point likert type and was graded as "Strongly Agree (5), Agree (4), Undecided (3), Disagree (2) Strongly Disagree (1)". After these procedures, validity and reliability analysis were performed. As a result of the reliability analysis performed on the innovative thinking skills scale, the total reliability coefficient of the scale was found to be $\alpha = .916$.

Attitude Scale Towards Digital Technology; Cabı 2015 has developed an attitude scale towards digital technology. This scale consists of 39 items. The scale was prepared according to the 5-point Likert type and was graded as "I totally agree (5), I agree (4), I am undecided (3), I do not agree (2), I do not agree (1)". After these procedures, validity and reliability analysis were performed. As a result of the reliability analysis on the attitude towards digital technology scale, the total reliability coefficient of the scale was determined as 0.90.

Data Analysis

For quantitative data; due to the homogeneous distribution of the results of the research, it showed a normal distribution in the analysis of the data obtained both before and after the application. To test the problem situation in research the standard

deviations of the scores and the significant difference between the averages of these scores. has been looked after. In the analyses, the skewness value was -.019; The kurtosis value is -.179. has been calculated. If these values are between -1 and +1, the data shows a normal distribution. (Büyüköztürk, 2020). It was observed that the scores showed a normal distribution. This due to this situation, t-test for dependent samples, one of the parametric tests, was applied. As a result of the reliability analysis performed on the innovative thinking skills scale, the total reliability coefficient of the scale was found to be $\alpha = .916$. As a result of the reliability analysis on the attitude towards digital technology scale, the total reliability coefficient of the scale was determined as 0.90.

Findings

Findings of Quantitative Data

In order to examine whether there is an effect on STEM-based innovative thinking skills in robotic coding and 3D printing applications, the Innovative Thinking Skills Scale and the Attitude towards Digital Technology Scale were applied as a pre-test and post-test at the beginning and end of the application. Dependent samples t-test was performed on the data obtained from teacher candidates.

Innovative Thinking Skills Analysis

Table 2. Statistical values of innovative thinking skills

N	valid data	45
	Missing data	0
Skewness		.49
Std. HataSkewness		.41
Kurtosis		.22
Std. Hata Kurtosis		.77

When Table 2 is examined, the skewness and kurtosis values are between (+/-2) values (Büyüköztürk, 2020). The results of the Kolmogorow Smirnov test seem to support these data. These values give the result that the data show normal distribution. Therefore, it is

envisaged to use parametric tests in tests performed on variables.

Table 3. Innovative thinking skills t-test for dependent samples

	\bar{x}	n	ss	s _{h_x}
PRETEST	60.28	45	3.11	.48
POSTTEST	74.43	45	2.91	.45

When Table 3 is examined, when the results of STEM-based innovative thinking skills in robotic coding and 3D printing applications are examined, it is seen that there is an increase in the averages of $X_{pretest} = 60$ and $X_{posttest} = 74$. In the results, numerical data show that there is a positive progress in favor of the post-test average scores. However, we need to see the T test results in order to obtain a definite and scientific result.

Table 4. Innovative thinking skills dependent samples test

	\bar{x}	ss	sh _x	Low _{er}	Upp _{er}	t	d _f	P
PRETEST-	14.1	3.8	0.6	-	-	-	4	0.0
POSTTEST	5	9	3	16.6	14.1	23.3	5	00

As a result of the dependent samples t-test analysis in Table 4, when the Innovative Thinking Skills pre-test and post-test results of the pre-service teachers are compared, it is clearly seen that there is a statistically significant increase in the learner skills of the pre-service teachers. $t(45) = -23.33$; $p = 0.00$. With these numerical data, we can conclude that Robotic coding and 3D printer applications have a positive effect on the STEM-based innovative thinking skills of teacher candidates.

Attitude Analysis Towards Digital Technology

Table 5. Statistical values of attitudes towards digital technology

N	Valid data	45
	Nissing data	0
Skewness		.44
Std. HataSkewness		.37
Kurtosis		.17
Std. Hata Kurtosis		.72

When Table 5 is examined, the skewness and kurtosis values are between (+/-2) values

(Büyüköztürk, 2020). The results of the Kolmogorow Smirnov test seem to support these data. These values give the result that the data show normal distribution. Therefore, it is envisaged to use parametric tests in tests performed on variables.

Table 6. T-test for attitude dependent samples towards digital technology

	\bar{x}	n	ss	sh _x
PRETEST	61.43	45	3.17	.51
POSTTEST	75.81	45	2.94	.47

When Table 6 is examined, it is seen that there is an increase in the averages of $X_{pre-test} = 61$ and $X_{post-test} = 75$ when the results of their attitudes towards Digital Technology are examined. In the results, numerical data show that there is a positive progress in favor of the post-test average scores. However, we need to see the T test results in order to obtain a definite and scientific result.

Table 7. Attitude dependent samples test towards digital technology

	\bar{x}	ss	sh _x	Low er	Upp er	t	d f	P
PRETEST-	-	3.7	0.6	-	-	-	4	0.0
POSTTEST	14.38	7	1	17.28	13.62	21.58	5	00

As a result of the dependent samples t-test analysis in Table 7, when the pre-test and post-test results of prospective teachers' attitudes towards Digital Technology are compared, it is clearly seen that there is a statistically significant increase in the learner skills of the pre-service teachers. $t(45) = -21.58; p = 0.00$. With these numerical data, we can conclude that robotic coding and 3D printer applications have a positive effect on prospective teachers' attitudes towards STEM-based digital technology.

Discussion

In the results of the analysis conducted to determine STEM-based innovative thinking skills and attitudes towards digital technology in robotic coding and 3D printer applications, it is seen that there is a positive significant change in both innovative thinking skills and attitudes towards

digital technology. It is seen that pre-service teachers have positive attitudes towards STEM-based innovative thinking skills and attitudes towards digital technology in robotic coding and 3D printer applications.

Looking at the literature review; Dougherty and Clarke (2018: 360) determined in their study which features are necessary to be a successful innovation. Among them; cooperation, creativity, being observant, curiosity, willingness to experiment, taking risks, willingness to challenge the status quo, being action-oriented and visionary. In the light of the findings of the research, it can be said that the use of digital technology should be added to these features. Sevinç (2021) When the results of the research are evaluated holistically, it can be said that teachers' teaching-learning understanding and effective teaching strategies on students' innovative thinking skills are limited. It is thought that the reason for the limited results in the research is that two different sample groups, teacher and student, were studied. According to Vinichenko et al. (2021: 2) in his study, today, the most important condition for a company's competitiveness in any sector, both nationally and internationally, is the presence of educated employees who use modern information technologies well. Sevinç & Uyangör (2020) Innovative thinking skills scale is at a level that can be used to measure innovative thinking skills of vocational high school students. Although there are no studies in which students' innovative thinking skills are evaluated, studies on creative thinking skills related to innovative thinking are frequently encountered.

In her study, Dilek (2013) examined the effect of socio-cultural characteristics on creative thinking on university students who received mathematics teacher education, and determined that the creativity levels of the students did not differ according to the high school they graduated from. Erdoğan and Gök (2011) also found that the students had moderate creativity skills in their study in which they examined the creative thinking skills of prospective classroom teachers. (Gülerüüz, 2020; Gülerüüz & Dilber, 2022) He studied the effects of 3D printing and robotic coding applications on 21st century skills, STEM awareness and STEM self-efficacy (Özdamar,

2004). Reliability analysis of the innovative thinking skills scale was applied. Different from these studies, Adıgüzel (2016) conducted a study on classroom teachers working in primary schools and determined that classroom teachers have below-average creative thinking skills. They obtained positive feedback from teacher candidates. They stated that with the study, the information became concrete and provided permanent learning.

There are many studies on measuring students' attitudes towards technology. The most important of these studies is a scale developed within the scope of the project called "Students' Attitudes Towards Technology" carried out at Eindhoven University of Technology in the Netherlands in 1984. In his research, Cabi (2015) developed a scale to determine the attitudes of secondary school students towards digital technology. Yurdugül and Aşkar (2008) adapted the scale of "Students' Attitudes Towards Technology", adapted into Turkish, and the sub-dimensions of "negativeness of technology" and "interest in technology" defined in the US scale may overlap with the names of the sub-dimensions of the developed scale. However, no names such as "social networks" and "entertainment use" were found in the sub-dimensions of similar scales. According to Cabi (2016), digital technology can be defined as applications that display, store and transmit information electronically on a screen. In this context, a wide variety of applications including computer, internet, mobile phones, camera, video and web technologies are included in digital technology. Gokhale et al. (2013) conducted a study to determine the attitudes of university students towards information technologies. It is seen that students' work in the field of computer largely depends on their attitudes towards digital technology. Digital technology plays an effective and active role in educational environments as well as in all areas of life. It is thought that determining students' attitudes towards digital technologies will have an impact on the design and arrangement of teaching environments.

The digital world interaction of the students and the most important benefit of STEM education is to take an active role in the digitalizing world. In order not to be exploited by developed and

strategy-developing countries in the digitalizing world, more productive individuals are needed than consumer individuals. With the development of the digital world, students continue their development as individuals with technology and innovative thinking skills. When it comes to STEM-based (robotics, coding and 3D design) construction, there are two main ways of thinking. First, as anyone can guess, "innovative thinking" The importance of innovative thinking is already understood when the questioning, researching and experiencing nature of STEM is taken into account. In other words, it is not enough to take what is offered and use it. It is necessary to develop different perspectives. Otherwise; It is not possible to advance in fields such as science and technology. It is necessary to criticize, think and question in order to discover a new way, to introduce a new product. Another way of thinking is "creative thinking". Creative thinking is needed, especially when design comes into play. With creative thinking, it is possible to approach different problems differently. It is possible to produce more permanent solutions in a shorter time. In this sense, especially when engineering, technology and innovation are mentioned, it is seen that creative thinking plays one of the most important roles.

Conclusion

Pre-service teachers, who are expected to train individuals with STEM-based innovative thinking, are expected to adopt contemporary teaching approaches and be aware of the strategies they use. It is thought that students' innovative thinking skills may be affected by various variables. One of these variables is teachers' understanding of teaching and learning and the other is effective teaching strategies adopted by teachers. It is thought that determining students' attitudes towards digital technology, developing educational activities, and raising students who can effectively use rapidly advancing digital technologies. It is seen that face-to-face workshop training activities are important in areas such as robotics, coding and 3D design activities in order to provide students with informatics production skills within the scope of STEM education, and

preparing interdisciplinary activities for teacher candidates or project making, 3D design and smart devices. In this context, providing training for teachers in the fields of innovation, STEM, robotics, coding and 3D design supports the professional development of teacher candidates. It is seen that students are preparing the professions of the future with 3D design, robotics, coding and innovative thinking skills, innovative ideas development process and interdisciplinary studies. In addition, it is thought that detecting and developing innovative thinking skills in an earlier period will contribute to the innovation capacity of the country. In addition, it is seen that his attitude towards digital technology has a significant effect on individual innovation competencies.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Ethics statement

We assure that all subjects involved in the study could participate voluntarily, that participation or non-participation had no consequences, that all participants were informed about the objectives and that no identifiable personal data were collected according to data protection standards. There were no ethical requirements at the time of our research.

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Appendix-1

Arduino Codes of Traffic Light Application

void setup()

```
{ pinModeKirmizi(4,OUTPUT);  
  pinModeSari(3,OUTPUT);  
  pinModeYesil(2,OUTPUT); }
```

void loop()

```
{ digitalWrite(4 HIGH);  
  digitalWrite(3, LOW);  
  digitalWrite(2, LOW);  
  delay(2000); // Kirmizi
```

```
  digitalWrite(4, HIGH);  
  digitalWrite(3, HIGH);  
  digitalWrite(2, LOW);  
  delay(500); // Kirmizi-Sari
```

```
  digitalWrite(4, LOW);  
  digitalWrite(3, LOW);  
  digitalWrite(2, HIGH);  
  delay(2000); // Yesil
```

```
  digitalWrite(4, LOW);
```

```
digitalWrite(3, HIGH);  
digitalWrite(2, LOW);  
delay(1000); // Sari }
```

RESEARCH ARTICLE

The Mediating Effect of Perceived Ease of Use on the Relationship Between Communication Overload and Job Performance

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Abstract

While developments in information and communication technology have made access to information easier and faster, they can also bring about unique challenges. Communication overload is one of these challenges. The aim of this research is to examine the interaction between communication overload and job performance from the perspective of employees and to investigate the mediating effect of perceived ease of use related to information and communication technology in this relationship. The research was conducted by collecting data through survey among Karabük University employees in 2023. Data obtained from 408 employees of Karabük University were analyzed using SPSS 26 software package. The relationships between variables were examined using Pearson Correlation test, and the mediating effect was analyzed through multiple regression analyses. The research results revealed a weak negative relationship between communication overload and job performance as well as a strong positive relationship between perceived ease of use and job performance. The results of the multiple regression analysis indicate that perceived ease of use plays a mediating role in the relationship between communication overload and job performance.

Keywords: Communication Overload, Perceived Ease of Use, Job Performance, Mediation Effect

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Öz

Bilgi ve iletişim teknolojisindeki gelişmeler bilgiye erişimi daha kolay ve hızlı bir hale getirirken, kendine özgü sorunlar da ortaya çıkarabilmektedir. Aşırı iletişim yükü bu sorunlardan birisidir. Bu araştırmanın amacı çalışanlar açısından aşırı iletişim yüküyle iş performansı arasındaki etkileşimi ve bu ilişkide bilgi ve iletişim teknolojisiyle ilgili algılanan kullanım kolaylığının aracılık etkisini incelemektir. Araştırma, 2023 yılında, Karabük Üniversitesi çalışanları arasında anket yoluyla veri toplanarak gerçekleştirilmiştir. Karabük Üniversitesinin 408 çalışanından elde edilen veriler SPSS 26 paket programı kullanılarak analiz edilmiştir. Araştırmada değişkenler arası ilişkiler Pearson Korelasyon testiyle, aracılık etkisiyse çoklu regresyon analizleriyle gerçekleştirilmiştir. Araştırma sonucu, aşırı iletişim yüküyle iş performansı ve algılanan kullanım kolaylığı arasında zayıf düzeyde negatif bir ilişki, algılanan kullanım kolaylığıyla iş performansı üzerinde ise yüksek düzeyde pozitif bir ilişki tespit edilmiştir. Çoklu regresyon analizi sonuçları, algılanan kullanım kolaylığının, aşırı iletişim yükü ve iş performansı arasındaki ilişkide aracılık etkisinin olduğuna işaret etmektedir.

Anahtar Kelimeler: : Aşırı İletişim Yükü, Algılanan Kullanım Kolaylığı, İş Performansı, Aracılık Etkisi.

Introduction

Rapid advancements in information and communication technology have been influencing and reshaping both individual and organizational communication and work practices (Men, 2022). The internet and mobile technologies have significantly increased the communication load individuals are exposed to. The complexity resulting from intensive technology use is referred to as 'technology clutter,' with one of its dimensions being 'communication overload' (Zhang et al., 2022).

Communication overload refers to individuals being exposed to more diverse and abundant information and messages than they can effectively process at a given time (Perez, Romo & Bell, 2019). Within the realm of communication overload, individuals may struggle to identify crucial information or messages, leading to time wastage and delays in decision-making and response development (Stephens, Mandhana, Kim, Li, Glowacki & Cruz, 2017). The proliferation of the internet and mobile devices has increased the use of social media platforms and mobile applications, making individuals an integral part of a constant and multifaceted communication system.

Social networking platforms like Facebook, Twitter, WhatsApp, and Instagram are utilized as essential tools in individuals' daily communications. The widespread adoption of mobile devices has significantly boosted the demand for these services (Tuğtekin, 2022). According to the Digital 2023 Report (We are Social), 5.16 billion people worldwide use the internet, and 5.44 billion people use mobile phones. Notably, the report highlights that 59.4% of the world's population are active social media users. In Türkiye, there are 71.38 million internet users and 62.55 million social media users, according to the same report.

Technology has made access to information and communication faster and easier. However, it is argued that there has not been a proportional increase in productivity related to information and communication technology advancements. Particularly in knowledge-intensive work, the

message traffic conveyed by third parties through email or mobile devices can lead to distraction, work interruptions, and consequently, decreased productivity (Karr-Wisniewski & Lu, 2010). External interference in an employee's work can enhance their multitasking abilities up to a certain point, but communication overload, when crossed, can result in negative physical and psychological effects on employees (Zhu & Bao, 2018; McFarlane & Latorella, 2002).

Communication overload can have individual and organizational effects on employees. Bawden & Robinson (2009) suggest that it can lead to a sense of loss of control, fatigue, attention deficits, and health issues in individuals. At the organizational level, excessive information and communication burden are proposed to have adverse effects on job satisfaction, productivity, and performance (Ellwart et al., 2015).

Employees working in universities, whether in academic or administrative roles, are in constant communication with a large number of individuals and institutions as part of their job responsibilities. When the transition to distance education occurred due to the COVID-19 pandemic and earthquakes, education activities could continue thanks to information and communication technologies. However, this situation also resulted in an extraordinary increase in the communication burden faced by employees (Kaymaz, 2021). Even during face-to-face education periods, both administrative and academic staff are exposed to a significant communication burden. In the academic field, individuals are also required to allocate sufficient time for self-improvement, maintain healthy communication with students, fulfill administrative duties, and advance their careers. The high number of students significantly increases the workload for both administrative and academic staff.

Academic or administrative personnel who wish to complete their tasks without missing important information must regularly and frequently check their emails, official documents sent through the electronic document management system (EBYS), messages from students through the student information system (OBS), and announcements made through web pages. They

must also understand and evaluate requests received through phone calls or in-person interactions. In addition to this message traffic that needs to be evaluated, employees may also experience interruptions in their work due to messages received through social media platforms from their personal networks. Moreover, social media platforms are considered practical by workgroups, making it almost impossible to ignore messages conveyed through these platforms. As a result, employees today are exposed to a significant communication load. Understanding the consequences of this communication overload from both individual and organizational perspectives holds great importance for organizational development efforts.

This research examines whether university employees are exposed to communication overload and investigates the interaction between communication overload and job performance. Additionally, the study aims to determine whether employees' perceptions of the ease of use of information and communication technology play a mediating role in the relationship between communication overload and job performance.

Literature Review

Communication Overload

Communication overload occurs when an individual's capacity and capability fall short of meeting the demands of an overwhelming amount of communication (Perez et al., 2019). Modern psychology suggests that the human brain can focus on a specific amount of information at any given moment. When a person attempts to multitask, their effectiveness in different tasks decreases, leading to a state known as cognitive overload (Young, 2013).

The concept of communication overload was first developed by Meier (1963) and has been discussed across various disciplines. Similar to the concept of information overload, communication overload is defined as the situation in which the recipient is exposed to more information than they can manage, comprehend, or make decisions about (Batista & Marques, 2017). The determinative

factor in communication overload is not only the quantity of messages but also the time required to process the message content (Cho, 2017). Chung and Goldhaber (1997) described communication overload as a situation in which an individual perceives being exposed to more complex and uncertain information, in a larger quantity, than they can process within a specific time frame during the communication process.

Communication overload typically arises when communication needs in a network exceed an individual's communication capabilities, negatively impacting their normal work routines (Fan et al., 2021). Developments in information and communication technologies, such as advanced shared databases, have increased communication diversity, message demand intensity, and consequently, employees' communication burden in workplaces (Moen et al., 2015). This excessive load requires employees to be constantly prepared to respond, placing increasing pressure on them. The abundance of information and messages also makes it challenging to filter out unclear and unnecessary messages (Stephens et al., 2017).

Communication overload can hinder an individual's ability to focus on their work, create doubts about the reliability of information, and, in the long term, lead to stress, fatigue, and a sense of anxiety among employees (Hsu & Lin, 2016; Pang et al., 2023; Fan et al., 2021).

In addition to the communication burden they face in the course of their professions, employees are also exposed to a personal communication load through a wide variety of social media platforms and mobile applications. Managing this intensive flow of messages and information, filtering out the unhelpful and unnecessary ones, and accessing the necessary information without wasting time requires considerable effort and time. The negative consequences of communication overload can vary based on employees' characteristics and the organizational climate. According to Cho et al. (2011), communication occurring in channels that enable advanced simultaneous communication in organizations generates a lower perception of communication overload. Similarly, in organizations where an organizational trust climate is established, and employees are included in decision-making mechanisms, the adverse

effects of communication overload can be minimized (Barrett et al., 2022).

Job Performance

For organizations to reach their goals, gain a competitive advantage over their rivals, and sustain their success, it is imperative that their human resources are effective, exhibit high job performance, and possess the necessary capabilities (Obi, 2015). In this way, employees can contribute to the achievements of their organizations. Traditionally, job performance has been focused on individual task performance, which is defined as the ability to fulfill job requirements (Cortina & Luchman, 2012). Nowadays, contextual performance, which encompasses behaviors contributing to the effective functioning of the organization, is also included under the concept of job performance. Task performance assesses how well employees complete their tasks, while contextual performance is associated with behaviors such as compliance with rules, voluntariness, teamwork, and alignment with organizational goals (Doğan, 2018).

Fleishman (1975) introduced three dimensions of job performance. The first dimension centers on task performance, which focuses on employees' abilities required for the job based on learning theories and training techniques. In this modeling, the second dimension is organizational citizenship behavior, and the third dimension comprises counterproductive, undesirable behaviors leading to inefficiencies. Organizational citizenship behavior refers to voluntary behaviors that contribute to the effective functioning of the organization, which are not part of the job description (Organ & Ryan, 1995). Undesirable behaviors are intentional actions by employees that violate the organization's rules and, as a result, threaten the well-being of the organization or its employees (Robinson & Bennett, 1995).

Job performance encompasses measurable actions, behaviors, and outcomes that contribute to the realization of organizational goals (Viswesvaran & Ones, 2000). Job performance is linked to both fulfilling job requirements and

contributing to the organizational culture, mission, and vision (Befort & Hatrup, 2003). Job performance can be measured in various ways, including self-evaluation by the employee, evaluation by the manager, using objective performance criteria, or a combination of these methods (Gilboa et al., 2008). In this study, the method of employees self-evaluating their own performance was preferred for measuring job performance.

In the literature, the antecedents of job performance have been examined from individual, environmental, managerial, and organizational perspectives. Among those related to communication, individual communication skills, communication style, and organizational communication have drawn attention (Turunç & Turgut, 2020). Factors affecting and originating from management include motivation and stress management, business operations methods, and extensive technology usage within the organization (Özmutaf, 2007; Yılmaz, 2012). Human resources are strategic in the workplace, and managing and planning these resources is a critical indicator of job performance (Dursun et al., 2020).

Perceived Ease of Use of Information and Communication Technologies

Perceived ease of use is defined as an individual's belief that they can easily use a technology without exerting excessive effort (Davis et al., 1989). Perceived ease of use is a variable within the Technology Acceptance Model (TAM) developed by Davis (1989). The Technology Acceptance Model (TAM) is a model created to determine the reasons why users either adapt to or struggle with the use of information and communication technologies. According to this model, individuals' intention to use a new technology increases if they believe they can easily use it and that it will benefit them professionally (Görhan & Öncü, 2015). Additionally, there are studies in the literature that question the importance of ease of use in the acceptance of information communication technology (Keil et al., 1995). Some research results show that there is relationship between perceived

ease of use of electronic documents and job performance and employee attitudes are the key elements that influence the technology acceptance behaviors (Hashim & Ismail, 2013).

Hypotheses Development

Below, information will be given about the hypotheses developed regarding the effects and relationships between variables and the theory and research results that underpin these hypotheses.

The Relationship Between Communication Overload and Job Performance

Research indicates that communication overload has negative effects at both individual and organizational levels in the workplace. Communication overload can lead to stress, ongoing mental fatigue, and decreased job performance among employees (Pang & Ruan, 2023). Intensive use of social media can reduce individuals' academic and job performance and lead to mental health problems (Dhir et al., 2018). Communication overload is viewed as a stress factor based on behavior. Stress can create tension in individuals and affect their behavior and performance (Ou et al., 2023).

According to Lee et al. (2016), communication overload is one of the determinants of excessive technology load, and overloads resulting from information, communication, and system characteristics create stress on individuals.

There have been limited studies in Türkiye regarding the interaction between communication overload and job performance. Özbek (2022) found in his research that there was no significant relationship between teachers' communication overload, motivation, and job performance. Another study during the COVID-19 pandemic found that teachers experienced a "moderate" level of communication overload, negatively affecting their job satisfaction to a "low" extent (Dilekçi & Limon, 2020). Similarly, Şahin and Göktaş (2023) identified a significant, weak negative relationship between teachers' perception of communication overload and their job satisfaction.

Internationally, research by Giri and Kumar (2010) suggested that organizational

communication is a determinant of organizational satisfaction and job performance. Yu et al. (2018) found that excessive information and communication load reduced job performance in employees by leading to social media fatigue. Stephens et al. (2017) identified the dimensions of communication overload as "risking message quality, frequent distraction, exposure to excessive information, using numerous information and communication technologies, decision-making pressure, response obligation, being overwhelmed by excessive information, and message accumulation." According to Karr-Wisniewski and Lu (2010), there is a significant and negative relationship between employees' communication overload and their productivity. Research conducted in various sectors has shown that communication overload leads to a decrease in employees' job skills, makes it difficult to concentrate, and negatively impacts job performance (Delpechitre et al., 2018; McFarlane & Latorella, 2002; Sean Burns & Bossaller, 2012).

Based on these explanations and research findings, the following hypothesis has been formulated regarding the relationship between communication overload and job performance:

H1 There is a negative relationship between employees' levels of communication overload and their job performance.

Relationship between Perceived Ease of Use and Communication Overload/Job Performance

Perceived ease of use is defined as the belief that an individual can use a technology without excessive effort, and it influences individuals' preferences for personal and work-related communication tools and their intentions for online shopping (Ocak, 2023). Employees' attitudes, behaviors, and intentions towards using information and communication technologies positively affect perceived ease of use (Özer et al., 2010). In measuring personal intentions and attitudes related to the use of information and communication technologies, perceived ease of use and benefit variables have been utilized by many researchers, and it has been determined that these variables have a direct and positive impact on individuals' technology acceptance behaviors

(Legris et al., 2003; Venkatesh, 2000). According to Gefen and Straub (2000), if a transaction performed using information communication technology is part of a decision-making process related to a task, it influences individuals' technology acceptance behavior.

As employees' technology usage skills increase, it is expected that they will experience less stress related to technology usage difficulties. The perception of technology ease of use in individuals is directly proportional to their technology usage capabilities. Communication overload can lead to ambiguity in decision-making mechanisms, role conflicts, and delays in decision-making for employees (Dilekçi & Limon, 2020). Perceived ease of use is expected to increase message processing speed, thereby reducing delays in the decision-making process. Excessive information and communication load lead to social media and information fatigue in individuals (Eliyana et al., 2020; Pang & Ruan, 2023; Fu et al., 2020). Individual technological inclination is expected to reduce fatigue caused by excessive information and message overload. In the case of excessive communication load, unnecessary communication leads to work interruptions and decreased productivity (Karr-Wisniewski & Lu, 2010). Technology usage skills accelerate the process of filtering out unnecessary information for employees.

Based on this information, Hypothesis H2 has been formulated as follows:

H2 There is a negative relationship between employees' levels of communication overload and perceived ease of use

Perceptions of ease of use of information and communication technologies affect individuals' decision-making processes (Temizkan & Nart, 2021). Perceived ease of use, as a sub-dimension of digitization, is one of the factors that positively affect job performance (Uzkurt, Atan, & Develi, 2022). In a study conducted by Omar et al. (2019) among public employees, a significant and positive relationship was found between perceived ease of use and job performance. Employees with a high level of technology usage are expected to have more advanced organizational skills, resulting in higher job

performance. Based on this information, Hypothesis H3 has been formulated as follows:

H3 There is a positive relationship between employees' perceived ease of use and job performance.

Mediating Effect of Perceived Ease of Use on the Interaction of Communication Overload and Job Performance

Research has been conducted on the mediating effect of the perceived ease of use of information and communication technology among various variables. Mustapha and Obid (2015) confirmed the mediating effect of perceived ease of use on service quality and online tax system usage in their research. Similarly, research on the widespread use of e-government services by citizens has shown that ease of use plays a mediating role in shaping individual behaviors related to technology usage (Chen & Aklikokou, 2020). In the online distance education system, ease of use is one of the determinants of students' intentions to use information and communication technologies. Ease of use has a mediating effect between individuals' self-efficacy factors and their intentions to use technology (Panergayo & Aliazas, 2021). According to a study by Kabakuş & Küçükoğlu (2022), perceived ease of use was found to mediate the relationship between the trust factor and the use of mobile banking platforms. Based on this explanation and research findings, hypothesis H4 has been formulated as follows:

H4 Employees' perceived ease of use regarding the information and communication technology mediates the relationship between communication overload and job performance.

Methodology

The significance and purpose of the research

In the context of businesses, human resources, which are one of the most crucial production factors, hold strategic value due to their capabilities. Work performance serves as a significant indicator in measuring these capabilities (Dursun et al., 2020). Within this

framework, factors that influence work performance gain importance. Factors at the organizational level, such as motivation, leadership styles, organizational culture, intensive technology usage, business methods, and stress management, are variables associated with work performance (Özmutaf, 2007; Yılmaz, 2012). Among the individual factors related to work performance and communication, communication skills, communication style, and organizational communication stand out (Turunç & Turgut, 2020).

Rapid developments in information and communication technology have been influencing and altering people's communication and lifestyles as well as the ways businesses conduct their operations (Men, 2022). While these technological advancements expedite access to information and offer various conveniences in life, they also bring about unique risks. Information overload, technology addiction, and time wastage are among these risks. Communication overload, which can be described as a situation where an individual is exposed to more information and messages than they can process at a given time due to intensive technology use, can also affect employees' work performance.

The aim of this research is to examine whether employees are exposed to communication overload and the interaction between communication overload and work performance. Additionally, it will determine whether the perceived ease of use of information and communication technology plays a mediating role in the interaction between communication overload and work performance. The limited number of studies on this subject in Türkiye, coupled with the novelty and significance of demonstrating the mediating effect of perceived ease of use in the interaction between communication overload and work performance, adds to the originality and importance of this research.

Research Model

The process of collecting data from the target population to determine the cause-effect relationship between variables is called the relational screening model (Kırcaali-İftar & Tekin,

1997). In this research, the relational screening model was used in accordance with the aim to be achieved. The developed model is shown in Figure 1.

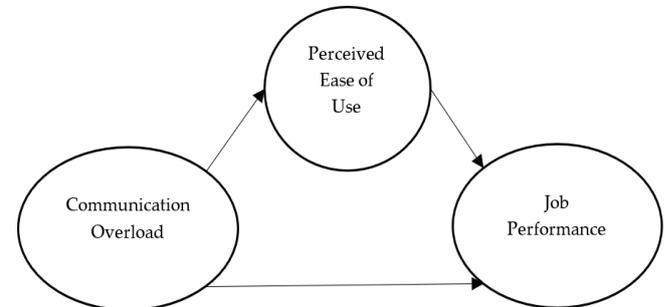


Figure 1. Research Model (Source: Developed by the author)

Population and Sample

The population of this study consists of the administrative and academic staff of Karabük University. As of the end of 2022, the university employs 1,166 academic and 481 administrative personnel (Administrative Activity Report, 2022). The university places special importance on the performance of its employees in its strategic planning activities. Data were collected using the convenience sampling method, a non-random sampling method, based on voluntariness. In determining the sample size, the table developed by Krejcie and Morgan (1970) was utilized. According to the significance level of $\alpha=0.05$ and a $\pm 5\%$ margin of error, it is stated that the sample size should be 313 individuals. In this study, a total of 408 individuals at Karabük University were reached, and the collected data were evaluated. The findings obtained from the descriptive statistics conducted to determine the distribution of participants' general characteristics are presented in Table 1.

Table 1. Demographic characteristics of participants

Gender	n	%
Female	147	36
Male	261	64
Age	n	%
20-30 years old	65	15,9
31-40 years old	117	28,7
41-50 years old	157	38,5
51 and over years old	69	16,9

Professional Positions/Titles	n	%
Administrative staff	123	30,1
Academic staff	78	19,1
Assistant Professor	91	22,3
Associate Professor	62	15,2
Professor	54	13,2
Years of Service		
Less than 5 years	68	16,7
Between 5-10 years	67	16,4
Between 11-15 years	117	28,7
Between 16-20 years	90	22,1
More than 21 years	66	16,2
Proficiency level at Using Information and Communication Technology		
Very advanced skills	33	8,1
Advanced skills	189	46,3
Intermediate level skills	166	40,7
Low level skills	18	4,4
No skills at all	2	,5
Total	408	100

Of the participants in the study, 36% are female, and 64% are male. In terms of age, it is observed that 15.9% of the employees are in the 20-30 age range, 28.7% in the 31-40 age range, 38.5% in the 41-50 age range, and 16.9% are 51 years and older. Considering the participants' professional positions/titles, 30.1% are administrative staff, 19.1% are academic staff, 22.3% are Assistant Professors, 15.2% are Associate Professors, and 13.2% are Professors. Regarding the years of service, 16.7% of the employees have worked at the university for less than 5 years, 16.4% between 5-10 years, 28.7% between 11-15 years, 22.1% between 16-20 years, and 16.2% have worked for 21 years or more at the university. When looking at the participants' levels of proficiency in using information and communication technology, it is observed that 46.3% of the employees have advanced skills, 40.7% have intermediate skills, 8.1% have very advanced skills, 4.4% have low skills, and 0.5% have no skills.

Data Collection Tools and Scales

In the research, the survey technique was used as the data collection tool. The research was carried out between July-August 2023. The first part of the questionnaire consists of five questions related to the participants' demographic characteristics. In

the second part, the "Communication Overload" scale has been adapted from the scale developed by Wisniewski and Lu (2010). In this scale, communication overload is measured with four statements. The "Job Performance" scale in the third part of the questionnaire was used by Kirkman and Rosen (1999) and Sigler and Pearson (2000), and the Turkish translation and application were performed by Çöl (2008). This scale consists of a total of 4 statements. In the fourth part of the questionnaire, there is the "Perceived Ease of Use" scale, which consists of 5 statements. This scale was developed by Dawis (1989) and the Turkish version was used by Turan (2011).

Data Collection and Analysis

SPSS 26 software package was used for data analysis. The structural validity of the scales was assessed using Factor Analysis, and their reliability was examined using Cronbach's Alpha coefficients. In the interpretation of reliability coefficients, the following intervals were considered: " $0.00 \leq \alpha < 0.40$ indicates unreliability, $0.41 \leq \alpha < 0.60$ indicates low reliability, $0.61 \leq \alpha < 0.80$ indicates moderate reliability, and $0.81 \leq \alpha < 1.00$ indicates high reliability" (Kalaycı, 2010). Subsequently, arithmetic mean values were examined to determine the levels of employees' excessive communication loads, perceived ease of use, and job performance perceptions. In interpreting arithmetic mean values, the following ranges were used: "1.00-1.80 = strongly disagree, 1.81-2.60 = disagree, 2.61-3.40 = undecided, 3.41-4.20 = agree, and 4.21-5.00 = strongly agree" (Özdamar, 2001).

The normality analysis provided skewness and kurtosis values within the range of -1.5 to 1.5 for the communication overload scale (-0.509; -0.201), perceived ease of use scale (-0.928; 1.487), and job performance scale (-0.719; 0.631), indicating that parametric tests could be used in the analyses. Pearson correlation test was used to determine the relationships between communication overload, perceived ease of use, and job performance. The level of the relationship between variables was interpreted considering the following intervals: "0.00-0.25=very weak; 0.26-0.49=weak; 0.50-

0.69=moderate; 0.70-0.89=high; 0.90-1.00=very high" (Kalaycı, 2010). Simple and multiple regression analyses were conducted to determine the mediating role of perceived ease of use in the interaction between communication overload and job performance.

Factor Analysis and Reliability Results

Factor Analysis (EFA) was conducted to test the structural validity of the scales used in the study. Cronbach's Alpha test was used to assess the reliability of the scales. The obtained results can be seen in Table 2.

Table 2. Factor analysis and reliability results of the scales

Scales	Items	Factor Load	I. Eigen value	% of Variance	α
Communication overload(CO)	CO1	0,809	5,784	28,442	0,810
	CO2	0,864			
	CO3	0,804			
	CO4	0,607			
Perceived Ease of Use (PEU)	PEU1	0,709	2,044	20,953	0,833
	PEU2	0,811			
	PEU3	0,761			
	PEU4	0,766			
	PEU5	0,813			
Job Performance (JP)	JP1	0,804	1,193	19,997	0,899
	JP2	0,845			
	JP3	0,765			
	JP4	0,799			
Cumulative % Kaiser-Meyer-Olkin (KMO)			69,392	0,880	0,669
Bartlett Test of Sphericity			$\chi^2=2916,778$	0,000	

As a result of the factor analysis conducted, it is understood from the KMO (0.880) and Bartlett ($\chi^2 = 2916.778$; $p = 0.000$) values that the data obtained from a total of 408 participants regarding a total of 13 items related to the scales used in the survey demonstrate a certain structure. Since the total variance explanation rate of the scale is ≥ 0.55 , it has been determined that the data sufficiently measure the research problem (Tabachnick and Fidell, 2013). Although there are different values for factor loading values in the literature, the value widely accepted in social sciences is ≥ 0.35 (Büyüköztürk, 2002). In this context, it has been revealed that the factor loading values of the scale range from 0.607 to 0.864 and are above the accepted threshold. Cronbach's Alpha coefficients were examined for scale reliability. In the literature, a reliability coefficient in the range of

$0.61 \leq \alpha < 0.80$ is considered quite reliable (Kalaycı, 2010). In this framework, Alpha coefficients were found to be (0.810) for the CO scale, (0.833) for the PEU scale, and (0.899) for the JP scale. The overall Alpha coefficient obtained for the scale was determined as (0.669), and it was decided that the scale is reliable (Akgül and Çevik, 2003).

Findings

In this section, the findings obtained from the analysis of the data obtained from the field study conducted for Karabük University employees are examined.

Findings regarding employees' perceptions of communication overload, perceived ease of use, and job performance

Descriptive statistics, including arithmetic means and standard deviations were examined to determine the levels of communication overload, perceived ease of use and job performance perceptions of Karabük University employees. The findings obtained are presented in Table 3.

Table 3. Descriptive Statistics

Variables	f	\bar{X}	SD
Communication Overload	408	3,3511	,88569
Perceived Ease of Use	408	4,0784	,56805
Job Performance	408	3,9816	,70643

It can be stated that Karabük University employees perceive their communication overload at a moderate level ($\bar{X}=3.35$), while their perceived ease of use ($\bar{X}=4.07$) and job performance perceptions ($\bar{X}=3.98$) are at a higher level.

Findings Related to Correlation Analysis

The correlation analysis results can be seen in Table 4 below.

Table 4. Average, standard deviation, and correlation values for the variables of communication overload, perceived ease of use, and job performance

Variables	M	S	1	2	3
			D		
1. Communication Overload (CO)	3,35	0,885	1		
2. Perceived Ease of Use (PEU)	4,07	0,568	-0,313**	1	
3. Job Performance (JP)	3,98	0,706	-0,353**	0,726**	1

Based on the correlations presented in Table 4, it can be observed that there is a negative and weak relationship between employees' communication overload and job performance ($r = -0.353$, $p < 0.01$). Accordingly, as employees' perceptions of communication overload increase, their perceptions of job performance decrease. As a result of the correlation analysis conducted, the hypothesis "H1: There is a negative relationship between employees' levels of communication overload and their job performance." has been accepted.

The findings also indicate a negative and weak relationship between communication overload and perceived ease of use ($r = -0.313$, $p < 0.01$). Thus, as employees' perceptions of communication overload increase, their perceptions of perceived ease of use decrease. Similarly, as perceptions of ease of use of information and communication technology increase, perceptions of communication overload decrease. As a result of these findings, the hypothesis "H2: There is a negative relationship between employees' levels of communication overload and perceived ease of use" has been accepted.

The correlation findings indicate a positive and high-level relationship between perceived ease of use and job performance ($r = 0.726$, $p < 0.01$). This relationship demonstrates that as employees perceive ease of use increase, their perceptions of job performance also increase. Based on these findings, the hypothesis "H3: There is a positive relationship between employees' perceived ease of use and job performance." has been accepted.

Simple and Multiple Regression Analysis Results Conducted to Test the Mediation Effect of Perceived Ease of Use

The situation where a third variable provides the relationship between two variables is referred to as a mediation effect. In order to claim the existence of a mediation relationship between variables, there must be a significant statistical relationship between all variables. When the effect of the mediator variable is examined, if there is a decrease in the relationship between the independent variable and the dependent variable, it is called partial mediation effect, and if this relationship becomes statistically insignificant, it is called full mediation effect. In cases where the relationship is found to be insignificant, the Sobel test is used to statistically test this relationship by examining the z value that will be obtained (Baron and Kenny, 1986).

To test the mediation effect of perceived ease of use on the relationship between communication overload and job performance, multiple linear regression analysis was conducted. The analysis results are presented in Table 5.

Table 5. Results of multiple linear regression analysis on the mediation effect of perceived ease of use in the relationship between communication overload and job performance

Dep. variable	Independent variable	B	Std. error	β	T	p	R ²	F
1-JP								
CO								
Constant		4,926	0,128	—	38,374	0,000	0,125	57,848
	CO	-0,282	0,037	-0,313	-7,606	0,000		
2-PEU								
CO								
Constant		4,751	0,105	—	45,335	0,000	0,098	44,009
	CO	0,282	0,053	0,313	7,606	0,000		

CO	-	0,0	-	-	0,0		
	0,2	30	0,3	6,63	00		
	01		13	4			
<hr/>							
3-JP	CO						
	and						
	PEU						
<hr/>							
Const	0,8	0,2	----	3,91	0,0	0,5	242,
ant	92	28	---	1	00	45	796
<hr/>							
CO	-	0,0	-	-	0,0		
	0,1	28	0,1	3,95	00		
	11		40	8			
<hr/>							
PEU	0,8	0,0	0,6	19,3	0,0		
	49	44	83	53	00		

According to the results of the multiple linear regression analysis, it is found that the relationships between independent and dependent variables are significant ($p=0.000$). The level of the relationship between communication overload and job performance is ($\beta=-0.353$), and when the mediation effect of perceived ease of use is controlled, this relationship decreases to ($\beta=-0.140$), and at the same time, it is statistically significant ($p=0.000$). These results indicate that perceived ease of use partially mediates the relationship between communication overload and job performance. As a result of the multiple regression analyses conducted, the hypothesis "H4: Employees' perceived ease of use regarding the information and communication technology mediates the relationship between communication overload and job performance." was accepted.

Below, in Figure 2, the mediating effect of perceived ease of use on the interaction between communication overload and job performance can be seen.

The proportion of the indirect effect in the total effect in the mediation effect of perceived ease of use has been determined as 0.604. According to this result, it can be stated that 60.4% of the effect of communication overload on job performance is attributable to the mediating variable, perceived ease of use, and there may be other mediating variables influencing this relationship.

Discussion and Conclusion

This research was conducted to determine whether perceived ease of use mediates the relationship between Karabük University employees' perceptions of communication overload and their job performance. A total of 408 university employees participated in the field study. The analyses revealed that employees' perceptions of communication overload were at a moderate level ($\bar{X}=3.35$), while their perceptions of ease of use ($\bar{X}=4.07$) and job performance ($\bar{X}=3.98$) were higher.

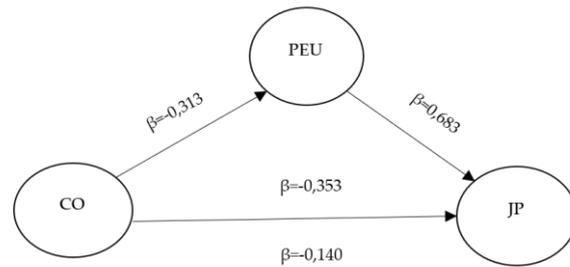


Figure 2. Mediating effect of perceived ease of use on the interaction between communication overload and job performance

This suggests that employees are proficient in using the necessary information and communication technology. However, despite this, it is also understood that they are exposed to a moderate level of communication overload. Academic or administrative staff at the university are often required to evaluate the message traffic directed to them within a certain time frame, especially during the academic year, in order to make necessary decisions and take actions. These messages can include emails, social media posts, text messages, official documents received through electronic official correspondence channels, messages conveyed through the student information systems, announcements and correspondence from the university, higher education board, or other official institutions, and, especially for academic staff, correspondence, emails, and announcements related to academic activities such as journals, conferences, and congresses. Academic staff also need significant time for their primary duty, which is teaching and research. In addition to their academic duties, academic staff members who have also taken on

administrative duties may experience even greater communication loads.

When examining the relationships between communication overload, perceived ease of use, and job performance, the following points were identified: There is a negative and weak relationship between employees' perceptions of communication overload and their job performance ($r=-0.353$, $p<0.01$). This result indicates that as employees' perceptions of communication overload increase, their perceptions of job performance decrease. The correlation between the two variables supports the hypothesis "H1: There is a negative relationship between employees' levels of communication overload and their job performance."

This result is consistent with some other research on the effects of communication overload on job performance (Dhir et al., 2018; Giri and Kumar, 2010; Delpechitre et al., 2018; McFarlane and Latorella, 2002; Sean Burns and Bossaller, 2012; Yu et al., 2018; Ou et al., 2023). However, in a study conducted among teachers by Özbek (2022), no significant relationship was found between communication overload and job performance.

communication overload occurs when individuals are exposed to information and messages beyond the level they can effectively cope with. This situation can undoubtedly lead to a decrease in job performance, even due to time constraints alone. communication overload can also lead to stress, interruptions in work, and difficulty in focusing on work, among other consequences. To reduce the effect of excessive communication load, it is necessary to either increase the individual's capacity to process a certain amount of information and messages in a given time or reduce the load of irrelevant or unimportant messages in the workflow. The first approach can be achieved through personal development, while the second approach can be realized by advanced technology suitable for efficient workflow or by developing personal discipline awareness. To make technology purpose-oriented, it is necessary to develop useful software and hardware in line with business processes.

The analyses also showed a negative and weak relationship between communication overload and perceived ease of use ($r=-0.313$, $p<0.01$). This result suggests that as employees' perceptions of the ease of using information and communication technology increase, their perceptions of communication overload decrease. The findings support the hypothesis "H2: There is a negative relationship between employees' levels of communication overload and perceived ease of use." Depending on the nature of the relationship, to reduce the effect of communication overload on employees, it may be necessary to improve the technological capabilities used for effective job performance. In addition, it can be said that the technology used should be easy to learn, apply, and user-friendly.

According to the research findings, there is a positive and strong relationship between perceived ease of use and job performance ($r=0.726$, $p<0.01$). This result indicates that as employees' perceptions of ease of use increase, their perceptions of job performance also increase. These findings support the hypothesis "H3: There is a positive relationship between employees' perceived ease of use and job performance." The result obtained in this research is similar to some other research findings in this field. Uz Kurt, Atan, and Develi (2022) found a significant and positive relationship between perceived ease of use as a sub-dimension of digitalization and job performance in their study. Akça and Özer (2012) determined that there is a significant and positive relationship between perceived ease of use in enterprise resource planning applications and organizational performance. Similarly, regarding the use of social media applications, a significant and positive relationship was found between perceived ease of use and job performance (Omar et al., 2019; Iswanto et al., 2021).

Perceived ease of use refers to the feelings and thoughts that individuals develop based on how easily a technology can be used by the user. A high perception of ease of use indicates that the technology used is clear, understandable, and easy to use. It also suggests that the user has a high level of technological capability. Based on the results, the relationship between perceived ease of use and

job performance is high, and this finding is remarkable. Therefore, improving the perception of ease of use of technology should be a priority in efforts to enhance job performance in jobs where information and communication technology is used in work processes. To increase the perceived ease of use of employees concerning a technology, it may be necessary to focus on two different areas. The first area is related to the user-friendly design of the technology, which is purely a technical matter. The second area involves training activities aimed at increasing employees' knowledge and skills related to technology use. Through these training activities, employees' capacities are increased, allowing them to more easily handle excessive communication loads and improve their job performance.

The results of multiple linear regression analysis indicate that perceived ease of use partially mediates the relationship between communication overload and job performance. This result supports the hypothesis "H4: Employees' perceived ease of use regarding the information and communication technology mediates the relationship between communication overload and job performance." The proportion of the indirect effect in the total effect in the mediation effect of perceived ease of use has been determined as 0.604. This result indicates that the mediating effect of perceived ease of use is highly significant. The result also suggests that there may be other mediating variables influencing this relationship. In research examining whether perceived ease of use mediates the relationship between various variables, it has been found that this variable has a mediating effect in the relationships between service quality and online tax system usage (Mustapha and Obid, 2015), technology use and shaping individual behaviors (Chen and Aklkokou, 2020), individuals' self-efficacy factors and technology usage intentions (Panergayo & Aliazas, 2021), and trust and mobile banking usage (Kabakuş and Küçüköğlü, 2022).

In this research, it has been observed that perceived ease of use, acting as an intermediary, reduces the direct impact of communication overload on job performance. In other words, perceived ease of use serves as a buffer to mitigate the negative effects of employees' communication

overload on job performance. Based on the findings, employees' high technological proficiency enables them to more easily shoulder the burden of communication overload and cope with stress resulting from it.

Based on the results obtained in the research, the following recommendations can be made regarding organizational development activities aimed at preventing performance declines due to communication overload in organizations:

Designing in-service training activities aimed at enhancing employees' information and communication technology capabilities,

Enhancing the ease of use and user-friendliness of the information and communication technology used in job requirements,

Implementing technical adjustments to consolidate different and numerous communication channels into a common and interactive platform,

Increasing employees' awareness and consciousness regarding personal use of social media applications during work hours to prevent time wastage,

Developing systems that can filter out irrelevant and unnecessary information and communication data by carefully reviewing business processes.

Limitations

One of the most significant limitations of the research is that the data used in the study is limited to Karabük University personnel. Still results can be generalized at least for state universities considering the magnitude of staff and student numbers in Karabük University. While technology makes our lives easier, it can also create unique problems. Communication overload has recently emerged as one of these issues. There are still relatively limited research about communication overload and job performance in literature.

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RESEARCH ARTICLE

An Econometric Study on the Validity of the Unemployment Hysteresis Hypothesis in EU-15 and EU-28

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Abstract

Unemployment is among the main economic problems not only for developed countries but also for underdeveloped countries. The European Union, which was mostly composed of developed Western European countries until 2004, has grown with the participation of Eastern European countries in the following years. In its current form, the European Union consists of countries with different levels of development. The European Union should undoubtedly consider this structure of the union in the economic policies it develops. The existence of unemployment hysteresis, which shows the situation in which unemployment, which increased after an economic shock, does not return to its former levels, is important for policymakers of the union countries, especially in terms of methods of combating unemployment. This study aims to examine unemployment hysteresis for the EU-15 and EU-28 over the average values in the 2001Q1-2019Q4 period. In addition to the traditional unit root tests of Augmented Dickey Fuller (ADF) and Phillips Perron (PP), the Fractional Frequency Fourier ADF Unit Root Test developed by Bozoklu et al. (2020) has been used as the methodology. The data are obtained from Eurostat, the official website of the European Union where statistics are published. As a result of the study, evidence is found that the hysteresis hypothesis is valid in EU-15 and EU-28 according to all three analyzes used. In the study, the use of the Fractional Frequency Fourier ADF Unit Root Test, which is the most up-to-date test, contributes to the literature.

Keywords: Unemployment Hysteresis, NAIRU, Unemployment, Augmented Dickey Fuller (ADF), Phillips Perron (PP), Fractional Frequency Fourier ADF

Öz

İşsizlik, az gelişmiş ülkeler için olduğu kadar gelişmiş ülkeler açısından da ana ekonomik sorunlar arasında yer almaktadır. 2004 yılına kadar çoğunlukla gelişmiş batı Avrupa ülkelerinin oluşturduğu Avrupa Birliği, sonraki yıllarda doğu Avrupa ülkelerinin de katılımıyla büyümüştür. Avrupa Birliği şimdiki haliyle farklı gelişmişlik seviyelerini barındıran ülkelere dönüşmektedir. Avrupa Birliği geliştirdiği ekonomi politikalarında şüphesiz ki birliğin bu yapısını göz önünde bulundurmalıdır. Ekonomik bir şok sonrası artış gösteren işsizliğin geri eski seviyelerine dönmediği durumu gösteren işsizlik histerisinin varlığı, birlik ülkelerinin politika yapıcıları için özellikle işsizlikle mücadele yöntemleri açısından önem arz etmektedir. Bu çalışma, 2001Q1-2019Q4 döneminde AB-15 ve AB-28 için işsizlik histerisini ortalama değerler üzerinden incelemeyi amaçlamaktadır. Çalışmada, metodoloji olarak Augmented Dickey Fuller (ADF) ve Phillips Perron (PP) gibi geleneksel birim kök testlerinin yanı sıra Bozoklu vd. (2020) tarafından geliştirilen Kesirli Frekanslı Fourier ADF Birim Kök Testi kullanılmıştır. Veriler, Avrupa Birliği'nin istatistiklerinin yayımlandığı resmi web sitesi Eurostat veri havuzundan elde edilmiştir. Çalışma sonucunda, kullanılan her üç analize göre de histeri hipotezinin AB-15 ve AB-28'de geçerli olduğuna dair kanıtlar bulunmuştur. Çalışmada, bilindiği kadarıyla literatürde yer alan en güncel birim kök testi olan Kesirli Frekanslı Fourier ADF Birim Kök Testinin kullanılması literatüre katkı sağlamaktadır.

Anahtar Kelimeler: İşsizlik Histerizi, Nairu, İşsizlik, Artırılmış Dickey Fuller (ADF), Phillips Perron (PP), Kesirli Frekanslı Fourier ADF

Introduction

The deficiencies of Classical Economics, which emerged with the 1929 economic crisis, were tried to be eliminated with Keynesian theories until the 1973 OPEC oil crisis. However, unemployment after the global oil crisis has become permanent. The Phillips curve, which had its golden age in the 1950s, was not sufficient to explain the unemployment experienced in this crisis. In these years, Blanchard and Summers (1986) called "unemployment hysteresis"¹ when unemployment, which increased with an economic shock, did not return to its previous levels (Akcan, 2019, p. 34).

Before the studies on unemployment hysteresis, the generally accepted view was Non-Accelerating Inflation Rate of Unemployment (NAIRU), developed by economists such as Friedman (1968) and Phelps (1967, 1968). NAIRU and natural unemployment rate have similar meanings (Ball & Mankiw, 2002, p. 115). These two results, which emerged as a result of empirical studies, are very important for policy makers. In an economy with unemployment hysteresis, there is much more need for precautionary packages to address this problem, while in economies with natural unemployment, unemployment may automatically return to normal levels (Chang, 2011, p. 2208).

Hysteresis arises from internal and external shocks in economies. Traditional policies might be inadequate in addressing such persistent unemployment, causing shifts in the long-term natural unemployment rate (Yıldırım & İnançlı, 2018, p. 46). European unemployment has been a major subject of research in economics. Debates revolve around whether the elevated unemployment since the 1970s is due to economic shocks or structural factors (Jacobson et al., 1997, p. 1782). Blanchard and Summers (1986) posited that neither Classical nor Keynesian theories can sufficiently account for Europe's rising unemployment, necessitating an exploration into "hysteresis theories".

One central question surrounding European unemployment hysteresis is the potential influence

of new EU accession countries. The EU expanded from its original 15 members in 2004 to 28 members after subsequent enlargements. Most countries that joined post-2004 emerged following the Soviet Union's dissolution. The rationale behind analyzing EU-15 and EU-28 separately in this study is to discern potential differences in unemployment hysteresis between the earlier, more established EU members and the broader, post-enlargement EU. Analyzing them separately allows for an exploration of whether newer member states, with their unique economic histories and challenges, have had a distinct impact on the overall unemployment hysteresis of the EU.

The main purpose of this study is to test the unemployment hysteresis in EU-15, representing the pre-2004 European Union, and EU-28, which includes all current members. In doing so, we can ascertain the influence of post-2004 EU accession countries on unemployment hysteresis. This study's primary contributions are twofold: First, to our knowledge, no other research has examined the average unemployment hysteresis of EU member states pre- and post-2004. Second, the unit root test employed in this study incorporates a Fourier function, allowing for a nuanced analysis of subtle shifts, complemented by traditional unit root tests. This article comprises four main sections: following the introduction is a literature review, then a section detailing the dataset and methodology, and finally, a section presenting the results of the applied analyses.

Literature Review

When the literature on unemployment hysteresis is examined, it can be stated that there are many studies dealing with hysteresis and the natural rate hypothesis. From the study of Blanchard and Summers (1986) until now, the hysteresis hypothesis or tests for natural unemployment are analyzed by econometric methods based on the unit root test. The unit root tests used are collected in three different groups as Augmented Dickey-Fuller (ADF), the ones which take into account structural breaks, and panel ones (Camarero et al.,

¹ Although "hysteresis" was used for the first time in the field of physics, it means "to be late or to be behind" in Greek (Cross, Darby, Ireland & Piscitelli, 1998).

2004; Carrion-i-Silvestre et al., 2005; Hadri and Rao, 2008; Enders and Lee; 2012).

Traditional tests such as Augmented Dickey-Fuller (ADF) (1979) and Phillips-Perron (PP) (1988) generally support autoregressive and unit root process. On the other hand, they are applied without considering structural breaks. In order to include structural breaks in the analysis, the exact location and number of breaks must be known. A dummy variable is used to solve this problem, but this method has many undesirable results (Chang, 2011, p. 2208). Becker et al. (2004, 2006) used Fourier tests for analyzes that also take into account structural breaks. Afterwards, Enders & Lee (2009) and Pascalau (2010) successfully used the Fourier approach to model structural breaks. In the literature, the hysteresis hypothesis has been tested with many different methods and models.

The studies, methods, periods and results that investigate whether unemployment hysteresis is valid in European Union countries are given as follows in Table-1.

Table 1. Literature Review

Study	Method	Countries and Data Period	Valid	Invalid
Jaeger & Parkinson (1994)	ADF	Canada, Germany, England and USA (1960:1-1991:4)	Canada and Germany	USA
Jacobson et al., (1997)	Structural VAR Models	Denmark (1971-1990), Norway (1967-90), Sweden (1965-90)	✓	
León-Dedesma & McAdam (2004)	Markov-switching analysis, compound root test	CEE countries and EU-15 (1991:1-2002:12)		✓
Christopoulos & León-Ledesma (2007)	ADF (MADF), JLR, (DF) GLS-SUR, ADF-SUR, Pesaran's panel unit root test, Choi's panel unit root test	12 EU countries 1988(Q1)-1999(Q4)		✓

Dreger & Reimers (2009)	Panel unit roots	51 state of USA ve 14 EU countries (1983:1-2004:4)		✓	
Srinivasan & Mitra (2012)	Kalman Filter	Almanya & Fransa (1955-2010)			✓
Bolat et al., (2014)	Nonlinear heterogeneous panel unit root tests	17 European Region Countries (2000:1-2013:1)	6 countries		11 countries
Mercan et al. (2015)	Panel Data Analysis	Türkiye, EU-15, EU-27, OECD and G-8 Countries	Other countries		G-8 countries
Klinger & Weber (2016)	Markov switching	Germany (1960:1-2015:6), USA (Weekly)	Germany		USA
Akdoğan (2017)	Unit root testing and linearity testing, AESTAR model (includes structural break)	31 European countries, USA and Japan (each country's timeline differs for quarters)			60 percent of countries
Li et al., (2017)	Panel Stationary Test, Fourier Unit Root Test	PIIGS countries (1960-2011)	Greece		The other countries
Furuoka (2017a)	ADF, FADF, SUR - FADF	France, Germany, Italy, Spain, United Kingdom (1991-2015)	Four countries		Spain
Furuoka (2017b)	ADF, FADF, ADF-SB and FADF-SB	Denmark, Finland, Norway and Sweden (2000Q1-2014Q2)			✓
Obradović et al. (2018)	Linear and nonlinear unit root tests	10 countries from South East Europe	8 countries		2 countries

Jump & Stockhammer (2018)	NAIRU estimation method used by the European Commission	EU-15 (1960-2016)	√	
Sigeze et al. (2019)	Fourier-KPSS panel stationarity test	Türkiye and EU countries (1991-2016)	The other countries	Latvia, Belgium, Cyprus, Sweden
Jiang et al. (2019)	Quantile-based unit root testing	G7 countries (1980-2017)		√
Yaya et al. (2021)	A nonlinear unit root test based on ARNN	5 European countries, 42 African countries, 15 countries from other regions (1983-2018)	√	
Doğaner (2023)	Linear and Nonlinear Unit Root Tests	European countries (1991-2020)	16 European countries	

Dataset and Method

Most of the countries that joined the European Union after 2004 are countries that left the Soviet system or have different economic structures from European countries. The European Union is not only a political, but also an economic. Therefore, in the study, the member countries of the union are divided into two EU-15 and EU-28 and unemployment data are taken as average. Unemployment data for the period 2000Q1 - 2019Q4 of 15 countries that were members of the union before 2004 and the periods 2000Q1 -2019Q4 of 28 countries that were members of the union after 2004 are evaluated together. In addition to the traditional unit root tests such as Augmented Dickey Fuller (ADF) and Phillips Perron (PP), the Fractional Frequency Fourier ADF Unit Root Test, which is the newest unit root test in the literature, is used as a method. The data are obtained from the Eurostat official site. The descriptive statistics of the data are as in Table 2.

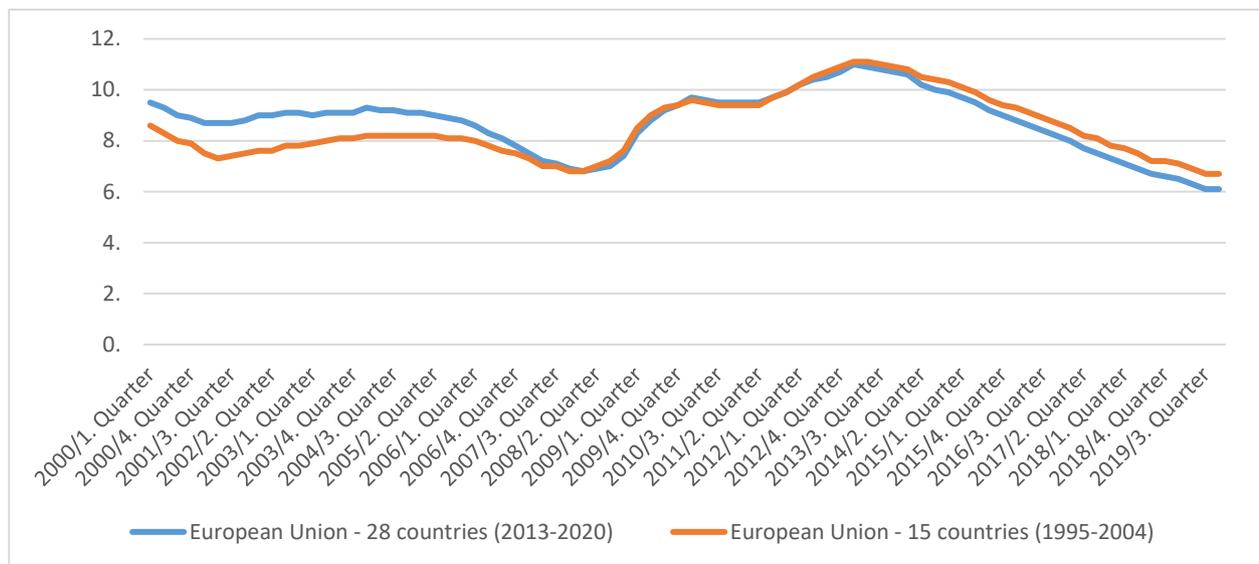
Table 2. Descriptive Statistics

Countries	Mean	Median	Max.	Min.	Std. Dev.	Skewness	Kurtosis	Jarque-Bera
EU - 15	8.548750	8.200000	11.100000	6.700000	1.246463	0.511164	2.158649	5.843422
EU - 28	8.737500	9.000000	11.000000	6.100000	1.226643	0.381485	2.455780	2.927662

Table 2 provides the descriptive statistics for unemployment data of two groups of countries: EU-15 and EU-28, over the period 2000Q1-2019Q4. The mean unemployment rate for EU-15 countries is approximately 8.55%, while it's slightly higher for EU-28 countries at about 8.74%. The medians for both groups are fairly close, with EU-15 at 8.2% and EU-28 at 9%. Both the maximum and minimum unemployment rates for EU-15 and EU-28 are relatively close. For EU-15, the range is between 6.7% and 11.1%, and for EU-28, it's between 6.1% and 11%. This proximity in range indicates a similarity in the spread of unemployment rates among the two groups of countries. The Jarque-Bera test checks whether the given data sample has the skewness and kurtosis matching a normal distribution. For both EU-15 and EU-28, the values are relatively low, which implies that we cannot reject the null hypothesis that the data is normally distributed.

In summary, the descriptive statistics indicate that the two groups of countries, EU-15 and EU-28, have unemployment data sets that are closely aligned in terms of central tendency, spread, and shape. The max and min values' closeness between the two groups emphasizes their similarities. Furthermore, based on the Jarque-Bera test results, it can be concluded that the unemployment data sets for both groups are approximately normally distributed.

The change in average unemployment rates for 15 countries and 28 countries of the European Union between 2000Q1 and 2019Q3 is shown in Graph 1.



Graph 1. EU-15 and EU-28 Average Unemployment Data
 Source. Eurostat (2023)

When Graph 1 is examined, the changes in unemployment rates of both country groups by periods show parallelism. In 2000, the unemployment rate of 15 member countries was lower than the total unemployment rate of 28 member countries, but towards the end of 2019, this situation was the opposite. By 2019Q4, the unemployment rate for 15 member countries was 6.7%, while the unemployment rate for 28 member countries was 6.1%. In this state, at first glance, it can be said that the countries that joined the union after 2004 transferred unemployment to 15 other countries through labor mobility. In addition, the unemployment rate of both country groups tended to decrease before the 2008 global crisis and while it was the same at the beginning of 2008, it increased continuously from 2008 to 2010. While the average unemployment data peaked at 11% in 2013, it decreased steadily in the following years and fell below the 2008 data.

Augmented Dickey Fuller (ADF) Test

As a result of shocks in the economy, the stagnation of the series in macroeconomic time series deteriorates. In these cases, the stationary state of the series is analyzed with unit root tests (Yurdakul, 2000). The first study on unit root testing was done by Dickey and Fuller (1979).

Later, Dickey and Fuller (1981) developed the test and included the autoregressive processes in the analysis and came up with the Augmented Dickey Fuller Unit Root Test (ADF).

Three different models are suggested for the use of the ADF test. In below, Equation (1) is used for tests in which coefficient and trend effect are not included, Equation (2) is used for tests where there is no trend effect but constant coefficient effect, and Equation (3) is used for stability tests where both constant coefficient and trend effect are present.

$$\Delta Y_t = \beta_1 Y_{t-1} + \sum_{i=1}^k \alpha_i \Delta Y_{t-i} + \varepsilon_t \tag{1}$$

$$\Delta Y_t = \beta_0 + \beta_1 Y_{t-1} + \sum_{i=1}^k \alpha_i \Delta Y_{t-i} + \varepsilon_t \tag{2}$$

$$\Delta Y_t = \beta_0 + \alpha t + \beta_1 Y_{t-1} + \sum_{i=1}^k \alpha_i \Delta Y_{t-i} + \varepsilon_t \tag{3}$$

The ΔY_t value indicates $(Y_t - Y_{t-1})$. β_0 indicates constant and t represents trend. In the model, β_1 is included as the coefficient of (Y_{t-1}) , while the t term belonging to β_1 is used as a test statistic. The accuracy of the $\beta_1=0$ hypothesis is found by comparing the Dickey-Fuller table values with the t value.

$H_0 = \beta_1 = 0$ The series is not stationary and has a unit root,

$H_1 = \beta_1 < 0$ The series is stationary and there is no unit root in the series.

Phillips Perron (PP) Test

ADF unit root tests make two assumptions for the error term, namely that they are independent and have constant variance. Therefore, it is necessary to make sure that the error term does not contain correlation and variable variance (Akcan, 2019, p. 40). Phillips and Perron (1988) presented a method whose assumption was developed for the error term in the ADF unit root test. The regression equations, which were handled according to the least squares method in the Phillips – Perron unit root test, are shown with equations (4) and (5). In the regression equation, T represents the number of observations, $\hat{\mu}_t$ is the error term and $(\hat{\mu}, \hat{\alpha})$ and $(\tilde{\mu}, \tilde{\beta}, \tilde{\alpha})$ are the coefficients of the regression equation.

$$Y_t = \hat{\mu} + \hat{\alpha}Y_{t-1} + \hat{\mu}_t, \tag{4}$$

$$Y_t = \tilde{\mu} + \tilde{\beta}(t - \frac{T}{2}) + \tilde{\alpha}Y_{t-1} + \tilde{\mu}_t \tag{5}$$

Fractional Frequency Fourier ADF Unit Root Test

Perron (1989) developed many tests that take into account structural breaks in unit root tests. The Fourier ADF unit root test proposed by Enders and Lee (2012) has been developed for situations where structural breaks are not sudden, but slow and soft. According to Omay (2015), thanks to Fourier tests, there is no need to know the structure (sharp or soft), number and location of structural breaks beforehand. This situation increases the power of the test in unit root analysis.

The following model is used in the application of the Fourier ADF unit root test:

$$\Delta y_t = \delta_0 + \delta_1 \sin\left(\frac{2\pi kt}{T}\right) + \delta_2 \cos\left(\frac{2\pi kt}{T}\right) + \delta_3 y_{t-1} + \sum_{i=1}^p \alpha_i \Delta y_{t-i} + v_t \tag{6}$$

In Model (6); T is the number of observations, t is the trend, k is the number of frequencies available, $\pi = 3.1416$, and p is the appropriate lag length. The Akaike information criterion was used to determine the appropriate lag length.

For the frequency value (k), Enders and Lee (2012) used integer values and determined a frequency value range from 1 to 5. Christopoulos and Leon-Ledesma (2011) stated that frequency values can also be fractional. Omay (2015) expanded the range of fractional values. Bozoklu et al. (2020), on the other hand, expanded the frequency values to be $k = (0.1, 0.2, 0.3, \dots, 4.8, 4.9, 5)$ between 0.1 and 5 and presented the critical values of the fractional frequency Fourier ADF unit root test. The model for the unit root test proposed by Bozoklu et al. (2020) is as in (7).

$$y_t^* = \alpha_0 1_t^* + \beta_0 t_t^* + \lambda_1 \sin_{1,t}^* + \lambda_2 \cos_{1,t}^* + \mu_t, \tag{7}$$

$t=1, 2, \dots, T$

$$y_t^* = (1-L)^{d_0} y_t, 1_t^* = (1-L)^{d_0} 1_t, t_t^* = (1-L)^{d_0} t_t, \mu_t = (1-L)^{d_0} \mu_t, \sin_{1,t}^* = (1-L)^{d_0} \sin\left(\frac{2\pi kt}{T}\right), \cos_{1,t}^* = (1-L)^{d_0} \cos\left(\frac{2\pi kt}{T}\right), x_t^* = (1-L)^{d_0} \mu_t.$$

In equation (7), in cases where μ_t is $I(0)$, the equation is linear and the coefficients can be estimated using the standard least squares method. Equation (7) is estimated for the appropriate frequency and the value that produces the least residual sum of squares for all k values between $0 < k \leq 5$ should be chosen (Bozoklu et al., 2020, pp. 5-6).

Findings and Results

Augmented Dickey Fuller Unit Root Test results for EU-15 and EU-28 unemployment rates are as in Table 3 and Table 4.

Table 3. EU-15 ADF Unit Root Test Results

	ADF t statistics	Probability Value	1%	%5	%10
Constant Term	-1.675615	0.4396	3.516 676	2.899 115	2.586 866
Trend and Constant Term	-1.367807	0.8628	4.080 021	3.468 459	3.161 067

Table 4. EU-28 ADF Unit Root Test Results

	ADF t statistics	Probability Value	1%	%5	%10
Constant Term	-1.646581	0.4542	-3.516676	-2.899115	-2.586866
Trend and Constant Term	-1.768205	0.7107	-4.080021	-3.468459	-3.161067

According to the Augmented Dickey Fuller Test results, it has been observed that the unemployment hysteresis effect is valid in the in constant term and trend and constant term models in EU-28 and EU-15. Phillips Perron Unit Root Test results for EU-15 and EU-28 unemployment rates are as in Table 5 and Table 6.

Table 5. EU-15 PP Unit Root Test Results

	PP t statistics	Probability Value	%1	%5	%10
Constant Term	-	0.6892	-	-	-
	1.157101		3.5155 36	2.8986 23	2.5866 05
Trend and Constant Term	-	-	-	-	-
	0.841426	0.9568	4.0784 2	3.4677 03	3.1606 27

Table 6. EU-28 PP Unit Root Test Results

	PP t statistics	Probability Value	%1	%5	%10
Constant Term	-0.919802	0.7771	-	-	-
			3.515 536	2.898 623	2.586 605
Trend and Constant Term	-1.028746	0.9335	-	-	-
			4.078 42	3.467 703	3.160 627

According to Phillips Perron Test results, unemployment hysteresis effect has been observed in EU-28 and EU-15 in constant term and trend and constant term models. In this sense, it has been seen that ADF and PP tests gave the same results. The Fractional Frequency Fourier ADF Unit Root Test results for EU-15 and EU-28 unemployment rates are as in Table 7.

Table 7. Fractional Frequency Fourier ADF Unit Root Test Results (Constant Term)

Group of Countries	FADF t statistics	Frequency	1%	5%	10%
EU-15	-3.147381	1.3	-4.2592	-3.6034	-3.2618
EU-28	-3.245163	1.6	-4.1139	-3.43019	-3.07417

Fractional Frequency Fourier ADF Unit Root Test frequency values are wider than conventional tests, so it is expected to give more accurate results. The constant term Fractional Frequency Fourier ADF Unit Root Test results in Table 7 are analyzed according to the critical values in Table A of Bozoklu et al. (2020) and according to the test results, it is found that the unemployment hysteresis effect is valid in EU-28 and EU-15 at the 5% critical value. It should also be noted that the unemployment hysteresis is not valid in EU-28 at the 10% critical value in the model with constant term.

Table 8. Fractional Frequency Fourier ADF Unit Root Test Results (Trend and Constant Term)

Group of Countries	FADF t statistics	Frequency	1%	5%	10%
EU-15	-3.129948	1.2	-4.96096	-4.36321	-4.0621 8
EU-28	-3.601616	1.5	-4.89476	-4.28233	-3.9779 2

The results of the Fractional Frequency Fourier ADF Unit Root Test for the model with trend and constant term in Table 8 are analyzed according to the critical values in Table B of Bozoklu et al. (2020). According to the test results, the unemployment hysteresis effect is found to be valid in the EU-28 and EU-15. The findings are largely consistent with the results of Sigeze et al. (2019) and Doğaner (2023), who test the unemployment hysteresis in all European Union countries with different methods. On the other hand, when the results are evaluated for the EU-15 countries, they are consistent with the results of Dreger & Reimers (2009), Mercan et al. (2015) and Jump & Stockhammer (2018), but contradict León-Dedesma & McAdam (2004).

Conclusion and Evaluation

Unemployment, which surged following economic shocks and persisted at elevated levels, remains a significant concern for European Union countries. Prior to 2004, the European Union had 15 member states, but this number grew to 28 after 2004, mainly due to the accession of Eastern European countries. Addressing hysteresis, a concept related to structural unemployment, is critical in a continually expanding union like the European Union. Given this distinction between member countries, the study divides them into EU-15 and EU-28 groups. Owing to the European Union's dual character as an economic and political union, the unemployment data isn't analyzed for each country individually but is based on averaged figures for EU-15 and EU-28 for the period 2001Q1-2019Q4. This research applies the Fractional Frequency Fourier ADF Unit Root Test alongside traditional unit root tests (ADF, PP).

From the findings, it's evident that economic shocks have brought about enduring alterations in the European Union economy. For both the EU-15 and EU-28 groups, the unemployment hysteresis theory is confirmed across all analyses. To formulate and implement effective policies to counter unemployment, it's crucial to accurately measure the extent of hysteresis. In this context, the Fractional Frequency Fourier ADF Unit Root Test introduced in this study offers a modern methodology to assess the hysteresis hypothesis effectively.

The evaluations suggest that the mean unemployment rates in both EU-15 and EU-28 exhibit a non-stationary trend around an evolving average. This indicates that economic fluctuations have an enduring impact on the natural unemployment rate. It's clear that without interventions, unemployment will not revert to its natural rate autonomously. A combination of expansive monetary and fiscal policies is essential to counteract the long-term hysteresis effects on unemployment in European Union countries.

This research contributes to the academic domain in two significant ways. Firstly, no prior studies in the economics literature have concentrated on the average unemployment rates for both EU-15 and EU-28. Secondly, the Fractional

Frequency Fourier ADF Unit Root Test used here represents the latest unit root test that allows for detailed analysis, thanks to its broad differentiation parameters.

While the proximity of the max, min, and mean values between the two country groups suggests similarity, it's essential to interpret the descriptive statistics accurately. A deeper exploration into time variance could provide more comprehensive insights into the dynamics and impact of new memberships on unemployment trends in the European Union. Future research could delve into the time-variance aspect to better understand the factors influencing unemployment trends in the European Union, both historically and prospectively.

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The Effect of Dark Personality Traits on The Tendency of Accountants Towards Accounting Fraud

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Abstract

It is known that the personality traits of professional accountants affect their attitudes towards fraud and unethical behavior. In this study, it is aimed to examine the effect of dark triad personality traits of accounting professionals on their tendency to commit accounting fraud. The research is important in terms of bringing a psychology and accounting-based study to the literature of our country, which is widely seen in the international literature. Data were collected from 307 professional accountants registered in the Chamber of Certified Public Accountants of Balıkesir through the questionnaire developed within the scope of the research. Obtained data were analyzed by using structural equation model through IBM SPSS 25 and AMOS programs. As a result of the research, it has been concluded that the psychopathy and Machiavellian dimensions of the dark personality traits of the professions affect the internal and external motivations of their tendency to commit accounting fraud, but the narcissism dimension from the dark personality traits does not influence the tendency of accounting professionals to commit fraud. By identifying individuals with dark triad personality traits, it is possible to reduce negative situations in the business environment, tendencies towards accounting fraud, unethical behaviors and actions.

Keywords: Accounting Ethics, Tendency Towards Fraud, Accounting Fraud, Dark Triad Personality, Professional Accountant

Öz

Muhasebe meslek mensuplarının kişilik özelliklerinin hile ve etik dışı davranışlara yönelik tutumlarını etkilediği bilinmektedir. Bu çalışmada, muhasebe meslek mensuplarının karanlık üçlü kişilik özelliklerinin muhasebe hilesi yapma eğilimlerine etkisinin incelenmesi amaçlanmıştır. Araştırma uluslararası literatürde yaygın olarak görülen psikoloji ve muhasebe temelli bir çalışmayı ülkemiz literatürüne de kazandırması açısından önem taşımaktadır. Araştırma kapsamında geliştirilen anket formu aracılığıyla Balıkesir Serbest Muhasebeci ve Mali Müşavirler Odasına kayıtlı 307 muhasebe meslek mensubundan veri toplanmıştır. Elde edilen veriler IBM SPSS 25 ve AMOS programları aracılığıyla yapısal eşitlik modeli kullanılarak analiz edilmiştir. Araştırma sonucunda meslek mensuplarının karanlık kişilik özelliklerinden psikopati ve makyaavelizm boyutlarının muhasebe hilesi yapma eğilimlerinin içsel ve dışsal güdülerini etkilediği ancak karanlık kişilik özelliklerinden narsizm boyutunun muhasebe meslek mensuplarının muhasebe hilesi yapma eğilimi üzerinde bir etkisi olmadığı tespit edilmiştir. Karanlık üçlü kişilik özelliklerine sahip bireylerin belirlenmesi ile iş ortamındaki olumsuz durumların, muhasebe sahtekarlığına yönelik eğilimlerin, etik olmayan davranış ve eylemlerin azaltılması mümkündür.

Anahtar Kelimeler: Muhasebe Etiği, Hileye Yönelme, Muhasebe Hilesi, Karanlık Üçlü Kişilik, Muhasebe Meslek Mensubu

Introduction

Accounting data is an important criterion in determining the performance of businesses. Profit or loss resulting from business activities is a performance indicator for business managers. In this context, there is the possibility of making some manipulations in this performance criterion for individuals with both commercial and individual success targets.

Fraud and manipulation in accounting documents are not a recent phenomenon. According to the records in the Cruciform Monument, which dates to three thousand BC, it is thought that there was a forgery of incomes (Parker, 1991). Fraudulent transactions are based on three main reasons, called the "Fraud Triangle". These reasons; can be expressed as "Pressure", "Opportunity" and "Realization" (Kagias et al., 2022).

Studies in business and accounting aim to explain the personality of the individual academically by associating it with his behavior in the business environment, and by predicting the situations that will occur in the business environment. Psychologically, it can be thought that there is a relationship between the personality of the individual and the tendency of the individual to commit accounting fraud.

It is thought that for the person to be inclined to commit fraud and to be able to continue this successfully in the long term, he must have some characteristic features belonging to the dark triad personality traits. These features can be listed as lying to protect one's interests, making unethical decisions, smugness, and not feeling remorseful or guilty for bad deeds (Mutschmann et al., 2021). So that the dark triad personality traits (Machiavellianism, Narcissism, and Psychopathy) can affect the individual's decision-making style (Shivani & Godwin, 2018).

In international studies in the field of accounting, the effects of psychological factors on the provision of accounting services are given a lot of attention, especially within the scope of fraud and ethical issues (Johnson et al., 2013; Harrison et al., 2018; Eimer and Garkaz, 2018; Norhamida et al., 2023). However, in the studies conducted in our country, it has been observed that psychological

factors related to accounting professionals are not included except few articles (Alankaya & Akpınar, 2017; Umut, 2018; Altinkaynak & Tutar 2019). In our country, as far as is known no study has been found on the relationship between the dark personality traits of accountants and their tendency to commit fraud. The subject is quite original and important in terms of its possible consequences. In this context, this research aims to investigate the effect of dark personality traits of professional accountants on their tendency to commit accounting fraud. In this context, it has been concluded that the dark personality traits of accountants, psychopathy and Machiavellian dimensions, have an effect on their tendency to commit fraud in accounting, both in terms of internal and external motives.

Literature and Hypothesis Development

In businesses, accounting information is used as a tool to express both operational and personal performances (Amernic & Craig, 2010). Considering that the performance targets of individuals are based on accounting data and the bonus and reward system is determined at the end of these processes, the processes turn into an opportunity for accountants who are psychologically predisposed to accounting fraud.

Tendency to commit accounting fraud

The concept of fraud derives from the word "Fraus", which means damage, wrongdoing, and deception (Meriç, 2020). There are some reasons that push individuals to make mistakes and fraud in accounting. These can be expressed as pressure, opportunity, and rationalization. The first condition for fraudulent behavior is an incentive, motive, or pressure to commit fraudulent action; secondly, a perceived opportunity to commit fraud, and thirdly, a perceived mentality to rationalize and legitimize action, or an attitude of not needing such a rationalization at all (Mutschmann et al., 2021). AICPA (American Institute of Certified Public Accountants) reports that when an accounting fraud occurs, all three conditions in the fraud triangle are generally present (Free et al., 2007). The pressure factor that

can cause mistakes and fraud can be determined by examining the luxury and bad habits, the opportunity factor can be determined by monitoring and evaluating the individuals, and the rationalization factor can be determined by clearly defining the wrong behaviors. Identifying these elements will help reduce the risk of errors and fraud in accounting (Doğan & Nazlı, 2015). There are many psychological and economic factors that may lead a professional accountant to commit fraud. Pressures exerted by taxpayers while recording accounting transactions, accepting unethical customer requests due to fear of losing customers and malpractice by colleagues are among the psychological factors. The desire to live in better conditions, encountering demands to pay less tax, the existence of informal economy, relatively high tax rates, and competition are among the economic factors (Demir & Arslan, 2020; Uslu & Özbay, 2020). On the other hand, the tendency of professional accountants to cheat includes internal and external sources. While the intrinsic motivations are related to the unethical behaviors, conscientious responsibilities of the individual, and the situations of being caught, the extrinsic motivations are related to the situation of taxpayers in the face of economic conditions, the legislation, the pressures of customers, and competition (Pehlivan and Koç, 2020).

Whether accountants tend to commit fraud or not is related to many factors, but basically, it is related to their personality traits. In this context, there are many academic studies on the personality traits of professional accountants. For example, in their research examining the personality traits of professional accountants in terms of information-hiding behavior within the scope of behavioral accounting, Altınkaynak and Tutar (2019) found that there is a significant and inverse relationship between honest and friendly people and information-hiding behaviors. Alankaya and Akpınar (2017) examined the accountant characters in movies within the scope of widely accepted personality typologies and characteristics. Research results show that accountants in movies are generally quiet, calm, responsible, and compliant people. However, it has been specified that some accountant characters

have dark personality tendencies such as narcissism and psychopathy.

Dark triad personality traits

Paulhus and Williams (2002) conducted a study on subclinical personality traits that are thought to be socially repulsive in Narcissism, Machiavellianism, and Psychopathy and defined these traits as the dark triad personality traits. Dark Triad Personality traits are among the unpleasant human traits included in the psychology literature by researchers. The Dark Triad consists of three interrelated and empirically salient features, expressed as Machiavellianism, Narcissism, and Psychopathy (Norhamida et al., 2023), and dark personality traits are perceived as a threat to an ideal society (Shivani & Godwin, 2018). Harrison et al. (2018) stated that everyone has dark personality traits, but they are at different levels as low, medium, and high.

Machiavellianism: The Machiavellian personality trait reflects the philosophy of Niccolò Machiavelli, who was the political adviser of the Medici family in the fifteenth century (Furnham et al., 2013). For Machiavellian individuals, other people around them are only tools to be used to achieve their own ideals. When it comes to their own interests, they may exhibit many behaviors that cannot be tolerated by society, ranging from lying, cheating, and flattery to others (Özdemir & Kazancı Sunaoğlu, 2023). Individuals with Machiavellian characteristics are highly goal-oriented, self-reflective, and have a high potential to resort to any means to achieve their personal goals (Karaaslan & Gizir, 2021). These people can easily violate traditional moral codes if necessary to achieve their personal goals. They are people who try to get along with the centers of power and think that human nature is unreliable (Özsoy & Ardiç, 2020).

Narcissism: Narcissism is expressed as an individual's excessive love for himself and is a type of personality disorder (Satici et al., 2019). Narcissists are people who are extremely self-admiring, selfish, self-focused, boastful, closed to criticism, jealous, and prone to attack. They are people who constantly seek power and attention, exaggerate their characteristics, constantly try to

show off to others, belittle others and try to establish authority over them (Özsoy & Ardiç, 2020). Narcissistic people always think that they are superior to others and tend to act aggressively towards those who they believe do not appreciate them enough (Cichocka et al., 2023).

Psychopathy: Psychopathy traits are associated with greater depressive symptoms (Lucas & Chang, 2022). Characteristics of psychopathy can be expressed as hostile behavior, high desire for excitement, manipulative behavior, non-social behavior, and insensitivity (Hare & Neumann, 2008). Psychopathy is expressed as the tendency to be indifferent towards the structures that maintain order in society and other individuals, the inability to control impulses, and the tendency not to feel guilty or remorseful when exhibiting behavior that harms other people (Özdemir & Kazancı Sunaoğlu, 2023). Psychopathy refers to features such as lack of empathy, less commitment, empowerment through cruelty, and contempt for others (Ho & Fido, 2022). The psychopath is indifferent to the emotional pain that others may feel (Aydoğan & Serbest, 2016). Psychopaths never care about others and may end individual relationships for no reason (Özkan, 2020). Individuals with high psychopathy characteristics can do anything for their desires and do not feel conscientious about it. Also, psychopaths are often very attractive and intelligent people (Bailey, 2019).

Since the personality traits of those who practice the accounting profession are very important in performing the profession in accordance with ethical values and away from fraud the dark triad personality traits have been the subject of many accounting studies. Some of these studies are listed below.

Umut (2018) drew attention to the effect of the dark triad on strategic accounting financing decisions and managers, and stated that the effects of the dark triad on the field of accounting and finance would be negative for both businesses and society if necessary precautions were not taken.

Eimer and Garkaz (2018) in their research concluded that the opportunistic nature of individuals and the dark triad personality traits have an impact on decision-making processes in accounting in Iran. The higher the accountant's

Dark Triad, the more opportunistic the decisions made by accountants.

Harrison et al. (2018) tried to determine the relationship between people with dark triad personality traits and unethical behaviors. They found that each of these characteristics affects the process of making unethical decisions in different ways. Accordingly, psychopathic features have significant effects on people's rationalization of their fraudulent behavior. Narcissism directs people to unethical behaviors in order to obtain personal benefits. In addition, while performing unethical behaviors, narcissists have different personal perceptions about their personal skills in the crimes they commit, such as being very successful and better than others. Machiavellianism, on the other hand, motivates the individual to behave in an unethical way, while changing the individual's perceptions of using the opportunities that arise to deceive others.

Aprillia and Maharani (2021) examined the effect of the dark triad on the ethical behavior of accountants in Indonesia. As a result of the research, they concluded that narcissism and psychopathy have a positive effect, while Machiavellianism has a negative effect on ethical behavior.

Issa and Mohamed (2022) conducted a study to measure the effect of dark triad personality traits on accountants' attitudes towards the disclosure of cyber security risks in Egypt. As a result of the research, it was concluded that there is a significant relationship between the dark triad personality traits and the attitudes of accountants towards disclosure of cyber security risks in terms of Machiavellianism and narcissism.

Norhamida et al. (2023) investigated the ethical behavior of accountants in Indonesia and aimed to measure the effect of the dark triad and subjective norm on the behaviors and ethical intentions of perceived peers. Research results showed that the dark triad did not significantly affect the behaviors of perceived peers but did significantly affect unethical intention.

Among the many studies listed above, the number of studies conducted in our country is limited. Therefore, there is no valid and reliable data on whether there are people with black triad personality traits in the field of accounting and

finance in our country or how such people affect the financial statements prepared in our country or the direction of the accounting financing decisions they make (Umut, 2018). Personality characteristics are one of the important determinants of individuals' behavior (Satici et al., 2019). Especially in recent years, due to the increase in unethical practices in business life, researchers in the field seem to focus on the dark side of organizational life and personality (Aydoğan and Serbest, 2016). For this reason, research hypotheses have been developed in the following way to measure the effect of dark triad personality traits on the tendency of professional accountants to cheat in our country.

In the accounting area, Murphy (2012) found that participants with high levels of Machiavellianism were more likely to make fraud in financial statements and Machiavellians who misreported felt significantly less guilty than others who misreported. Bitlisli and Dinç (2015) in their study examining Machiavellianism, which is one of the dark personality traits, aimed to find out if there is a relationship between the Machiavellian personality traits of accountants and their ethical decision-making behaviors. In this study, they concluded that Machiavellian personality traits are partially effective in ethical decision-making behaviors. Within the scope of the information given above, considering that Machiavellianism may have an effect on the professional accountant's tendency to commit fraud, the first hypothesis in this research was developed as follows:

H₁: Machiavellianism, a dark triad personality trait, affects the tendency to commit accounting fraud (internal and external motives).

There are several studies on narcissism in the accounting literature. While investigating the effect of senior manager narcissism on accounting fraud, Rijsenbilt and Commandeur (2013) emphasized that narcissism has an important place in determining accounting outcomes. Johnson et al. (2013) proved in their study that there is a positive and significant relationship between narcissistic behavior, fraud tendency and managers' fraud risk assessments. Mutschmann et al. (2021) stated that the most comprehensively studied personality trait in the accounting literature is narcissism, but there is no study that

clearly investigates the effect of narcissism on fraud tendency. Considering the gap in the literature pointed out by Mutschmann et al. (2021), the second hypothesis of the study was developed as follows.

H₂: Narcissism, a dark triad personality trait, affects the tendency to commit accounting fraud (internal and external motives).

Individuals with the personality trait of psychopathy are prone to fraud (Murphy & Dacin, 2011). Although it has an obvious impact on accountant fraudulent behavior, psychopathy traits have received little attention from accounting scholars in the accounting literature (Bailey, 2015). Considering that psychopathy behavior needs to be researched more in the field of accounting and that psychopathy may have an effect on the tendency of accounting professionals to commit accounting fraud, the third hypothesis in this research was developed as follows:

H₃: Psychopathy, a dark triad personality trait, affects the tendency to commit accounting fraud (internal and external motives).

Research Methodology

In the research methodology part, data collection method and measurement tools of the research, scope of the research and sampling and statistical analyzes are included.

Data Collection Method and Measurement Tools of the Research

The ethics committee approval for this research was obtained from the Sakarya University of Applied Sciences with decision number 14, dated 07.07.2023. A questionnaire form created online within the scope of the research was sent to CCPA of Balıkesir members and the data collected from 307 professionals who answered the questionnaire were analyzed with IBM SPSS 25 and AMOS. The questionnaire form consists of 26 expressions including 6 demographic variables. The scales used in the research are explained below:

"The Dirty Dozen (Dark Triad Personality)" Scale which consists of 12 variables and 3 sub-dimensions, Machiavellianism, Narcissism and Psychopathy, developed by Jonason and Webster

(2010) was used to determine personality traits. The Turkish adaptations of the scale were made by (Özsoy et al. 2017; Satici et al. 2018; Yaşlıoğlu & Atılgan, 2018) and its validity and reliability were proven.

"The Accounting Fraud Tendency Scale" consisting of total 8 variables with two dimensions internal and external motives, developed by Pehlivan and Koç (2020) has been used to determine the tendencies towards fraud.

Scope of the Research and Sampling

The scope of the study consists of professional accountants registered in Chamber of Certified Public Accountants of Balıkesir. The research sample was calculated as 285 participants with a 95% confidence interval and a 5% margin of error (Yazıcıoğlu and Erdoğan, 2004). In this context, data were collected from 307 of 1097 professional accountants registered in CCPA of Balıkesir (CCPA of Balıkesir 2022 Annual Report). It has been determined that 8 (2.6%) of the participants in the research were independent accountants and 299 (97.4) were Certified Public Accountants. 44 (14.3%) of the participants are between 1-5 years, 60 (19.5%) are between 6-10 years, 106 (34.5%) are between 11-15 years, and 97 (31.6%) were found to have 16 years or more of professional experience. 66 (21.5%) of the participants were female and 241 (78.5%) were male. 9 (2.9%) of the participants were 26 years old and under, 78 (25.4%) were between 27-36 years old, 101 (32.9%) were 37-46 years old, 81 (26.4%) were in the age range of 47-56 and 38 (12.4%) were aged 57 and over. When the participants were examined in terms of marital status, it was determined that 225 (73.3%) were married and 82 (26.7%) were single. On the other hand, 9 (2.9%) of the participants were at high school or below, 42 (13.7%) at associate degree, 208 (67.8%) at undergraduate level, and 46 (15.0%) had a master's degree and 2 (0.7%) had a doctorate-level education.

Validity and Reliability Analysis

The statistical programs IBM SPSS 25 and AMOS 24 were used to test the reliability and structural validity of the scales of the study. In this context,

explanatory factor (EFA) analysis and confirmatory factor (CFA) analyzes were applied. The EFA results and Cronbach α coefficients of the "Accounting Fraud Tendency Scale" and the "The Dirty Dozen (Dark Triad Personality) Scale" are presented in Table 1.

Table 1. Results of Explanatory Factor Analysis

Factors Related to Scales of "Accounting Fraud Tendency" and "Dark Triad Personality"	Question	Factor Loads	Cronbach α	Eigen Value	Variance%	Explained Variance	K-M-O Value	Sig.	
Accounting Fraud Tendency	Internal Motives	4	0.6	0.8	2.8	35.	69.	0.8	0.0
		23-	23-	25	19	239	389	99	00
	External Motives	4	0.5	0.8	2.7	34.			
		96-	96-	68	32	150			
Dark Triad Personality	Machiavellianism	4	0.8	0.9	3.7	30.	76.	0.9	0.0
		10-	10-	30	18	981	973	26	00
	Narcissism	4	0.6	0.8	2.8	23.			
		94-	94-	75	68	904			
Psychopathy	4	0.5	0.8	2.6	22.				
	01-	01-	53	51	088				
			0.8						
			91						

The scales of the study were subjected to Exploratory Factor Analysis by applying fundamental component analysis and the varimax rotation method. In the EFA results, it was determined that both the tendency to accounting fraud tendency scale (KMO=0.899; $\chi^2=1265.220$; $p=0.000$) and the dark triad personality traits scale (KMO=0.926; $\chi^2=2770,709$; $p=0.000$) were acceptable for factor analysis. However, it has been confirmed that the accounting fraud scale has a 2-dimensional structure and the dark triad personality traits scale has a three-dimensional structure. The fact that the factor loadings of the accounting fraud scale were between 0.596 and 0.851 and the factor loadings of the dark triad personality traits scale were between 0.501 and 0.891 showed that the items of both scales were compatible with the structure. Also, it was observed that the Cronbach α coefficients of the dimensions of the scales used in the research were above 0.70. As a result of these, it has been

evidenced that the factor structures of both scales are strong and reliable (Büyüköztürk, 2009).

Table 2. Descriptive Statistics

Variables	N	Mean	Std. Deviation	Skewness	Kurtosis
Accounting Fraud Tendency	307	2.26	0.991	1.348	1.303
Dark Triad Personality	307	2.89	1.129	0.340	-
Internal Motives	307	2.22	1.115	1.127	0.374
External Motives	307	2.33	1.095	0.924	0.010
Machiavellianism	307	3.07	1.159	-	-
Narcissism				0.001	1.024
Psychopathy				1	4

Table 2 shows that the skewness and kurtosis values of the variables vary between -1.5 and +1.5, so it was determined that the research data had a normal distribution (Tabachnick & Fidell, 2013). Confirmatory Factor Analysis analysis was applied to check the suitability of the factor structures acquired at the result of the EFA applied to the scales used in the research. The fit index values obtained as a result of CFA are presented in Table 3.

Table 3. Confirmatory factor analysis goodness of fit values

Scale/Model	$\Delta\chi^2$	d.f.	$\Delta\chi^2$	RMS EA	AG FI	GF I	CF I	NF I
Accounting Fraud Tendency	52.7	9	2.7	0.076	0.9	0.9	0.9	0.9
Dark Triad Personality	75	0	78		24	60	73	59
Internal Motives	114.	4	2.3	0.066	0.9	0.9	0.9	0.9
External Motives	312	9	33		10	44	76	59

*p < 0.05

The fit index values are given in Table 3. Accordingly, it was seen that the goodness-of-fit values of the scales used in the study met the criteria (Meydan and Şeşen, 2011: 37). On the other hand, the fact that the factor loads of the statements related to the tendency to accounting fraud scale were between 0.679-0.846 and the factor loads of

the statements related to the dark triad personality scale were between 0.606-0.931, confirmed the congruent validity (Bagozzi & Yi, 1988).

Hypothesis Test Results

The correlation coefficients of the variables examined within the scope of the research were presented in Table 4.

Table 4. Correlation Coefficients

Variables	Internal Motives	External Motives	Machiavellianism	Narcissism	Psychopathy
Internal Motives	1				
External Motives	0.685**	1			
Machiavellianism	0.538**	0.523**	1		
Narcissism	0.450**	0.452**	0.735**	1	
Psychopathy	0.441**	0.471**	0.606**	0.594**	1

**p < 0.01

In Table 4 the results of the correlation analysis were given. According to these results was a moderate and positive relationship between the internal motives of the accounting fraud tendency and dimensions of the dark personality traits scale, the Machiavellianism (0.538**), narcissism (0.450**), and psychopathy (0.441**). On the other hand, it was observed that there was a moderate and positive correlation between the external motives for accounting fraud tendency and the dark personality traits scale's Machiavellianism (0.523**), narcissism (0.452**), and psychopathy (0.471**) dimensions.

The effect of dark triad personality traits on the tendency towards accounting fraud was tested using the structural equation model. The structural equation model obtained within the scope of the research is presented in Figure 1.

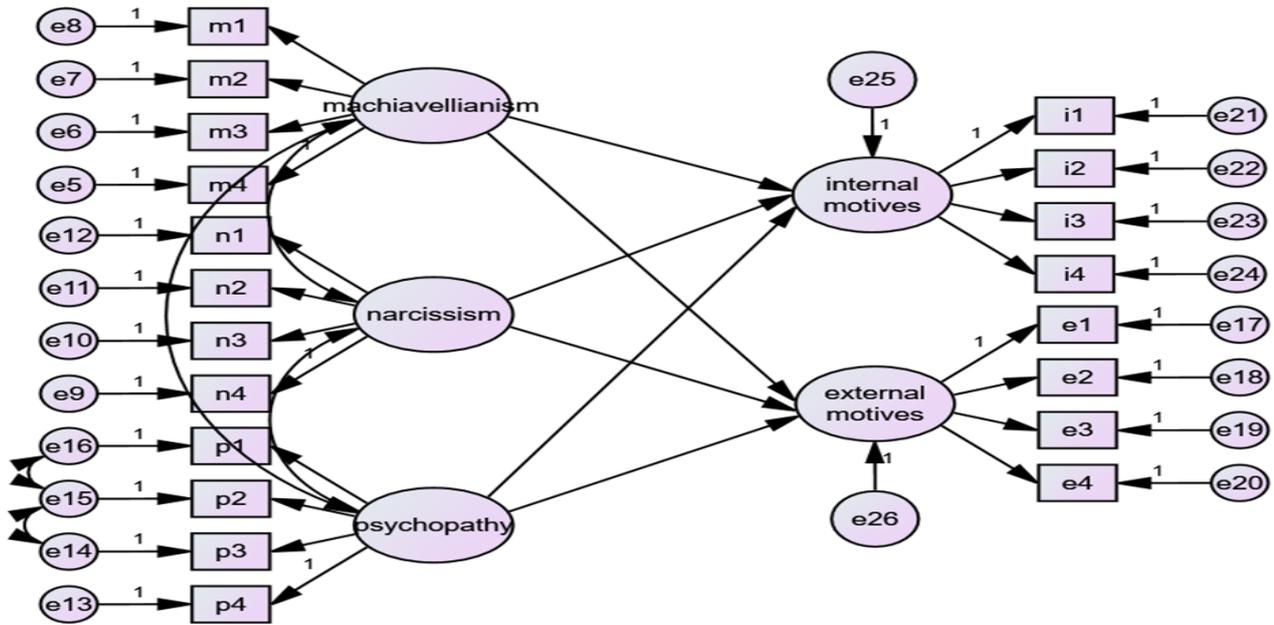


Figure 1. Structural Equation Model

The results of the analysis of the structural equation model is shown in figure 1. The structural equation model $\chi^2=428,149$ explaining the effect of dark personality traits on the tendency of accounting fraud; $df=159$; It was found to be significant at the $p=0.000$ level. $\chi^2/SD=2.693$ for the model; $GFI=0.881$; $AGFI=0.842$; $NFI=0.903$; $CFI=0.936$ and $RMSEA=0.074$. It can be said that these fit indices support the structural equation model (Meydan and Şeşen, 2011: 37). The regression weights are seen in Table 5 below.

However, Machiavellianism ($\beta=0.385$; $t=3.244$, $p<0.01$) and psychopathy ($\beta=0.288$; $t=2.380$; $p<0.05$) were predictors of external motivations for accounting fraud tendency ($R^2 = 0.372$). According to the model, it was concluded that as Machiavellianism and psychopathy from dark personality traits increase, internal and external motives towards accounting fraud also increase. Accordingly, while the H1 and H3 hypotheses were accepted, the H2, hypothesis was rejected.

Table 5. Path Analysis Values

Tested Path	Standardized Regression Weights (β)	Regression Weights (B)	S.E.	C.R	Sig.
Machiavellianism → Internal Motives	0.468	0.385	0.097	3.970	***
Machiavellianism → External Motives	0.385	0.287	0.088	3.244	0.001
Narcissism → Internal Motives	-0.053	-0.046	0.111	-0.418	0.676
Narcissism → External Motives	-0.028	-0.022	0.100	-0.221	0.825
Psychopathy → Internal Motives	0.278	0.247	0.106	2.320	0.020
Psychopathy → External Motives	0.288	0.231	0.097	2.380	0.017

As seen in Table 5, Machiavellianism ($\beta=0.468$; $t=3.970$; $p<0.001$) and psychopathy ($\beta=0.278$; $t=2.320$; $p<0.05$) are predictors of internal motives for accounting fraud tendency ($R^2 = 0.435$).

Conclusion

Since professional accountants play an important role in the sustainability of the economic system, it

is important to increase the quality and reliability of the accounting profession. In this context, there are some characteristics that accountants should have. While some of these characteristics are related to the professional development level and professional knowledge of accountants, some of them are related to their character. Accountants must be honest, reliable, ethical, and conscientious while performing their activities. Compliance with accounting standards and never committing fraud is a must for accountants.

Characteristics that are considered socially negative and unattractive are far from ethical, moral, and socially acceptable behavior and are called the 'Dark Triad' (Zheng & MacCann, 2023). It can be thought that individuals with dark triad personality traits are likely to turn to accounting fraud due to their own characteristics. Because these people are usually people who are actively looking for ways to cheat in accounting. For this purpose, it was aimed to analyze the effect of personality traits of the Dark Triad on the tendency towards accounting fraud in this study. In addition, the findings of the presented studies support the proposition that individuals with Dark Triad personality traits (Machiavellianism and psychopathy) tend to accounting fraud.

The results of the study are similar to the study of Mutschmann et al. (2021), who stated that managers with dark personality traits are more likely to make fraudulent accounting practices in accounting and finance departments.

Studies in the field of psychology have concluded that individuals with higher levels of Machiavellianism tend to be more manipulative and opportunistic (Gunnthorsdottir et al., 2002). Machiavellianism refers to being deceptive, manipulative, ambitious, and exploitative (Özdemir & Kazancı Sunaoğlu, 2023). The results of the current research have shown that Machiavellianism, a dark personality trait, affects the internal and external motives of the tendency to cheat in accounting. Individuals with Machiavellian characteristics are more likely to rationalize their accounting fraud behavior. Because Machiavellian individuals believe that manipulation is necessary to be successful in life and they manipulate others to achieve their own goals.

It was concluded in this study that Narcissism, which is a dark personality trait, is not one of the internal and external motives of the tendency to commit fraud in accounting. In this context, while it differs from the results reported by Johnson et al. (2013), it is similar to the conclusions of Aprillia and Maharani (2021). Emotional indifference to others and low empathy cause narcissism to be defined as one of the characteristics of the Dark Triad. However, narcissism is a more socially acceptable behavior and more adaptable to social life than the personality traits of Machiavellianism or psychopathy (Zheng & MacCann, 2023).

Scientific research has shown that there is widespread fraud in the accounting field. Empirical research indicates that while there is pressure and opportunity in the fraud triangle, the process only waits for rationalization, so it can be said that it is easier for an individual with high psychopathy characteristics to rationalize fraud (Bailey, 2015). Psychopathy has a noticeable effect on individuals' rationalization of fraudulent behavior (Harrison et al., 2018). According to the results of this research, it has been shown that psychopathy, a dark personality trait, affects the internal and external motives of the tendency to turn to accounting fraud. However, although individuals may have psychopathic features, they can change their minds in honesty by reviewing their behavior. In this way, it is possible to get rid of confusion and contradictions. In this context, the desire to tell the truth is the most natural way for an individual to purify himself from his mistakes (Özkan, 2020).

When dark personality traits are evaluated, it has been determined that people with Machiavellianism and psychopathy characteristics, unlike narcissists, are emotionally disconnected from other individuals in society and ignore morality more (Crysel et al., 2013). This situation detected by Crysel et al. (2013) helps explain the results of the current research, because in this study, it was concluded that Machiavellianism and psychopathy traits influence the tendency to commit fraud, while such an effect was not detected for the narcissism trait. It is possible outcome that professional accountants who have a personality trait that is more likely to ignore morality will tend to cheat.

It is known that personal characteristics, moral intensity, and honesty are among the internal factors affecting the ethical behavior of accountants (Caniago et al., 2023). Therefore, identifying people with dark triad personality traits can minimize negative situations in the business environment, tendencies towards accounting fraud, and unethical behavior and actions.

The results of this study are important in that as far as is known it is the first study to investigate the effect of dark personality traits on the tendency toward accounting fraud. The number of multidisciplinary studies involving psychology and accounting in common in the world is increasing (Davison, 2015). Because especially research in accounting ethics and behavioral accounting are related to the field of psychology and sociology, as well as theoretical accounting knowledge. However, some limitations of the research need to be acknowledged. First of all, the fact that the research sample is limited to only with the accountants registered in the Chamber of Certified Public Accountants of Balıkesir. For this reason, participants cannot be representative of the entire working population of accountants and the generalizability of the findings is greatly limited. The relationships we describe need to be replicated with a variety of different samples to be confirmed. Moreover, future studies will bring a broader perspective to the field if they investigate personality, ethics, and fraud in the field of accounting, together with experts in the field of accounting and psychology, in larger samples.

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Challenging Islamophobia with Humor - The Example of the Datteltäter on Youtube¹

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Abstract

A new generation of Muslim youth in the West is using humor to cope with rising Islamophobia, racist immigration rhetoric, and sexism. A representative of this new generation is the YouTube channel Datteltäter. Drawing on social theories of humor and dissent, this study analyzes Datteltäter's content, arguing that their humor is a practice of dissent and attempts to subvert dominant discourse. Since humor is not a practice of opposition per se, its character at this point depends on its context, the distribution of sensibilities, its relationship to policing regimes, and the techniques it uses. This study, using the online ethnography method, described and analyzed Datteltäter's representative videos, which were selected through purposive sampling. The study concluded that its humor exposes the Islamophobic and racist discourses and practices that permeate everyday life in German society and distribute the sensible in order to police bodies by disrupting their hierarchy of emotions and ideas. The study also found that the new generation of Muslims has strong insights due to their in-betweenness and has developed a similar oppositional attitude towards their communities. In doing so, they create a space of shared experiences and hybrid subjectivities that are open to others.

Keywords: Islamophobia, Humor, New Generation Immigrants, Datteltäter, YouTube
Öz

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Batı'daki yeni nesil Müslüman gençler, yükselen İslamofobi, göçmen karşıtı ırkçı söylem ve cinsiyetçilikle başa çıkmak için mizahı kullanmaktadır. Bu yeni neslin bir temsilcisi de Datteltäter adlı YouTube kanaludur. Mizah ve muhalefete ilişkin sosyal teorilerden yararlanan bu çalışma, Datteltäter tarafından üretilen içeriği analiz ederek, mizahlarının bir muhalefet pratiği olduğunu ve mizah yoluyla egemen söylemi yıkınaya çalıştıklarını ortaya koymaktadır. Kendi başına bir muhalefet pratiği olmayan mizahın muhalif etkinliği onun bağlamına, duyarlılıklar dağılımı ve kontrol rejimleri ile ilişkisine ve kullandığı tekniklere bağlıdır. Çevrimiçi etnografi yönteminin kullanıldığı bu çalışmada, Datteltäter YouTube kanalının amaçlı örneklemle seçilen temsil edici videoları betimlenerek analiz edilmiştir. Çalışmada, Alman toplumunda gündelik hayata nüfuz eden, bedenleri kontrol etmek için duyumsanabilir olanı dağıtan İslamofobik ve ırkçı söylem ve uygulamaların, onları anlamlı kılan duygu ve fikirler hiyerarşisini bozan mizah yoluyla ifşa edildiği sonucuna varılmıştır. Çalışma ayrıca yeni nesil Müslümanların iki toplum arasındalık halleri nedeniyle güçlü içgörülere sahip olduğunu ve kendi toplumlarına karşı da benzer bir muhalif tutum geliştirdiğini ortaya koymuştur. Bunu yaparken, başkalarına açık bir ortak deneyimler ve melez öznellikler alanı yaratmaktadır.

Anahtar Kelimeler: İslamofobi, Mizah, Yeni Nesil Göçmenler, Datteltäter, YouTube

¹ This article is based on and developed from the paper "Humor Practices of Muslim Youth Living in Germany: The Case of Datteltäter YouTube Channel" which was presented at the 9th International Communication Days, Communication Studies in the Digital Age Symposium, organized by Üsküdar University Faculty of Communication.

Introduction

While Islam and Muslims had long been constructed in the West from an Orientalist perspective, with the Iranian Revolution in 1979, this construct was additionally associated with political fundamentalism and, after the 9/11 attacks in New York, with terrorism (Hafez and Richter, 2007). This shift made life difficult for Muslim populations living in the West (Nussbaum, 2018, p.17-23), while leading to the rise of Islamophobia. At the same time, as European countries became multicultural societies through migration, various debates arose (Bekaroğlu et al. 2015, p. 4-5), such as whether Islam is compatible with Western values and lifestyles (Göle, 2015, p.19), which positions Muslims and the West in a hierarchical way. A new post-migrant (Yildiz, 2021, pp. 20-21) generation of Muslim actors, who grew up in Europe, speak the language of the countries they live in, have communication skills, and see themselves as part of those countries, has emerged as a significant opposition force that does not accept the terms of discussion determined by these questions and seeks to reverse the theoretical arguments developed by the West about Islam and the Middle East (Göle, 2015, p. 64). Young people of this post-migrant generation also use the power of humor in their struggle. They do not let others speak for them, they do not passively observe, but "talk back" (hooks, 1989).

The use of humor by Muslims has not only been on the rise since the 9/11 attacks. This young generation has also changed the form and quality of ethnic humor (Bilici, 2010). The new generation of Muslim youth living in Germany also object against the Islamophobia and marginalization practices of the German society with humor. This article discusses humor as a practice of dissenting (Rancière, 2004), in addition to its therapeutic function, by analyzing the humorous content of the German YouTube channel *Datteltäter* and asking what the techniques are that make their humor a practice of dissenting. The channel was launched in 2015 by Muslim and non-Muslim young people from different cultural backgrounds living in German-speaking countries, especially Germany. The channel produces humor that deconstructs Islamophobic and anti-immigrant sentiments and

practices and attempts to show the intergenerational contradictions of the Muslim community. The channel's content producers aim to reverse the mainstream media's stereotypical portrayal of Muslims as marginalized and victimized and to generate a virtual space for healing and solidarity within the community by showing the tensions they face not only in society, but also in their own community in everyday life.

We now have a body of literature that sees humor and laughter as a practice of resistance. According to this literature, laughter/humor has the function of correcting the defects and malfunctions of the social order. For communities and classes excluded from the ideal public order, humor has been an important tool of latent and implicit resistance and critique of hegemonic discourses and practices (Sanders, 2001) by making fun of the dominant (Kundera, 1988). But this article does not necessarily assume humor as a practice of dissenting per se. Humor has a long history of serving dominant social groups and maintaining power relations - for example, the social Darwinist representation of African Americans and other cultures in the colonial era (Aidi, 2021). The point then is that humor is certainly in some way related to power and the distribution of what is sayable, visible, and sensible (Rancière, 2004), but how it is related, whether it is a practice of policing or dissenting, depends on its context and techniques. Through the case of the *Datteltäter* channel on YouTube, this article looks at humor as a dissenting practice by analyzing its content and techniques, such as appropriating and subverting stereotypes, disrupting identities and deconstructing associations, accumulating and densifying the subtly distributed everyday techniques of racism and sexism, reversing the prevailing hierarchies, transforming the unequal discourses of society into encounters of equals, bringing one's own views to the center, not accepting the attributions and raising one's own voices that have been silenced by the regime of the sensible, claiming spaces in-between and hybrid subjectivities.

With the diversification of internet-based social media and the opportunity for ordinary people to produce content, the new generation of Muslim youth is trying to reverse the racist and sexist

discourses and discriminatory practices that are implicit and explicit in everyday life in liberal and democratic Western societies. They use social media platforms not only to disseminate their content, but also as a space to share experiences and feelings and to generate ideas. Internet ethnography, one of the basic qualitative research methods, was therefore adopted for the study. Online ethnography is conducted by adapting the ethnographic field research method to the study of computer-mediated communication (Alyanak, 2014, p.134). This study, which adopts the method of internet ethnography, focuses on 20 videos of the long-followed *Datteltäter* YouTube channel that expose and criticize Islamophobic and racist discourses and practices and reveal their seemingly meaningful hierarchy of feelings and thoughts. These videos, which represent many similar videos and best exemplify the technique, were selected and explained in different categories. These videos were analyzed between 2021 and 2022 and 10 videos were described for the study. These videos were interpreted within the framework of the literature. For each video, the tactics and techniques that would enable it to be identified as a practice of opposition were discussed.

After a brief theoretical discussion of humor as a practice of dissenting, the following part of the article contextualizes the case study in a social network of Islamophobia, immigration, and post-migrant life in the West and in Germany. The second part of the article is devoted to an analysis of the content produced by *Datteltäter* and a discussion of the techniques used in their satirical practice of dissenting.

Laughter and Humor

Thinkers from various disciplines and different time periods have tried to provide different explanations of why and what we laugh at, and the function and purpose of laughter. Terms such as laughter, farce, wit, humor, satire, and comedy are close in meaning and are used interchangeably. According to this body of literature, the perpetrator and the object of laughter are human, and it is this characteristic that distinguishes humans from other living beings (Aristoteles cited

in Bakhtin, 2001, p. 89; Bergson, 2015, p.5). We have three classical theories of laughter: superiority, incongruity, and relaxation (Moreall, 1997), all of which go back to Aristotle or Plato. According to the superiority theory, laughter is an expression of superiority (Moreall, 1997, p. 8), that one feels superior and happy not to be in the situation of the ridiculed (Hobbes, 2005, p.54). The theory of incongruity, takes laughter as a mental reaction to the unexpected and irrational, while Kant see it out of disappointment of expectations, Schopenhauer formulate it as an incompatibility between a concept and the real thing related to it (Morreall, 1997, p.28). The psychoanalytic explanation, the relaxation theory, based on Aristotle's concept of catharsis and the ideas of Spencer and Freud, explains laughter, in terms of the theory of the return of repressed emotions, as a healing release of the energy repressed by prohibition (Freud, 1996, p. 200). Although they are inadequate and differ in their explanation of why we laugh, they all relate to the power relations and social norms. Laughter occurs and only gains meaning in a social context. Laughter always belongs to a social context (Bergson, 2015). According to Bergson, one cannot enjoy the funny in isolation; laughter always needs a resonance. So much so that laughter is like complicity with other laughs. This is where the power of laughter comes from. Laughter is a social "gesture" that has the advantage of correcting things that disrupt the social flow, adding flexibility to the mechanical rigidity of the social structure (Bergson, 2015, pp. 6-14). Looking from this social theory of laughter helps us avoid the problems posed by other theories and allows us to approach laughter as something that can also reverse the patterns of superiority, make us enjoy discord, and find relief through opposition. This body of literature approaches laughter as a tool of critique and resistance for subaltern groups. Sanders (2001, p. 45), for example, sees laughter as a means for the dispossessed, against the white and educated upper class men who are the voice of history, to 'at least try to erase it, even if they cannot participate in writing history'. According to Kundera (1988), who sees laughter as a tool of rebellion, it is by mocking the dominant that the weak overcome obstacles. This is not to say that laughter is

exclusively emancipatory. Although our case exemplifies this theory of laughter, this paper does not limit laughter to this aspect alone. It is certainly constitutive of power relations, but whether it is an instrument for maintaining or disrupting these relations can only be understood by taking into account the context, the producers, the consumers, the production techniques.

The cartoon crisis in Denmark in 2005 is a perfect example of how something that functions as objection and criticism for non-dominant groups can easily be used by the dominant culture against sub-groups, as a practice of policing bodies. On the one hand, the cartoons depicting the Prophet Muhammad as a terrorist with a bomb participate in an Islamophobic discourse that constructs Muslims as violent people; on the other hand, the protests against them have been used to establish a discourse that claims Muslims lack humor, a modern virtue of criticism (Marzolph, 2011). Saba Mahmood (2015) draws our attention to the emotions involved in interpreting the cartoon crisis. The trigger for the cartoon crisis is not the violation of religious law, but the sensitivity to the shaking of the self on which the relationship of loyalty to the Prophet is based. In other words, according to most Muslims, the crime committed by the cartoons is not committed against a moral prohibition, but is related to the injury of one's feelings (Mahmood, 2015, p. 99). By interpreting it as a violation of an emotional bond, she destabilizes the culturalist perspective through an affect-based approach. Berlant and Ngai (2017) argue that what is humor for some can easily turn into shame and fear for others. This is not a call to establish some norms to identify true or false humor, but rather to reckon with humor's intimate relationship with the production of power relations and its long history. The question then becomes who is laughing at whom in what social context and environment of hegemonic discourse and power relations (Bhungalia, 2019). In this context, laughter can be defined as a dissenting practice as long as, following Rancière (2004), it puts the marginalized, silenced, and dominated groups into the center of the political, not the discourses about them or the overrepresentation of foreign-produced labels and identities, but their

voices and practices that subvert these labels and foreign-produced identities (Yildiz, 2021).

For Rancière, the distribution of the sensible is a police order that determines what makes sense and what is excluded from it, and dissent is a challenge to this regime of distribution of the sensible, the sayable, the visible (Rancière, 2004). Dissensus is the basis of Rancière's concept of democracy, not as a form of government, but as a mode that does not function through consensus and unity, but rather through disagreement as the main mode of relationship and heterogeneity as preference (Rancière, 2009). This is established only on the basis of equality, not as a reality or teleology, but as a fundamental presumption. The practice of dissent challenges the consensual ideas and helps a possibility of the otherwise to emerge, tries to redistribute the sensible. It presupposes equality and constantly verifies it. Humor is not *per se* a practice of dissenting, since it sometimes maintains the exclusion of some bodies by making them nonsense, or simply disguises and legitimizes the police order, becoming a means of policing bodies, as in the case of rape jokes or racist parodies. But it can also contribute to disturbing the dominant distribution of hierarchies, fears, and pleasures. It can turn fear into something absurd, laughable. What humor can produce again becomes a question of context, of power relations, of regimes of distribution of the sensible, and of techniques that make this possible.

Islamophobia and Muslims in Europe

Since we cannot analyze humor without understanding its social context and the objects and subjects of laughter, we should briefly look at the intimate relationship between the West, Islamophobia, and the discourse of migration. European society began to become cosmopolitan with migratory mobility due to the process of decolonization and the need for labor in the post-war period. In response, various debates emerged that problematized the cultures and lifestyles of migrant communities (Bekaroğlu et al., 2015, pp. 4-5), especially Muslim immigrants in Europe, such as the so-called (in)compatibility of Islam with Western values and lifestyles (Göle, 2015, p.19). The construction of immigrants as exploiters of the

welfare state or their criminalization has been one of the main channels of argumentation. Since the attacks of September 11 (2001) in New York, the construction of Muslim immigrants has been more heavily colored by security concerns and fears, in parallel with geopolitical concerns and the US "war on terror", which was also established in Europe alongside the Madrid (2004) and London (2005) bombings, the murder of Theo van Gogh in Amsterdam (2004) and the Charlie Hebdo (2015) attacks in Paris, as well as the attacks on crowds in some European cities after 2017. The fact that those who planned and carried out the attacks were young Muslims born and raised in Europe deeply affected European public opinion (Nussbaum, 2018, p. 23), leading to the production of labels such as "homemade terrorists" and the construction of Islam and Muslim immigrants as threats to Western civilization, which went hand in hand with the declaration of the end of multiculturalism (Bekaroglu et al., 2015, pp.4-5). Islamophobia is not entirely new but is also fed by the continuation of the general fear of religion in the secular age, the anti-Islamism of the Middle Ages, the Arabophobia of colonialism (Geisser cited in Göle, 2015, p.48).

Batur (2017, p. 5) also claims that Islam is today perceived almost synonymously with religious violence. Both religion as a strictly separated concept from the secular and the alleged proximity of religion to violence have their roots in the colonial modern formation of the nation-state (Batur, 2017, p. 83-105). Furthermore, the perception of Islam in the West has changed in different historical periods. Islam and Muslims - along with other cultural formations outside the West - were constructed as the Other of Europe in a more spatio-temporalized form in the Orientalist discourse during the colonial period: Europe, as the self-proclaimed most developed region of the world, perceived other contemporary regions in temporal terms, labeling them as remaining in the "prehistoric Stone Age" or the "religiously saturated Dark Middle Ages", lacking the achievements of Western civilization (Batur, 2017, pp. 49-52). Accordingly, while the West is free, rational, and developed, the East is irrational, backward, and exotic in a wide range of areas,

including academia, the arts, and mainstream media (Said, 2003).

The end of the cold war was another factor in the development of Islamophobia as geopolitics. Islam has been replaced by communism as a scapegoat for the West. With the dissolution of the Eastern Bloc and the disappearance of the threat of communism, Islam was defined as the new other (Said, 2008, pp. 55-58). Reconstruction of Islam as an enemy, Muslim countries as enemies out-there and Muslim immigrants as ones in-there, helped Europe to reach a conceptual and civilizational unity with the Eastern European Countries in the post-communist age (Batur, 2008).

One of the ways in which Islamophobia is fed and spread is through media. The role of the media in shaping public opinion, agenda setting, and hate crimes is undeniable. The media plays an important role in disseminating representations and images. Therefore, images and photographs of societies and cultures that we do not know and that are foreign to us are perceived within the confines of the media. While no significant information about Islam had previously been produced in the Western media, after the Iranian Revolution and the end of the Cold War, Islam was portrayed in the Western media as medieval, dangerous, and hostile to Western values (Said, 2008, p. 231; Hafez and Schmidt, 2020). A study focusing on the representation of Islam on the German television channels ARD and ZDF in 2005-2006 found that Islam was represented on these two channels in terms of terrorism/extremism, international conflicts, religious intolerance, fundamentalism/Islamization; it was found that 80% of the topics were on the agenda in a negative way, with concepts such as women/oppression/liberation, integration problems, human rights violations (Hafez and Richter, 2007, p.7). Islamophobic coverage in the Western media is not only the result of fear and ignorance. Some media actors, intellectuals and politicians have deliberately promoted Islamophobia as part of their political strategies. Nathan Lean (2015) conceptualizes the environment in which these people exploit this situation to gain wealth and fame as the Islamophobia industry.

The social and discursive positioning of millions of Muslims living in Northern Europe, and especially in Germany, and how they position themselves, provides an understanding of the relationship between Islamophobia, the West, and migration. Discriminatory practices against immigrants first emerged in the labor market. Under the name Ali Levent Sinirlioğlu, German journalist Günter Wallraf (1985) spends time among foreign workers in Germany and reveals the discrimination workers face in finding housing, ethical violations in the labor market and bureaucracy, violations of workers' health and safety, labor exploitation, mistreatment, and humiliation of foreign workers. However, the children of migrant workers, who are educated and have the tools to speak for themselves, are breaking new ground, as Göle (2015:64) argues. They are working to challenge and deconstruct both old and new representations of people with migrant backgrounds in mainstream racist discourse. For example, the feminist writer Aysel Özakin, one of the representatives of this new generation mentioned by Göle, opposes Wallraf's "pity" paradigm and the image of the Turk as a victim (Stowasser, 2002, p. 60).

The immigrants, who for the German public were mostly Turks, were transformed into Muslims in the public discourse alongside the development and establishment of Islamophobia. On the other hand, the children of migrant communities have also developed more ambiguous and hybrid identities as they live in social interaction with Muslims and non-Muslims from different ethnic backgrounds, leading some scholars (Yildiz, 2021) to use the term "post-migrant". Moreover, this new generation of Muslims in German society has access to new opportunities for self-representation, new tools, and new media platforms for interacting with the wider public in an environment of Islamophobic discourse produced and perpetuated by the mainstream media. With the diversification of social media platforms and the opportunities and tools for ordinary people to produce content, this new generation of Muslim youth is trying to reverse the representations of marginalization and victimization in the mainstream media in the new media environments.

Humor is increasingly one of the ways in which Muslims respond to and cope with the Islamophobic discourse and environment in which they live. Bilici (2010, p.196) draws attention to the correlation between the rise of Islamophobia in the US after 9/11 and the opening of a new era of 'Muslim comedy'. *Little Mosque on the Prairie*, a popular sitcom in Canada, the increasing number of stand-up comedians in America and Europe, and the humorous content produced on social media platforms can be cited as examples. Although Muslim humor did not emerge after 9/11, the date represents a shift in its history: it existed before in the form of ethnic comedy, but it continues its journey by taking on a different form and quality (Bilici, 2010). The resource from which it feeds is mostly the discrimination and racism that exist in the liberal societies in which Muslims live.

The above correlation could support Sander's (2001, p.308) therapeutic theory of humor. When people feel neglected, marginalized, and forgotten, they increasingly need humor in their lives to neutralize the problems and evils of the world and to temporarily suspend them. But the new form and content of Muslim humor go beyond this therapeutic function. American Muslim stand-up comedians are probably the first agents of this shift and the most analyzed cases (e.g., Aidi 2021). Aidi (2021) links their humor to the traditions of African American comedy, especially its technique of subverting racist stereotypes. Ömer Hammad's study, based on the textual analysis of the web series *Guess Who's Muslim*, produced by Canadian Muslims in 2016, shows that Muslims resist one-dimensional and racist representations with the humor they produce on social media and connect with North American Muslim and non-Muslim viewers. Humor emerged as a means of communication and self-representation not only with one's own community, but also with translocal communities of Muslims in the West and the non-Muslim public (Hammad, 2020). In another study that examined a blog called *Yalla Italia*, which emerged from the unity of culture, politics, and humor founded by second-generation Italian Muslims, the hybridity of storytelling, along with efforts to reconcile Muslim and Italian identities, highlights second-generation stories

that allow for a better understanding of multiple cultural, religious, and linguistic codes (Evolvi, 2017). Digital platforms are increasingly becoming spaces for the dissemination and communication of humor and, in parallel, spaces for research on humor (e.g., Aydin, 2023) that may escape the attention of social scientists.

Dissenting with Humour on YouTube - The Case of Datteltäter

Datteltäter (Offender Dates), a popular German YouTube channel with more than 500 thousand followers from Muslim and immigrant backgrounds, illustrates how the young Muslim generation uses humor differently and provides a good case study of how laughter can be a tool for non-dominant social classes and groups to resist, cope with problems, and engage in dialogue. Through this channel, a group of German-speaking Muslim and non-Muslim young people from different cultural backgrounds broadcast religious, ethnic, and political humorous content produced by themselves. The channel was founded by Younes, Fiete, Farah and Marcel, and as it gained interest, new young people joined the group. Those who produce content on the channel are post-migrant Muslim women and men, believers and non-believers, women with/without hijabs, men with/without beards, and their close Christian friends.

Datteltäter is derived from the German word *Attentäter* (meaning offender, assassin) by retaining and combining the last part *Täter* (meaning offender) with the word *Dattel* (date, the fruit). The channel's logo features a smiling date with a fez on its head, the string of which resembles a detonated dynamite fuse. Farah Bouamar, one of the channel's founders, explains how they came up with this name with satirical and bizarre connotations:

While the date is a special fruit, especially for Muslims, and has positive connotations, assassin evokes rabid hooded men waiting to detonate a bomb. The conflation of the two words creates a strange allusion: perpetrator date - assassin? Satirically, this means we make fruitful assassinations on laughing muscles and brains. The tenor of the term may sound a bit cynical, but

it illustrates well our intention to use satire to encourage people to think and question prejudices. (Bouamar, 2017)

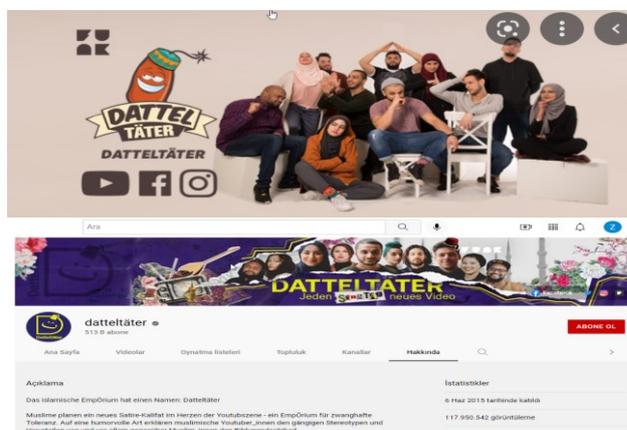


Fig. 1. Visuals from *Datteltäter* YouTube Channel, <https://www.youtube.com/@datteltater/about>

Through "fruitful assassinations on laughing muscles and brains," *Datteltäter* aims to deconstruct racism, Islamophobia, and similar prejudices that exist in public opinion about Islam and Muslims, as well as to build dialogue and bridges in the society in which they live. It also opens a door to the daily lives of Muslims in Germany and Austria and holds a mirror to Muslim society (Aleksander, 2019). Since 2016, the channel has been one of the groups that mainstream broadcasters such as Germany's ARD and ZDF cooperate with after the channel became popular among the German public. For producing content against prejudice, hate, and racism, the *Datteltäter* channel was included in YouTube's international Creators for Change network, which campaigns against intolerance and "hate speech" on the internet, and was awarded the 2017 Grimme Online Award and the 2017 Smart Hero Award.

The channel is followed by young people between the ages of 12 and 30 from different religions and ethnicities, and 60 percent of the followers are women (Fiete, 2019, p. 48). The standout, the pace of growth, and the endurance are not only related to the quality of the content produced but also to the community of followers, the communication with them, and the shared experiences and emotions. Followers are not just passive consumers of content but also participate in the generation of ideas for future content, sharing the discriminatory and racist practices

they experience at the call of the channel. As a space for sharing experiences both through the videos and the communication through the comments, the channel allows the construction of a space of shared experiences and feelings.

Calling to Confront Islamophobia

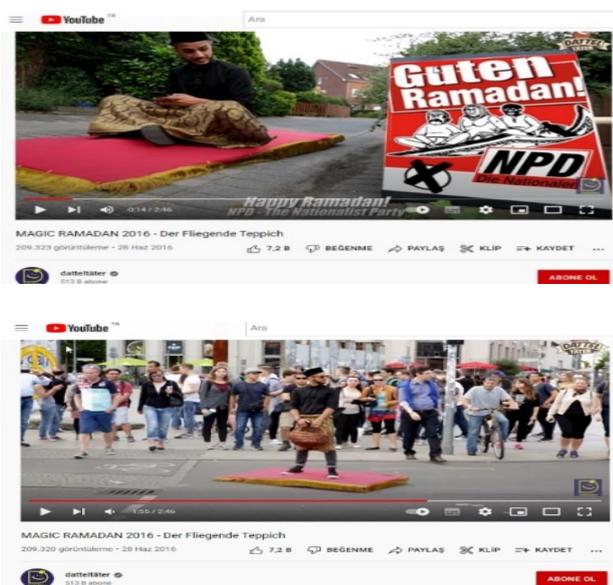


Fig. 2. "MAGIC RAMADAN 2016 - Der Fliegende Teppich,"
Source: YouTube/Datteltäter-2016a

The video titled "MAGIC RAMADAN 2016 - Der Fliegende Teppich" (Magic Ramadan 2016 - Flying Carpet) opens with a poster of the far-right NPD party depicting a man with a turban and mustache, a woman with a headscarf, and a black man who resembles a monkey sitting on a flying carpet. At the top of the poster, there is the text "Have a nice flight home-Guten Heimflug". Younes Al-Amayra, the founder of the channel, shows up next to the poster while sitting on a sliding red carpet with his fez on. Turning the embodiment of the orientalist view upside down, Al-Amayra changes the text on the poster next to him to "Happy Ramadan" by pressing a button on her phone. The video continues with the record of a performance in which Younes slides on the streets of Berlin on the red carpet with a fez on his head, a skirt wrapped around her waist, a date basket and the "Happy Ramadan" banner in his hands offering dates to everyone (Datteltäter, 2016). This

performance mocks orientalist and Islamophobic stereotypes and shows their absurdity by confronting people with those in their everyday lives.

Comedian Ahmed Ahmed (Çiçek, 2015) states that all people are the same when it comes to laughing and that humor is equalizing and generates empathy between communities. Muslims, according to him, can stand against Islamophobia with humor and overcome all negative and stereotypical attitudes about them with humor and trust and correct relationships between people can only be established with humor. Exposure to racism and religious discrimination can only be understood when it is articulated in a humorous way and so it helps to change world views by establishing a relationship between opposites. Fiete, one of the founders of the channel, states that they set out with a similar idea: in 2015, they chose humor as a way to endure and cope with a tense environment of news about ISIS and nightmare scenarios about Refugees in the German media, right wing movements such as Pegida² spreading the fears of "Islamization of the West." Similarly Muslims in Germany, observes Farah, try to deal with socially critical and sensitive issues such as racism, stereotypes, hatred, radicalization, and sexism that Muslims in Germany encounter in their daily lives by problematizing them with sarcastic humor on the social media scene. With their humorous content, they strive to build a long-overdue bridge between the dominant society and the Muslim minority and to reverse the media-based black-and-white image of Islam and Muslims (Bouamar, 2017). Blurring the border between these representations and everyday encounter through exaggerating helps them to deconstruct them. Appropriating an orientalist cliché and turning it into a performance – but not flying home, on the contrary participating in the everyday life – makes visible the absurdity of the racist placard and ridicules it.

Deciphering Everyday Racism and Discrimination

² Pegida-Patriotische europäer gegen Islamisierung des Abendlandes (Patriotic Europeans Against the Islamization of the West) was founded as a social media community and held its first demonstration in Dresden

on October 20, 2014. This movement later took names according to the cities in which it was located.

The video series titled "Wenn RASSISMUS EHRLICH wäre" (If racism were honest) satirizes the racism embedded in daily life in Germany. Younes Al-Amayra explains in the opening how this video series emerged: after a call they made to their followers on Instagram, they received experiences from the followers for three weeks. These series of parodies reflect everyday racism in situations like renting a house and job interviews, or in spaces like schools and public transportation. He attracts attention to the racism in education which is treated as if it does not exist: "Many Muslim young people have no idea that their teachers are racist [...] Many teachers do not know where racism begins and what can be disturbing for students" (Al-Amayra 2020). They aim to raise awareness of this racism and discrimination with their videos. When the channel gained popularity, the content producers started to occasionally give educational programs in schools to provide information about racism, prejudice, and Islamophobia by using their own satirical videos as teaching material.

One of the videos titled "Wenn RASSISMUS EHRLICH wäre | SCHULE" (If racism were honest | School), parodying racism in the school environment, the teacher entering the classroom is surprised when he sees the students of immigrant origin in the classroom and begins to humiliate them with arrogant and insulting statements. After entering the classroom, the teacher says, "Thank you, Merkel, I see a German... Damn, some of you don't want to come to school again, because of Ramadan... Let's see who is on the name list. Al Qaeda's list of names? ... A black student knocks on the door and enters and the teacher asks "Are your rubber boots late?" referring to Africans trying to cross the Mediterranean. When the teacher sighs and looks at the student list, he calls a student by an anonymized Muslim name, despite the answers he receives when he asks his name. This is actually an attitude that shows that other people do not recognize them as equal individuals by trivializing their names. While explaining the grades, he calls a student, who says his name is Younes, as Muhammed Ata, and tells him that he got a low grade. Then he turns to someone else and says, "Oh Ayşe, actually your grade is 1, but if you take off your headscarf, we can talk about better

grades." He belittles the student who tries to answer his question by saying, "Think of this place as your own home, you are only allowed to speak when someone gives you a permit," and implies that the society the student comes from is authoritarian and that he does not deserve to speak freely. The teacher, who constantly favors the only German student in the class, uses a tone that degrades ethnic and cultural identities in his dialogues with other students. To a hijabi student: "Why are you covering your beautiful hair? There is no such command in the Quran!" After saying this, he talks about forced marriage and states that they live in a civilized country and that it is necessary to be civilized. He belittles a black student by saying, "You talk loudly at home, just like in the forest," referring to a monkey that has not completed its evolution (Datteltäter, 2018). In these parodies, it becomes obvious how hurtful racism embedded in different attitudes and discourses can be in the language of the teacher, who has natural authority over the students in the educational environment.

To show all these situations in a single scene and through a single teacher makes the racism embedded in everyday life and language visible by exaggeration which may otherwise be felt but not recognized as racism. Even if it is recognized as such, the blame can be easily defied by the agents of racist language. Turning the everydayness of racism into a catalog of racist attitudes and a dense experience does not allow that.

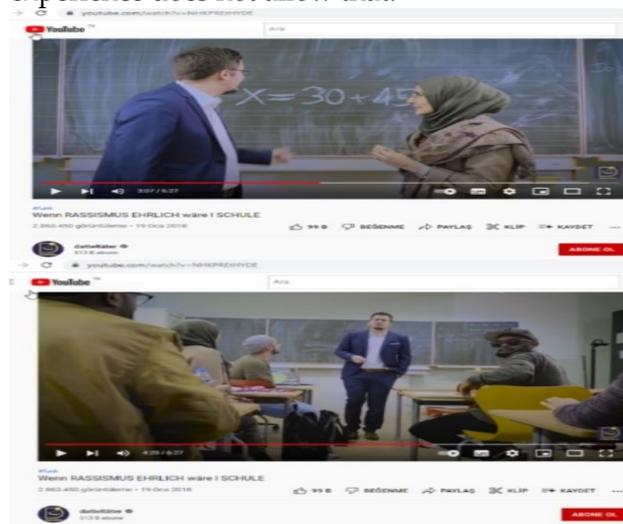


Fig. 3. Stills from "Wenn RASSISMUS EHRLICH wäre | SCHULE," Source: YouTube/Datteltäter-2018a

They do not stop at making it visible but try to make others feel the hurt and arouse empathy by reversing the roles. In a video titled "Wenn Migranten das sagen, was deutsche Lehrer sagen!" - (When immigrants say what German teachers say!), for example, they create the same situation as above by reversing the ethnocultural roles: This time, the teacher is Muslim and the students are predominantly German. They try to show how German students would feel in a similar subordinate position of being subjected to racist humiliations. It not only exposes the absurdity of individual racist attitudes but also becomes an invitation to society to empathize. We see the teacher entering the classroom, humiliating the students because of their names, ethnic, and cultural identities, distorting or anonymizing the names, giving arbitrarily low grades, judging the students by the sins of their ancestors, requesting comments and distancing statements in cases of violence against refugees. In the second parody, a hijabi Muslim teacher also enters the classroom and perpetuates similar racist attitudes and rhetoric. "Welcome animals" (Datteltäter, 2021), written in a hybrid language of Turkish or Arabic words combined with German pronouns on the blackboard in the classroom, shows that these languages are part of everyday German culture today.

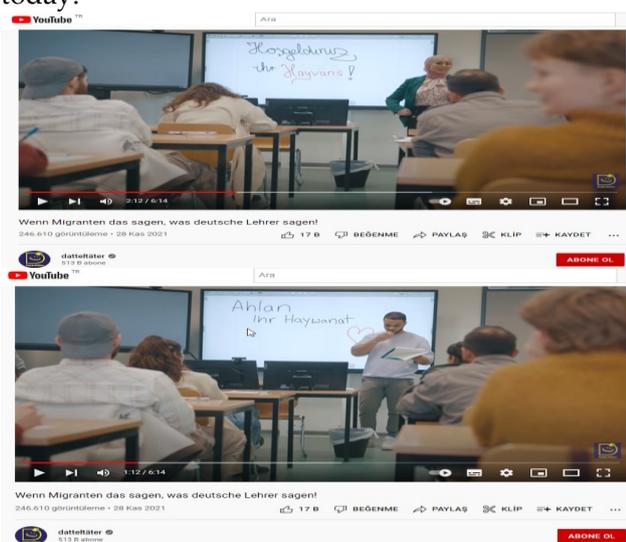


Fig. 4. "Wenn Migranten das sagen, was deutsche Lehrer sagen!," Source: YouTube/Datteltäter-2021

Dissociating from Deadly Representations of Islam

The constant exposure to racism and the need to defend one's community, as well as the discourse of victimhood (Aydemir, 2017), prevent Muslims from seeing and dealing with the problems within their community. Overcoming the idea of victimhood and critically addressing challenging problems within the community is now an ever more pressing issue, especially with the emergence of ISIS. Younes Al-Amayra finds it particularly important to criticize and challenge the actions of such groups that claim to represent Islam by using a humor mirror on social media, as Salafi groups effectively use YouTube. The desire to do something against these trends was effective in the establishment of this channel (Al-Amayra, 2015).

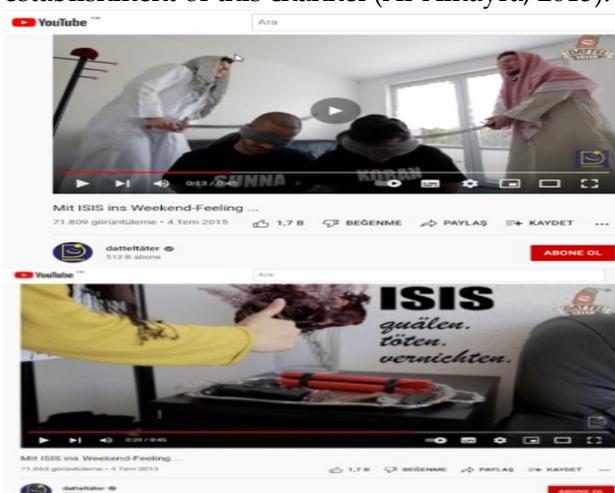


Fig. 5. "Mit ISIS ins Weekend-Feeling...", Source: YouTube/"Datteltäter-2015

The *Datteltäter* first attracted attention with a YouTube video mocking ISIS. In the video titled "Mit ISIS ins Weekend-Feeling ..." published in 2015, they try to turn the proclaimed image of ISIS upside down. The parody is reminiscent of the '90s commercials with background music, depicting a happy family buying creamy yogurt on a weekend vacation. A man wearing a keffiyeh and a woman wearing a headscarf are seen entering the house with a picnic basket in their hands, while explosives are hanging from the picnic basket. Two male executioners are kneeling on the ground and are about to execute two blindfolded male hostages with "Quran" and "Sunnah" written on their T-shirts. The hijabi woman puts the Koran in the drawer and then leaves the explosive tray in its place to make room for the violence. The text "ISIS, torture, kill, and destroy" appears on the screen, drawing attention

to the fact that ISIS privileges its violent methods over the Quran and Sunnah and even violates them. The video ends with Bertolt Brecht's words, "Great political criminals should be mocked. Respect for those murderers should be destroyed" appear on the screen. Commenting on the movie *The Dictator*, Sander (2001:304) claims that Caplin destroys the image of Hitler by making an exaggerated parody of him and turning him into a funny puppet. Similar to what Caplin does, *Datteltäter* tries to destroy the frightening image of ISIS members by making fun of them. The critique coming from the Muslim perspective of this video, which deconstructs the identities proclaimed by both themselves and the West, attempts to show that it does not represent Muslims by exposing the contradiction between their actions and the proclaimed Islamic way.

Dwelling In-between two Cultures, Growing up Different from Parents and Previous Generations

An important reason why young Muslim people admire the videos by the *Datteltäter* is also the tensions they experience with their families of different ethnic and cultural backgrounds. Parodies that focus on intergenerational tensions and family discord build a community of young people who have similar experiences and feelings and thus function as a space for healing. By sharing their similar experiences under the video on the platform, some content streamed in a video has turned into a series. While interaction with the community acts as a platform that generates a rich resource for further production, it also creates a virtual space for healing and community building. The video series "Dinge, die muslimische Eltern sagen!" (Things Muslim Parents Say!) is an example of this category. First, the mother who tells her daughter that she has cooked her favorite meals when she comes home makes an emotional and angry speech against her daughter who says she is not hungry: "Oh, did you eat out? What did you spend your money on? I stand in the kitchen and cook all day. Is this a hotel where everyone can come and go as they please? Am I your slave? What ungrateful children I have. I carried you for nine months! Nine months of pain!"

Again, in this video, the father's objection to his daughter, who says that her friend Laura invited her home for her birthday and a pajama party over the weekend, is quite exaggerated; "Isn't my daughter using her brain? My daughter doesn't see the news? Five rape cases and that's just on the stairs. Why do you want to sleep at his house? Don't we have a bed? Night party... What will come next? Prostitution? What will others think? Then will you invite others? Men..." This exaggerated state of vigilance is transformed into a performance that shows that intergenerational mistrust translates into oppression and restriction in the eyes of young people.

In the same video, the father who does not like his daughter's grade says, "I carried your grandmother on my back for 10 years, taking her to the doctor. I started working when I was 3 years old." His objection continues by repeating his own difficult experience. As the parody continues, the father opens the door to his daughter, who happily and proudly announces that she got a "B" on her exam. The father expresses his disappointment and reminds her of the painful experiences he had in his home country. The father angrily tears up the test paper and begins to grumble:

My daughter came home with a 2, huh? Did I swim to Europe for those grades? I came to Europe, 500 km away, on a three-legged donkey. I came to Europe with one pair of pants and one dime. And you get a B+. My God, what am I going to do with you? Should I send you back to Morocco? You can milk cows there! You're always on the phone. Click click, hello hello, you won't learn anything like that. What did I tell you? You have to be a doctor or an engineer. But you won't make it with a B+. Look at Omer. He has 13 Mercedes and he got married when he was 9 years old. With a B+ you can work as a cleaner. You have disappointed me. You are no longer my daughter. (*Datteltäter*, 2018b).

These videos consist of a series enriched by the experiences shared by the followers. These parodies focus on the discourse of parents who, through their own sacrifices, saddle young people with debt and expect them to be constantly successful. The younger generation is accused of failing to live up to these expectations. The younger generation distinguishes itself by

satirizing these attitudes of the older generation, which they perceive as oppressive and restrictive, preventing them from living their own lives. Shattering the seriousness of families by making fun of their parents' intolerance towards them reduces the tensions of Muslim youth with their parents. These videos serve both a therapeutic function and a dissensus against the norms and expectations of previous generations. Much of the video content is shaped by the cultural contradictions and conflicts that Muslim youth experience in their daily lives with their own society and families.

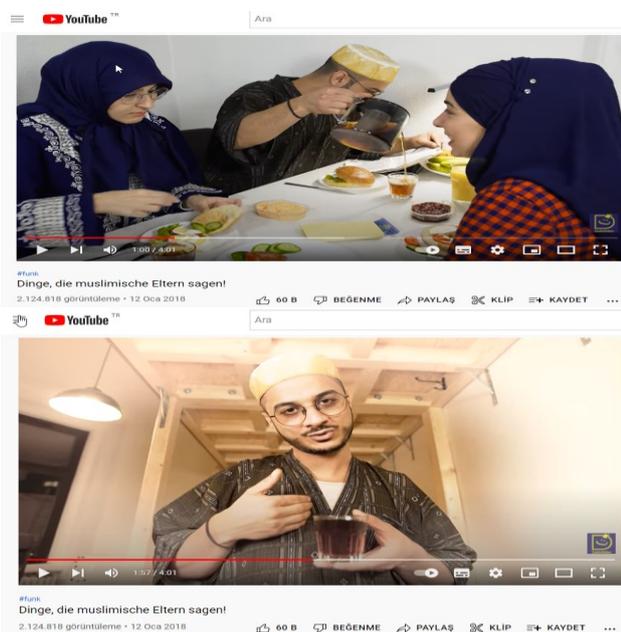


Fig. 6. "Dinge, die muslimische Eltern sagen!" Source: YouTube/Datteltäter-2018b

According to Bilici (2010: 201), the seeming disadvantage of tensions with both majority society and older generations and parents enables them to produce richer humor because they live on a critical border between the majority and minority communities to which they both belong. Positioned as guides for young people who identify with them, they can encourage them to question the dominant patterns of their own communities and to produce alternatives to them. They have a multifaceted function: they not only hold up a mirror to German society with humor but also to the Muslim community. Furthermore, they play a therapeutic function for Muslim youth in coping and dealing with, as well as rebelling against, the dominant discourses and attitudes of

former generations in their own community by parodying these (Aleksander, 2019).

Deconstructing Muslim Women with Humor

In patriarchy, humor has mostly been masculine, and the humor produced about women has been the product of this masculine view. Humor is generally shaped by male slang, sexuality, and perception of violence. Today, the number of women writing, drawing, or performing in the world of humor is increasing, and women who have realized the power of laughter have also learned that it can be used to demonstrate political resistance (Douglas, 2014, p. 63). In contrast to masculine humor, which perceives and interprets the world in an incomplete and biased way, female humorists can create humor that interprets life from a more holistic perspective (Özdemir, 2010, p. 33). Not because of an essential characteristic of femininity, but because they gain sensitivity to relationality by living at the intersection of multiple forms of discrimination based on religion, race, and class.

Muslim women living in Western countries are exposed to multiple forms of discrimination and racism, especially when they are visible through the hijab. For a long time, under the influence of the Orientalist view in the German media, Muslim women were portrayed as oppressed by their fathers and brothers, as poor, backward, and uneducated victims waiting to be saved (Schiffer, 2004, p.83). The *Datteltäter* depicts the everyday experiences of Muslim women (with or without hijab). The women who produce content for this channel are on the one hand trying to reverse the Orientalist view by "talking back" (hooks, 1989), speaking for themselves with humor, and on the other hand setting an example for their Muslim sisters and encouraging them to talk back.

In a video with the title "16 Dinge, die Kopftuchtragende Frauen in Deutschland kennen!" (16 Things that Hijabi Women in Germany Know!) is an exaggerated parody of the difficulties and strangeness that hijabi women experience in everyday life because of their hijab. Parodies usually consist of exaggerated representations based on real experiences. The video presents the absurdity of the situation with a

humorous performance, accompanied by music where there are almost no words. The tip of a hijab falling into the food while eating, using the hijab as a napkin when no napkin is found during dinner, fixing the hijab with a peg, hurting one's eyes while trying to wear glasses with the hijab, wearing glasses over the hijab, having difficulty putting on headphones, pricking one's head with a needle while tying the hijab. Such exaggerated parodies ridicule the difficulties that racist representations attribute to the lives of hijabis, and thus the feeling of pity (Datteltäter, 2017), by showing the small but real difficulties. Another parody deals with cliché questions about the hijab like "Do you sleep with a headscarf? Do you wash your hair? Do you have hair?" Questions such as these are used to satirize the insistence on remaining alien to the lives of Muslims. In another parody, a situation of the stranger's entry into the room of a hijabi woman while she is without hijab parodied: the woman uses diverse objects in the room to cover her hair, a situation and act familiar to hijabi women (Datteltäter, 2017).

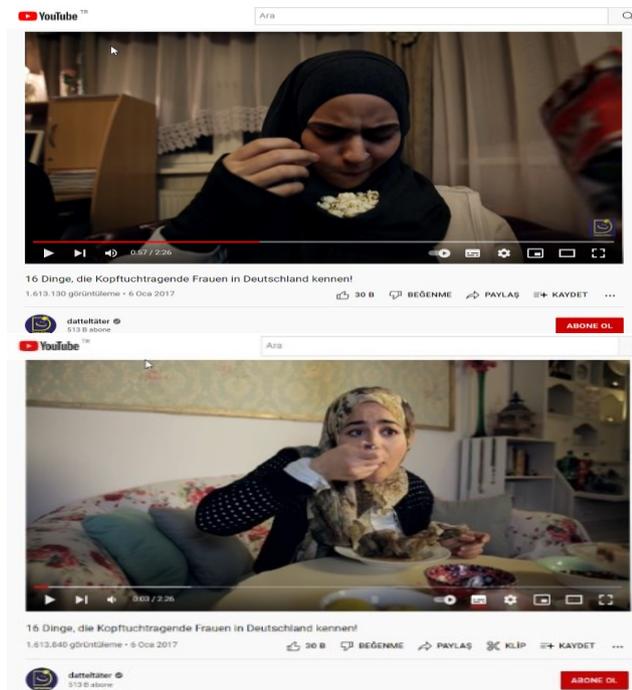


Fig. 7. "Dinge, die Muslimische Frauen ohne Kopftuch kennen!"
Source: YouTube/Datteltäter-2017

The topic of Muslim women is not limited to hijabi women. The video "Dinge, die Muslimische Frauen ohne Kopftuch kennen!" (Things familiar to Muslim women without hijab) parodies the

attitudes and discourses that non-hijabi Muslim women often encounter within the Muslim community and German society. The video features a hijabi woman having a dialogue with a German woman who has just converted to Islam but does not wear a hijab. "When will you wear a hijab?" When the German woman replies, "It's not time yet," the dialogue takes on a comically angry tone. The hijabi woman's imperiousness includes intimidation that her good deeds will fly away, and it ends with her throwing the headscarf in the face of the German Muslim woman. In a parody that follows, we see the absurdity of a one-way conversation in which one of the women praying in the mosque tries to persuade another woman who is trying to take off her hijab after prayer: "It suits you very well; keep it like that." The same video also parodies the attitude of a German man who compares his female Muslim colleague without hijab to another with hijab and praises the one without hijab - being without hijab (Datteltäter, 2018c). The first-hand knowledge of the experiences of encountering German society and the Muslim community, as well as the open criticism of both, give these parodies their authenticity and distinction.

Parody of Incompatible Close Encounters

Social encounters are the resource that feeds the content of the parodies produced by *Datteltäter*. Everyday life involves interactions that can lead to both bonding and separation. Although members of the Muslim community, or marginalized communities in general, are easily blamed for their exclusion because of their different attitudes and values, differences are mutual and relationships can be fostered through rapprochement. They draw attention to the fact that a better way of dealing with these differences is only possible without establishing a hegemonic relationship between them. A video entitled "8 Dinge, die Du bei Muslimen NIE tun solltest!" (8 things you should never do with Muslims) focuses on approaches that turn into violations of other people's values and norms. For example, one of the videos shows an exaggerated parody of what not to do to a person who is praying: Marcel leaves the room while his friend Younes is praying and gives

Younes a friendly pat on the back. Or Marcel enters the room with joy to share the good news that his podcasts have been listened to a lot. Younes is praying at the time, but Marcel joyfully begins to slap Younes's hand, which he has opened for prayer. When Marcel leaves, Younes angrily throws his slippers after him. In another parody, Marcel shows off the prayer rug he bought from Turkey as a doormat, and he pretends to step on it. Meeting a hijabi woman at the door of the house, Marcel fixes the protruding strands of hair of the hijabi woman by pushing them under her headscarf. The woman looks at Marcel in surprise. Marcel, who has brought wine as a gift for a Muslim friend, explains in an emotional tone that it is a family heirloom and that he can only give it to a friend. Faced with this situation, Younes accepts the gift with surprise. In these parodies, incompatibilities are revealed through the differences in the relationship norms of the Muslim community and German society through situations such as prayer, touching women, and giving wine (Datteltäter, 2020a).

These parodies show that relationships that tend towards closeness, even if based on good intentions, can lead to distance due to different norms. These staged themes appear as content that enables the non-Muslim community to better understand Muslim practices and indicators, and become a call to develop a style of relationship that is compatible with diversity. This way of approaching cultural differences can also be interpreted as a critique and practice of dissent against the hegemonic discourse of integration and its label of "parallel society." Bringing those who are overrepresented and marginalized by these discourses into the center of the discourse is again in line with dissent practices.

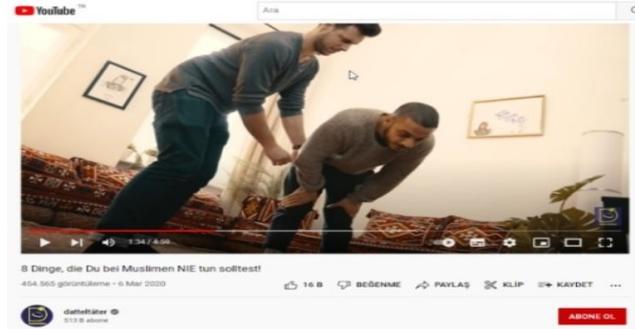


Fig. 8. "8 Dinge, die Du bei Muslimen NIE tun solltest!," Source: YouTube/Datteltäter-2020a

Conclusion

In this study, laughter and humor have been analyzed under the theoretical premise that they are inherently social (Bergson, 2015), thus they emerge within a sociality and gain meaning within the social context. Further, Sanders' (2001) approach to laughter as a tool of critique and resistance for communities and classes that have been displaced from the ideal public order has been taken as the main theoretical focus, which is, however, elaborated with Rancière's (2004, 2009) approach to dissensus. On the YouTube channel *Datteltäter*, post-migrant Muslim youths produce comedy as a practice of dissent against the regimes of sensible that are shaped by the racism and sexism against them in society. While being a practice of dissent, humor, and parody also have a therapeutic function, helping to create a space for hybrid subjectivities and shared experiences and feelings.

For post-migrant Muslim youth, humor has emerged as a powerful tool for subverting and reversing representations of marginalization and victimization in mainstream media. They attempt to construct and make visible their own subjectivity against hegemonic stereotypes. The *Datteltäter* channel exemplifies the use of humor to serve the dissent of a group of young people, their critique of the discourse of Western culture and media, the protectionist culture of their parents and the previous generation, and the authorities who speak in the name of Islam. Yet, it is not an opposition that denies and ignores what they are ultimately opposing. Instead, they continue to search for a way of communicating in which they verify their equality and their own subjectivity.

After this group's humor attracted an audience, it began to receive approval from the mainstream media. This also shows that there has been some success in reversing the assumptions of the mainstream media and that contact and communication with the mainstream has been established.

The content the channel broadcasts, on the one hand, focuses on the racist and discriminatory attitude of Western society towards Muslim people in the society, subverts and disrupts the prevailed normality of these, the distribution of the sensible (Ranci re, 2004), and on the other hand, carries internal criticism towards the culture of the Muslim communities. Especially after the differentiation of life expectations between the older and new generations of Muslims, the imposition of family authority on young people with old patterns of behavior becomes a subject of criticism. Producing and broadcasting humorous content on the channel has become a practice of dissent through which they disrupt the power relations by deconstructing the biased identity conceptions and forms of relations, as well as constructing and making visible their own hybrid subjectivity by creating a virtual space that contributes to German society and their own communities through the insights of their in-betweenness.

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RESEARCH ARTICLE

Do Islamic Values Matter for Environmental Protection? Empirical Evidence and Policy Suggestions Based on a Global Dataset

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Abstract

Environmental degradation increases all over the world with every passing day. Scholars have attempted to understand the parameters that impact environmental quality over the last three decades. The empirical models use different economic and technological parameters as explanatory variables to do so. However, in recent times, some studies mentioned the importance of social parameters in reducing environmental degradation. Religious principles and values are among the main social parameters that may impact the environment. Considering that climate change's repercussions are increasing daily, understanding the relationship between religion and the environment is essential for effective climate control measures and policies. Although environmental studies based on theological issues are common, there is hardly any empirical investigation related to eco-theological arguments with macro data. This study is the first initiative to uncover the environmental quality and religious teaching and values nexus by applying various panel econometric approaches at the global level. Accordingly, this study inspected the impact of Islamic Principles on the environment in 147 countries. The novel findings provided evidence that Islamic values help decrease CO2 emissions in 147 nations. These findings offer more effective practices and solutions to environmental problems.

Keywords: Environmental Sociology; Sociology of Religion; Islamicity Index; Environmental Degradation; Religious Values; Climate Change

Öz

Çevresel bozulmalar tüm dünyada her geçen gün artmaktadır. Araştırmacılar son otuz yılda çevresel kaliteyi etkileyen parametreleri belirlemeye çalışmışlardır. Bu amaçla, ampirik modellerde açıklayıcı değişkenler olarak farklı ekonomik ve teknolojik parametreler kullanılmıştır. Ancak son zamanlarda, bazı çalışmalar çevresel bozulmayı azaltmak için sosyal parametrelerin öneminden bahsetmektedir. Bir toplumun ve o toplumun kültürünün en önemli unsurlarından olan dini değerler, çevreyi etkileyebilecek başlıca sosyal parametreler arasında yer almaktadır. İklim değişikliğinin yansımalarının her geçen gün arttığı düşünüldüğünde, din ve çevre arasındaki ilişkiyi anlamak, etkili iklim koruma önlemleri ve politikaları için elzemdir. Her ne kadar literatürde çevresel teoloji çalışmaları yaygın olsa bile, eko-teolojik argümanlarla ilgili makro verilerle yapılan ampirik araştırmalar yok denecek kadar azdır. Bu çalışma, küresel düzeyde çeşitli panel veri ekonometrik yaklaşımları uygulayarak çevre kalitesi ile dini prensip ve değerler arasındaki bağı ortaya çıkaran ilk girişimdir. Buna göre, bu çalışma 147 ülkede İslami ilkelerin çevre üzerindeki etkisini incelemiştir. Elde edilen bulgular, İslami değerlerin 147 ülkeden oluşan panelde karbon emisyonlarını azaltmaya yardımcı olduğuna dair kanıtlar sağlamıştır. Araştırmanın sonucunda söz konusu bulgular perspektifinde, çevre sorunlarına yönelik politika önerileri ve çözümleri sunulmuştur.

Anahtar Kelimeler: Çevre Sosyolojisi; Din Sosyolojisi; İslamilik Endeksi; Çevresel Bozulma; Dini Değerler; İklim Değişikliği.

Introduction

Environmental deterioration is among the most modern-day problems (Apergis et al., 2018). Fossil-based energy usage, energy production and distribution, agricultural production, and other economic activities are significant sources of environmental deterioration (Can et al., 2022). Environmental degradation threatens human health and causes different health problems (e.g., respiratory and cardiac diseases, premature deaths). Furthermore, climate change, which emerges from increasing greenhouse gases, leads to heavy storms, rising sea levels, and acid rains (IPCC, 2018; Sun et al., 2016). To eliminate these challenges, a lot of reports and initiatives have been released by numerous organizations (Ali et al., 2022).

Scholars make considerable efforts to determine factors that trigger environmental degradation. These factors can be categorized as social, technological, and economic factors (Can & Gozgor, 2017). Studies in the environmental literature have primarily discussed the source of environmental degradation in the context of economic and technological parameters, such as financial development, international trade, tourism, population, and economic complexity (e.g. Ang, 2009; Cerdeira Bento & Moutinho, 2016; de Vita et al., 2015; Gozgor & Can, 2016; Hu et al., 2020; Ren et al., 2019).

As social parameters have a crucial impact on human behavior (Foxon et al., 2013), some current studies specify that social parameters might play an essential role in influencing environmental degradation (Mrabet et al., 2021). Human behaviors, attitudes, and consumption practices play an important role in environmental problems because of people's interaction with the environment. Focusing only on technical issues limits understanding the problems and producing permanent solutions to them (Capelli-Schellpfeffer, 2012). In this context, the source of the environmental problem lies in the relationship that people establish with the planet (Ezzy, 2004). The things that determine human behavior in this

relationship are the cultural understandings, values, beliefs, and mentalities of the societies they live in. In evaluating situations, people apply values. Values guide people's behaviors and attitudes (Adler, 1956; Kluckhohn, 2013; Schwartz & Bilsky, 1987). Therefore, they are important variables in defining social attitudes and behaviors (Rokeach, 1973). Values are created by some social actors. Culture and religion are some of these valuable creators in human society.

Contrary to what secularization theories argue (Wilson, 2016; Dixon, 1968; Bruce, 2002) religion continues to create very strong cultural influences in the modern period (Stark & Bainbridge, 1996; Beckford, 1990). Some parts of the world will be very religious while other parts will become increasingly secular meaning religious diversity will be polarized in the years to come (Stonawski et al., 2015). Currently, according to Hackett et al., (2017), 80 percent of the global population is part of a religious tradition. Compared to other social actors, religion, as a social actor, exerts greater influence in societies in terms of its ability to create meaning and value, establish moral authority, provide substantial material resources, and shape societies (Gardner, 2010). Religions affect their followers' worldviews and moral stances that can have institutional and economic power, and they ensure the achievement of collective goals due to their social connectivity (Haluza-DeLay, 2014).

Religions and religious values are among these social parameters that affect human and social behavior, which have a greater influence on environmental issues. Religions' teachings and their worldviews determine their followers' lifestyles and their relationships with the environment (Jenkins, 2009). Environmental deterioration is considered a social problem, which is one of the main issues that religion can influence. It is partly because, in religious teachings, some warnings have been made for the protection of the environment. It has been argued by many scholars that all religions offering a worldview have teachings that will impact the interaction of people and societies with the environment (Taylor, 2008; Gottlieb, 2006).¹ This effect does not mean that they

¹The Encyclopedia of Religion and Nature includes key summary parts on the major traditions such as Christianity, Islam, Jewish, Buddhism, Hinduism, Confucianism, Taoism, Jainism, Sikhism, Yoga, Shinto, and

others (Taylor, 2008).The Oxford Handbook of Religion and Ecology provides longer articles on Islam, Christianity, Jewish, Jainism, Hinduism, Buddhism, Daoism, and Confucianism (R. S. Gottlieb, 2006).

have a consensus on environmental problems. Many religions differ in how their followers will relate to nature as they offer a perspective on how to approach them related to biodiversity, ecosystems, ecological processes, and other environmental issues (Sponsel, 2010). However, they certainly offer a worldview toward environmental problems (Berry & Berry, 2009).

In this context, our principal goal is to investigate the effect of Islamic principles and values on the environment in a sample of one hundred and forty seven countries. The country constraint is based upon the accessibility of the data. This study seeks to contribute to current environmental economics literature in several ways. Initially, this is the first comprehensive research that explores the effect of Islamic principles and values (Islamicity Index) on the environment based on macro data. Second, the research simultaneously examines the impact of income and energy consumption on the environment. Third, we use various econometric techniques, such as the Durbin-H panel cointegration technique of Westerlund (2008), and the Common Correlated Effects-Mean Group (CCE-MG).

On the other hand, this study has several limitations. The first important issue was the publication of the Islamicity Index every five years which resulted in a reduction in total observations. In addition, data on some explanatory variables used in the empirical analysis was not available for all countries. Due to these issues, only one hundred and forty-seven countries were included in the study, and others were excluded due to data unavailability. In addition, the studies in the literature are mainly theoretical or survey-based, and no existing studies use macro data. Therefore, this study is very limited in terms of its literature.

The remaining part of this paper is structured as follows. Section two and three introduce theoretical background and data, empirical model, and econometric methods, respectively. While section four discusses results, section five offers policy recommendations. Section six provides conclusion, respectively.

Theoretical Background

Religions have the potential to play a significant role in environmental degradation. Religions are very diverse; therefore, when examining the relationship between religion and environment, the discourses of world religions about the environment will also differ, and it will not be possible to gather them under a single category. In studies on the relationship between environment and religion, which are mostly based on Judeo-Christian traditions and societies, there is no consensus on whether religion/religious values affect environmental degradation positively or negatively, or whether there is a meaningful relationship between religion and environment. Research on the relationship between environment and religion gained momentum, especially after White Jr (1967) thesis. Researching the impact of Judeo-Christian values on the environment, White Jr (1967) pointed out that the source of the destruction of ecosystems is the anthropocentric worldview and domination-centered understanding of religion. In some later sociological and anthropological studies until the 1990s, in terms of Judeo-Christian values, it was argued that religion/religious values had a positive effect in some studies (Arbuckle & Konisky, 2015). The currently available studies show that the relationship between religion and environmental attitudes is not clear (Arbuckle & Konisky, 2015). For religiosity, the results are mixed, for example, people in some religions express a great deal of environmental concern (e.g., Hayes & Marangudakis, 2000), although some studies show that this concern is quite low (Wolkomir et al., 1997). For example, although there are denominational differences in Judeo-Christian traditions (Hand & Van Liere, 1984), some studies have found positive relationships between religiosity and environmentalism (Kanagy & Willits, 1993). While others are confirming White's thesis (Eckberg & Blocker, 1989; Boyd, 1999) stating that environmental issues are negatively affected (Schultz et al., 2000) by an anthropocentric perspective (Schultz et al., 2000; Eckberg & Blocker, 1989) and apocalyptic belief (Barker & Bearce, 2013) in Judeo-Christian traditions. Others have said that there is no meaningful relationship

between religion and the environment other than fundamentalist views (Woodrum & Hoban, 1994). Regardless of the religion, environmental attitudes vary even within the same religion. Conservative and fundamentalist attitudes and beliefs in religion, regardless of which religion people belong to and the relationship between these beliefs, show that they negatively affect the view of environmentalism (Woodrum & Hoban, 1994; Guth et al., 1995; Eckberg & Blocker, 1989; Boyd, 1999; Hayes & Marangudakis, 2000). More liberal attitudes in religions/religious values affect environmentalism positively. Catholics have less pro-environmental attitudes than Protestants (Whitford & Wong, 2009) and Protestants have less pro-environmental attitudes than non-Christians (Hayes & Marangudakis, 2000). Even in the same denomination, some Liberal Protestants are reported to have a greater environmental concern when compared with other Protestants (Hand & Van Liere, 1984; Hayes & Marangudakis, 2000). Moreover, conservative Protestants are reported to have a lesser environmental concern when compared with other Protestants (Eckberg & Blocker, 1989; Sherkat & Ellison, 2007). As the conservatism in religious values increases, environmentalism decreases compared to those who are moderately religious or do not define themselves as Christians (Clements et al., 2014). Islam is among the world's largest religions in terms of the number of its followers in the world. According to Stonawski et al., (2015), it is expected that by 2060, it will be the largest religion in the world, because of high fertility rates and the young population. Therefore, it will be among the most significant actors in the world in terms of influencing people and their worldviews in the future. Islamic geography is mostly exposed to environmental problems (Koehrsen, 2021), and it is likely to remain in the future. The issue urgently needed to take the attention of scholars; so more empirical studies are needed.

Analyzing the relationship between the environmental issues and religion in Muslim countries is gaining great importance in environment literature. Islamic environmentalism

literature emerged after the 1960s with the work of Seyyed Hossein Nasr (Hope & Young, 1994). Later, Islamic environmentalism was further developed with the studies of Dien & 'Izz al-Dīn (2000) and Khalid (2002, 2005). Islamic environmentalism and ethics are based on the Qur'an and Sunnah (Hancock, 2017). Although there are many studies on environmental ethics in Islamic teachings (Dien & 'Izz al-Dīn, 2000; Foltz, 2003), this interest is quite low in the empirical field.

There are small-scale sociological studies on the relationship between religion and the environment in the Islamic context. Existing small-scale studies have examined the effects of Islamic values on pro-environmental behaviors (Rice, 2006); the relationship between religiosity and environmental behaviors (Ayten & Hussain, 2017); religion and environmental consciousness (Emari et al., 2017); religiosity's effect on purchasing green products (Khan & Kirmani, 2018; Farooq & Yahya, 2021), and purchasing behaviors (Hassan, 2014); developing Eco-Islam in Arab markets (Abdelzaher & Abdelzaher, 2017); Islamic perspectives on green jobs (King & Shackleton, 2020). The large-scale report on the attitudes of Muslim religious leaders to the environment (Skirbekk & Pędziwiatr, 2018), organizations, and religious leaders' influence on climate change (Koehrsen, 2021), and gender-based environmental attitudes (Vasi, 2010) are also studied. Within the national Islam context, the environmental concern of Great Britain Muslims (Gilliat-Ray & Bryant, 2011) and the United States Muslims' environmentalism by Albrecht and Nimer (2011) are other important studies.

To understand what kind of worldview offers Islam to its followers about the environment, analyzing the main sources of Islam will be beneficial. These main sources are the verses of the Qur'an and the Hadith, which are the teachings and practices of the Prophet. There are approximately seven hundred verses on issues related to the environment in the Qur'an. Considering these verses, nature is God's gift to the creatures (Quran, 45/13; 16/65)², the world is created on a certain ecological balance (Quran,

² "He 'also' subjected for you whatever is in the heavens and whatever is on the earth—all by His grace. Surely in this are signs for people who reflect (Quran, 45/13)." "And Allah sends down rain from the sky, giving life to the

earth after its death. Surely in this is a sign for those who listen (Quran, 16/65)."

32/5; 55 / 7-9; 67/3; 25/2)³, and man should protect animals. There are verses (Quran, 6/38) that the natural resources ought to be protected. They need to be used in moderation and they should not be wasted (Quran, 7/31; 17/27; 6/141)⁴, attention is drawn to the fact that humans ought to preserve this balance while benefiting from nature (Quran, 25/67)⁵. Those who disrupt this balance are described as "mufsid / defeatist" (Quran, 2/205)⁶ and various warnings are made against them (Quran, 30/41; 42/30)⁷. Besides these, emphasis is placed on cleanliness in areas where human beings exist, by constantly drawing attention to individual hygiene (Quran, 74/1-5)⁸.

The prophetic discourses emphasize the environmental awareness of Muslims on both individual and social levels. For example, looking at these Hadiths, it is stated that nature is the mother of humans and they should protect it.⁹ The Hadith also draws attention to afforestation¹⁰ and trees. According to some Hadiths, the plants should be protected.¹¹

Islam contains many different principles and values which set certain rules for its followers on how to live in harmony with people, society, and nature in the world. These values are combined in an index which is called the "Islamicity Index" developed by (Rehman & Askari (2010a; 2010b). The main goal of this index is to measure the degree of "Islamicity" of different countries in terms of experiencing Islamic values.¹² Experiencing these values means living and

practicing these values both individually and collectively. These principles are determined according to the Qur'anic verses and the Hadith. In other words, the Islamicity Index is trying to measure 'the reflection and manifestation of these teachings in a community or a country' (Askari, 2019). The teachings are the determinant of the set of variables used as proxies. Islamicity Index comprises four sub-indices. These are Economic Islamicity Index, Legal and Governance Islamicity Index, Human and Political Rights Islamicity Index, and International Relations Islamicity Index. The sum of these indices makes up the Overall Islamicity Index.

The Islamicity Index does not focus on how Muslim countries are, but on how much Islamic principles and values are experienced in any country. Although countries belong to different faiths and religions, the fact that the values of Islam are experienced in these non-Islamic countries causes the Islamicity Index value of the relevant country to be high. For example, according to the recently published 2019 Islamicity Index, the top ten countries with the highest index value are New Zealand (9.07), Sweden (9.03), Iceland (9.02), Netherland (9.00), Switzerland (8.87), Denmark (8.85), Ireland (8.80), Norway (8.76), Luxembourg (8.74), and Australia (8.67). In the context of Muslim countries, the United Arab Emirates, Malaysia, and Albania, with the ranking of 44th, 45th, 46th and index values of 7.79, 7.17, and 5.73, respectively have a better position compared to all

³ "He conducts every affair from the heavens to the earth, then it all ascends to Him on a Day whose length is a thousand years by your counting (Quran, 32/5)." "As for the sky, He raised it 'high', and set the balance 'of justice'. so that you do not defraud the scales. Weigh with justice, and do not give short measure (Quran, 55/7-9)." "He is the One' Who created seven heavens, one above the other. You will never see any imperfection in the creation of the Most Compassionate. So look again: do you see any flaws?(Quran, 67/3)." "....He has created everything, ordaining it precisely (Quran, 25/2)."

⁴ "O Children of Adam! Dress properly whenever you are at worship. Eat and drink, but do not waste. Surely He does not like the wasteful (Quran, 7/31)." "Surely the wasteful are 'like' brothers to the devils. And the Devil is ver ungrateful to his Lord (Quran, 17/27)." "He is the One Who produces gardens—both cultivated and wild'—and palm trees, crops of different flavours, olives, and pomegranates—similar 'in shape', but dissimilar 'in taste'. Eat of the fruit they bear and pay the dues at harvest, but do not waste. Surely He does not like the wasteful (Quran, 6/141)."

⁵ "'They are' those who spend neither wastefully nor stingily, but moderately in between (Quran, 25/67)."

⁶ "And when they leave 'you',¹ they strive throughout the land to spread mischief in it and destroy crops and cattle. Allah does not like mischief (Quran, 2/205)."

⁷ "Corruption has spread on land and sea as a result of what people's hands have done, so that Allah may cause them to taste 'the consequences of' some

of their deeds and perhaps they might return 'to the Right Path'(Quran, 30/41)." "Whatever affliction be falls you is because of what your own hands have committed. And He pardons much (Quran, 42:30)."

⁸ "O you covered up 'in your clothes'!. Arise and warn 'all'..Revere your Lord 'alone'.Purify your garments..Continue to' shun idols (Quran, 74/1-5)."

⁹"And take care of the earth for verily she is your mother (Sharma, 2021: 50, Tabaran)."

¹⁰"Whoever plants a tree and diligently looks after it, until it matures and bears fruit, is rewarded(Ibn Hanbal & Abd Allah ashShaybani, 1992: 415)."

"If a Moslem plants a tree or sows a field and men and beasts and birds eat from it, all of it is charity on his part,' and again, 'the world is green and beautiful and God has appointed you his stewards over it (Negi, 2005)."

¹¹"He who cuts a lote-tree [without justification], Allah will send him to Hellfire (Ashtankar, 2016; Anjum & Wani, 2018)"

¹² The index comprises four sub-indices related to economics, legal and governance, human and political rights, and international relations. Each of these titles has subtitles. Please see for details (Askari & Mohammadkhan, 2017).

other Muslim countries. The fact that non-Muslim but industrialised countries rank higher on these indices compared to Muslim countries raises questions about the validity of these indices (Bowe and Makki, 2016).

Islamicity index differs from the Maqasid Shari'ah-based indices in that it is based on the values derived from the primary sources of Islam, namely the Qur'an and Sunnah, and is also criticised for not being based on the Maqasid Shari'ah. Islamicity Index is criticised for its inability to measure the impact of such social activities in Muslim societies, especially since social rituals such as zakat, congregational prayer and pilgrimage, which unite Muslims, cannot be measured in a quantitative context. At the same time, the fact that charity is not measured in Muslim societies because it is voluntary and therefore unrecorded, on the other hand, the fact that it is realised through the state in non-Muslim welfare societies causes these rates to be high for equal and fair sharing of income. It has been criticised that some Islamic values can be measured through more qualitative in-depth observations rather than quantitative ones (Sencal, 2021).

Data, empirical model, and econometric methodology

Data and empirical model

In this research, our primary objective is to inspect the result of the Islamicity Index on CO₂ emissions in a case study for one hundred and forty seven countries. We employ yearly data consisting of 2000, 2005, 2010, 2015, and 2016 because of the availability of the data for the Islamicity Index. We try to keep as many countries as possible, to get sufficient data for all dependent and independent variables. Our empirical model is based upon the work of Arouri et al. (2012), Can et al. (2021), and Narayan & Narayan (2010). According to these scholars, income and energy use are the primary drivers of environmental deterioration. Our main model is described as follows:

$$CO2PC_{i,t} = f(GDPPC_{i,t}^{\beta_1}, EPC_{i,t}^{\beta_2}, IS_{i,t}^{\beta_3}) + e_{i,t} \tag{1}$$

$$CO2PC_{i,t} = \beta_0 + \beta_1 GDPPC_{i,t} + \beta_2 EPC_{i,t} + \beta_3 IS_{i,t} + e_{i,t} \tag{2}$$

Where *i* and *t* stands for country and time, independently. Besides in the model CO₂PC, GDPPC, EPC, and IS indicate CO₂ emissions per capita, per capita income, energy consumption per capita, and Islamicity Index, respectively. According to previous literature, we expect GDPPC and EPC to increase CO₂ emissions, while IS has the potential to decrease CO₂ emissions because when following of Islamic principles increases, it is expected that the environmental degradation might lessen. The error term is represented by *e_{i,t}*. The datasets for CO₂ emissions (metric tons per capita), GDP per capita (constant 2010 US\$), and EPC (kg of oil equivalent per capita) were acquired from the World Development Indicators (WDI), Islamicity index was obtained from Islamicity Foundation. Unlike the previous literature that mainly consists of survey-based studies, this study uses macro-level data, which was separately collected for every single country. Thus, this research does not provide participant demographic characteristics.

Table 1: Data and variables

Variables	Symbol	Measurement	Data Source
CO2 emissions	CO2PC	CO ₂ emissions (metric tons per capita)	World Development Indicators (WDI)
Income	GDPPC	Index GDP per capita (constant 2010 US\$)	World Development Indicators (WDI)
Energy Consumption	LEC	Energy consumption per capita (kg of oil equivalent per capita)	World Development Indicators (WDI)
Islamic Principles	IS	Index	Islamic Foundation

Note: The list of countries is provided in Appendix 1.

Econometric methodology

In this research, we use different panel econometric estimation approaches and our estimation consists of five different steps.

Cross-sectional dependence

In the initial step of empirical examination, we verify whether the series has cross-sectional dependence or independence. In the modern world, an event in a country can easily impact other nations. Thus, it is an important process to check CD. Disregarding CD in panel data results in biased results because many unit-root, cointegration, and long-run estimation tests do not take into account CD. To fulfill this objective, we utilized the CD test developed by Pesaran (2021). Pesaran's (2021) CD test can provide consistent results under the assumption of $T > N$ or $N > T$. The Pesaran CD test statistics are displayed as follows:

$$LM_{adj} = \left(\frac{2}{N(N-1)} \right)^{1/2} \frac{\sum_{i=1}^{N-1} \sum_{j=i+1}^N \hat{\rho}_{ij}^2 \frac{(T-K-1) \hat{\rho}_{ij} - \hat{\mu}_{Tij}}{v_{Tij}}}{\hat{\mu}_{Tij}} \sim N(0,1) \quad (1)$$

where $\hat{\mu}_{Tij}$ represents mean and v_{Tij} indicates variance.

Slope homogeneity test

Next, we utilized Pesaran and Yamagata's (2008) slope homogeneity test which is commonly used to disclose whether the slope coefficient is homogeneous in the cointegration equation. This is another important step for the selection of appropriate unit root, cointegration, and long-run estimation. Because some estimation techniques are not based on heterogeneous slope assumptions. The Pesaran and Yamagata (2008) homogeneity test statistics are displayed as follows:

$$S = \sum_{i=1}^N (\beta_i - \beta_{WFE})' \frac{x_i' M_{\tau} x_i}{\sigma_i^2} (\beta_i - \beta_{WFE}) \quad (2)$$

$$\Delta = (N)^{1/2} (2k)^{1/2} \left(\frac{1}{N} S - k \right) \quad (3)$$

In this equation, S indicates the test statistics. β_i stands for the coefficient of pooled ordinary least square (OLS) and weighted fixed effect pooled estimator.

Unit root analysis

Then we use the Hadri and Kuruzomi (2012) unit root test which is a second-generation unit root test that takes into consideration the cross-sectional dependency and permits the presence of common factors. In this stage, the null hypothesis of 'no unit root in the series' is verified against the alternative hypothesis of 'unit root in the series'. This is a vital step for using appropriate cointegration and long-run analysis. In addition, it corrects the autocorrelation problem in the process.

Cointegration test

In panel studies, before long-run estimation, it is generally considered necessary to check the long-run link between a dependent variable and explanatory variables. For cointegration analysis, the Durbin-H panel cointegration strategy is used which was presented by Westerlund (2008). This estimation is a popular technique and extensively used in recent literature because it takes into account common factors and CD. This approach can be adopted when the explanatory variable is $I(0)$ or $I(1)$ and the dependent variable is $I(1)$. Westerlund's (2008) cointegration approach gives DH_group statistics and the DH_Panel tests statistics based on the Durbin-Hausman principle.

Long-run estimation

In the last step, the Common Correlated Effects-Mean Group (CCE-MG) approach of Pesaran (2006) is applied to inspect the long-run coefficient of the independent variables. This approach assumes that independent variables and unobservable common effects are static and external. Apart from this, it is also consistent when independent variables and unobservable common effects are stationary ($I(0)$), first-order integrated ($I(1)$), and/or cointegrated.

Empirical findings

It is essential to apprehend whether the variables are cross-sectionally dependent or independent since the proper unit root and cointegration analysis can be chosen according to the outcomes

of the CD test. Hence, we utilize Breusch and Pagan (1980)(CDLM1) and Pesaran (2021) CD tests (CDLM2 and CDLM3) on the series and cointegration equations for one hundred and forty seven countries. The findings exist in **Table 1**. The results indicate that the null hypothesis of cross-

Table 1: Testing the cross-section dependency of the variables and models

Variable	CD-test					
	CDLM1-test	p-value	CDLM2-Test	p-value	CDLM3-Test	p-value
						Level
CO2PC	18001.63	0.000***	211.0482	0.000	206.9926	0.000***
GDPPC	17143.76	0.000***	199.2153	0.000	195.1597	0.000***
EPC	17058.03	0.000***	198.0327	0.000	193.9772	0.000***
IS	15721.07	0.000***	179.5915	0.000	175.5359	0.000***
Equation	12132.47	0.000***	176.5125	0.000	104.2654	0.000***

Notes: *** indicates the rejection of the null hypothesis at the 1% significance level.

sectional independence is firmly rejected at the 1% significance level.

In the second step, we run Hadri and Kurozumi's(2012) unit root test to analyze the null hypothesis of 'no unit root in the series'. The results are reported in **Table 2**. According to these findings, the null hypothesis is rejected and we confirmed that all the series are not stationary at the level while they end up being stationary at the first differences at a 1 percent significance level.

Table 2: Testing the order of integration of the variables

Hadri and Kuruzomi (2012) test for Countries								
Variable	Level		Critical Value		First Difference			
	Z _A ^{SPC} Stat.	Prob.	Z _A ^{LA} Stat.	Prob.	Z _A ^{SPC} Stat.	Prob.	Z _A ^{LA} Stat.	Prob.
CO2PC	12.0206	0.0000	10.8133	0.0000	-1.7135	0.9567***	-0.5736	0.7169***
GDPPC	12.3116	0.0000	11.1579	0.0000	-1.0104	0.8438***	-0.2700	0.6064***
EPC	12.4540	0.0000	10.5391	0.0000	-1.4518	0.9267***	-0.7154	0.7628***
IS	12.3557	0.0000	11.2407	0.0000	-1.2931	0.9020***	-0.2113	0.5837***

Notes: *** indicates the rejection of the null hypothesis at the 1% significance level.

Before running the cointegration test, we take a look at whether the slope coefficient is homogeneous or not using a Pesaran and Yamagata (2008) test. The results are presented in **Table 3**. The empirical findings validate the rejection of the null hypothesis of slope homogeneity at a 1 percent significance level. To put it simply, the cointegration equation states that the constant term and slope coefficients are homogeneous. In this case, the cointegration comments for the overall panel are valid.

Table 3: Homogeneity test

Variable	Test-stat	p-value
$\hat{\Delta}$	-0.609	0.729***
$\hat{\Delta}_{adj}$	-1.492	0.932***

Notes: *** indicates the rejection of the null hypothesis at the 1% significance level.

In literature, the cointegration technique is extensively employed to explore the long-run estimation Pedroni. Thus, in the next step, we run the Durbin-H cointegration approach presented by Westerlund (2008) to test the long-run link between the dependent and independent variables. The empirical results which accept the rejection of the null hypothesis of "no cointegration between the series" are provided in

Table 4. According to this evidence, we decide that there is a long-run link among the series in the long run.

Table 4: Durbin-H panel cointegration test

Variable	Test-stat	p-value
Durbin-H Group stat	74.849	0.000***
Durbin-H Panel stat	2.997	0.001***

Notes: *** indicates the rejection of the null hypothesis at the 1% significance level.

Finally, we utilize the CCE-MG estimator developed by Peseran (2006) to discover the impact of Islam Principles (Islamicity Index) and other

explanatory variables on the environment. The findings are reported in **Table 5**. The outcomes provide that while energy use (ENPC) is a crucial driver for environmental deterioration, income (GDPPC) and Islamic Principles (IS) have a suppressing impact on CO₂ emissions. According to empirical findings, when the energy use increases by 1 percent, the CO₂ emissions will rise 0.02% in the sample. Remarkably, the acquired outcomes expose that coefficient for income per capita (GDPPC) is negative and significant at a 10 percent significance level. According to this result, we can analyze that if GDPPC increases by 1 percent, the CO₂ emissions lowers by around 71 percent in the sample countries. Furthermore, the findings reveal that Islamicity (Islamic Principles) plays an essential function in reducing environmental deterioration. When Islamicity Index is boosted by 1 percent, the environmental degradation will lessen by approximately 27 percent. This outcome is the unique contribution of our research related to environmental economics.

Table 5: Long-run panel cointegration coefficients

Model : CO₂PC=F(GDPPC, EPC, IS)

Variable	Coefficient	t-stat
GDPPC	-0.7169	-1.41*
EPC	0.0002	5.20***
IS	-0.2767	-1.74**

*Notes: ***, ** & * indicates significance levels at the 1%, 5% and 10%, respectively. While calculating the t statistic, Newey-West heteroscedasticity standard error was used. Panel cointegration coefficients have been estimated by the Common Correlated Effects Mean Group (CCE-MG) method of Pesaran (2006) considering the cross-sectional dependency.*

Policy recommendations

The environmental problems impose a threat for all humanity. As values are guiding principles that enable people to interpret the world (Schwartz, 1999), all kinds of cultural, religious, and religious values should be used to overcome and manage this problem and create a more eco-social environment in the world (Kearns & Keller, 2009). Religion has the potential to support or discourage actions for protecting the environment (Tarakeshwar et al., 2001). As said before, recent studies based on eco-theological context show that

religion can play a positive role in environmental sustainability (Haught, 1996). Although some religions, such as Islam, Daoism, Hinduism, and Buddhism (Jenkins et al., 2017) or some new religious and ingenious and spiritual movements (Chapple, 2011) seem to be in harmony with the environment in terms of values and discourse, it turns out that this is not the case in practice in terms of environmental outputs. The problem here is that, rather than what religion and religious values say, the necessary environmental policies cannot be produced, and measures cannot be taken in societies where religion/religious values are dominant. At this point, although religions produce a discourse about the environment, policymakers and the economic conditions of societies affect environmental policies. In this context, policy makers' use of religion and religious values as a tool to increase eco-social environments will facilitate their work.

The findings gained from CCE-MG reveal that Islamic values have a suppressing impact on environmental degradation. In this context, we can divide policy implications into two parts. The first policy recommendation part is for the countries consisting of the full sample. In this sample group, there are different countries where Christianity, Islam, Jewish, Buddhism, Hinduism, and Confucianism are official state religions or nonreligiousness is a dominant attitude. In these countries, high values of the Islamicity index will pose a positive impact on increasing environmental quality. To increase Islamicity index values, governments should support economic freedom and property rights. Policymakers ought to support new investments (both foreign and domestic) to create new job opportunities, which also contribute to reducing income inequality and increasing human development in the country. Increasing educational quality is another important parameter that may impact the environment. For this purpose, governments should make a long-run plan for education. With the increase in education, countries can manufacture more complex and knowledge-based products which are less harmful for the environment.

The second policy recommendation is about Islamic countries. The Islamicity index shows that

Islamic values in some non-Islamic countries are higher than in Islamic countries which means Islamic values and principles are not fully practiced in OIC countries. The reason for this may stem from the understanding of religion and worldview. As mentioned in the second section, many expressions support the ecological understanding in Islamic verses and the hadiths. Based on these Islamic values environmental behaviors can be fostered and the formation of Islamic environmental ethics will be possible (Rice, 2006). However, although Islam supports environmentalist behaviors in terms of intellectual, sacred, and philosophical teaching (Dien & 'Izz al-Dīn, 2000) and establishes its relationship with the world as stewardship (caliphate) rather than a dominion understanding, initiatives and politics for environmental activities have a low impact in terms of their contribution to sustainability in Muslim countries.

Chapple (2011) especially states that world religions are light green in terms of environmental problems, and the world needs a darker green religion in terms of spiritual, social, and worldview. Considering the sociological realities, why are not these light green attitudes in world religions turned into dark green ones, especially in Islam? When the future of Islam is taken into the account in the world, there need to be urgent initiatives carried out by Muslim societies to create more dark green attitudes in the environment of Islamic countries.

In the light of the above findings, it is very important to take various initiatives to make these values into practice in these Islamic countries. In places, where official institutions are not developed so much in terms of environmental protection; cultural, social, and religious values will be effective in adopting pro-environmental attitudes and behaviors (Zemo & Nigus, 2021). More specifically, the following religious implications will be beneficial to create both individual and collective environmental sensitivity which in turn contribute to increasing environmental quality. Some of the political implications suggested in terms of this paper are:

Integrating religion into environmental protection programs is a crucial point (Niamir-Fuller et al., 2016), the power of transformation in

religions provides societies to become more sustainable (Bergmann, 2009; Gottlieb, 2008). The governments in Muslim countries should be part of environmental solutions urgently (Nasr, 2003).

Religious leaders have important roles in considering the close relations of religious leaders with politicians and other social decision-makers. Religious leaders can influence public opinion (Casanova, 2011; Davie, 2010) and in this context, they can raise awareness of environmental problems and influence political decision-making mechanisms to produce more environmentally friendly policies (Reder, 2012).

It is very important to bring the world-facing aspect of Islam to the fore among religious scholars and religious education since the afterlife and apocalyptic beliefs cause indifference to environmental problems in religions. As the environmental problem is a mindset problem, the understanding of fate, free will, apocalyptic beliefs, or victim consciousness makes people have a passive stance toward environmental problems. Accordingly, some religious and cultural educational programs should be carried out to make people feel that they have autonomy in their life and they can be decisive in their behaviors and lifestyles.

An ecological understanding of religion will enable people to understand that human beings are part of the ecology and not masters of ecology, and ecological stewardship must be developed as a mindset. Accordingly, religious people should have developed an awareness that they are a part of the ecology and they should live in harmony with nature. All these implications and suggestions are based on the idea that religion is a system that builds a mindset. Religion, which is the ultimate power of legitimation, will be important in instilling environmental awareness in both individual and collective dimensions. In the long turn, attaching a sacred meaning to environmental awareness might enable individuals, societies, and countries to develop more environmentally friendly lifestyles and policies.

Conclusion

A closer look at Muslim countries shows that autocratic forms of governance, limited individual

freedoms, inadequate provision of human rights, economic underdevelopment, economic and social injustice and radicalist Islamic discourses show that these countries are in great need of various reforms. In the 21st century, environmental crises have been added to these negative situations and Muslim countries have their share of this crisis.

Environmental deterioration is increasing day after day. To minimize the degradation, various institutions and organizations launch reports routinely. Additionally, scholars have sought to discover the indicators that impact environmental quality. In these researches, scholars typically utilize economic and technological parameters as explanatory variables in the empirical models. Although social parameters might have a prospective result on the environment, they are generally omitted from the models. Religion/Religious values are among the most essential parameters that shape the attitudes, behaviors, and mindset of society. To do that, in this research, we checked the impact of Islamic Principles (Islamicity Index) on environmental degradation in the sample of one hundred and forty seven countries. The findings provide evidence that when the index value increases, the environmental degradation reduces.

For future studies, we advise the scholars to explore the effects of Islamic values on the environment in Muslim countries. In terms of adopting and practicing Islamic values, the Islamicity index brings the theory and practice paradox to light. So the reasons for this paradox need to be scrutinized in further studies. Moreover, in this research, environmental degradation is represented by CO₂ emissions, for future studies, we advise using ecological footprint, air quality, or different environmental indicators.

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Appendix 1: List of countries

Albania	Algeria	Angola	Argentina	Armenia
Australia	Austria	Azerbaijan	Bahrain	Bangladesh
Belarus	Belgium	Belize	Benin	Bolivia
Bosnia and Herzegovina	Botswana	Brazil	Bulgaria	Burkina Faso
Burundi	Cambodia	Cameroon	Canada	Chad
Chile	China	Colombia	Congo, Dem. Rep.	Congo, Rep.
Costa Rica	Croatia	Cyprus	Czech Republic	Denmark
Dominican Republic	Ecuador	Egypt, Arab Rep.	El Salvador	Estonia
Ethiopia	Finland	France	Gabon	Georgia
Germany	Ghana	Greece	Guatemala	Guinea
Guyana	Haiti	Honduras	Hong Kong	Hungary
Iceland	India	Indonesia	Iran, Islamic Rep.	Iraq
Ireland	Israel	Italy	Jamaica	Japan
Jordan	Kazakhstan	Kenya	Korea, Rep.	Kuwait
Kyrgyz Republic	Lao PDR	Latvia	Lebanon	Lesotho
Liberia	Libya	Lithuania	Luxembourg	Macedonia
Madagascar	Malawi	Malaysia	Mali	Malta
Mauritania	Mauritius	Mexico	Moldova	Mongolia
Morocco	Mozambique	Namibia	Nepal	Netherlands
New Zealand	Nicaragua	Niger	Nigeria	Norway
Oman	Pakistan	Panama	Papua New Guinea	Paraguay
Peru	Philippines	Poland	Portugal	Qatar
Romania	Russian Federation	Rwanda	Saudi Arabia	Senegal
Serbia	Sierra Leone	Singapore	Slovak Republic	Slovenia
South Africa	Spain	Sri Lanka	Sudan	Suriname
Swaziland	Sweden	Switzerland	Tajikistan	Tanzania

Thailand	Togo	Tunisia	Turkey	Turkmenistan
Uganda	Ukraine	United Arab Emirates	United Kingdom	United States
Uruguay	Uzbekistan	Venezuela, RB	Vietnam	Yemen, Rep.
Zambia	Zimbabwe			

Note: Alphabetical order runs from left to right.

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RESEARCH ARTICLE

The Impact of Corporate Social Responsibility Activities On Brand Equity And Customer Satisfaction During Disaster Periods

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Abstract

Enterprises, as integral components of the societies in which they operate, extend their organizational framework beyond consumer needs alone. They exhibit sensitivity to societal advancements towards the elements of social marketing. In line with Corporate Social Responsibility (CSR) activities, businesses contribute to society in a planned manner. These well-orchestrated endeavors invariably exert a discernible influence on consumer perceptions. Furthermore, enterprises assume significant roles during disaster periods such as earthquakes and floods, alongside their planned CSR activities. Following the devastating Kahramanmaraş earthquake, which was dubbed a calamity of the century, businesses, alongside the government and citizens, mobilized their resources to address the substantial damages across ten provinces. In this study, the effects of CSR activities on brand equity and customer satisfaction during the disaster period were examined. Data collected online from 429 participants were analyzed using Structural Equation Modeling. Analysis results show that CSR has a positive effect on brand equity. Moreover, brand equity exhibited a positive and meaningful influence on customer satisfaction. The established model demonstrated that CSR not only directly affects customer satisfaction but also serves as a mediator between CSR and brand equity, ultimately affecting customer satisfaction.

Keywords: Corporate Social Responsibility, Disaster Periods, Brand Equity, Customer Satisfaction, Structural Equation Modeling

Öz

İşletmeler, faaliyet gösterdikleri toplumun birer parçası olarak, sadece tüketicinin ihtiyaçları ekseninde örgütlenmekle kalmayıp, sosyal pazarlama anlayışı doğrultusunda toplumda yaşanan gelişmelere de duyarlı davranmaktadır. Kurumsal sosyal sorumluluk (KSS) faaliyetlerinin kollarından biri olan hayırseverlik boyutu doğrultusunda işletmeler planlı olarak topluma katkı sunmaktadır. Bu planlı çalışmalar, tüketici algılarını etkilemektedir. Planlı KSS faaliyetlerinin yanı sıra, deprem, sel gibi afet dönemlerinde de işletmeler büyük rol üstlenmektedir. Yüzyılın felaketi olarak adlandırılan Kahramanmaraş depreminde 10 ilde büyük yıkımlar sonrasında, devletin yanı sıra, vatandaş ve işletmeler de olanaklarını seferber etmiştir. Bu çalışmada afet döneminde KSS çalışmalarının marka denkliği ve müşteri tatmini üzerine etkileri incelenmiştir. Araştırmada 429 katılımcıdan online olarak toplanan veriler, Yapısal Eşitlik Modeli ile analiz edilmiştir. Analiz ile, KSS'nin marka denkliği üzerinde pozitif anlamlı bir etkisi olduğu sonucuna ulaşılmıştır. Bunun yanı sıra, marka denkliğinin de müşteri tatmini üzerinde pozitif ve anlamlı bir etkisi olduğu doğrulanmıştır. Araştırma, aynı zamanda, KSS değişkeninin müşteri tatmini üzerinde doğrudan anlamlı bir etkisi olduğu sonucuna işaret etmektedir. Son olarak, KSS müşteri tatmini ilişkisinde marka denkliğinin tam aracı etkisi olduğu görülmüştür.

Anahtar Kelimeler: Kurumsal Sosyal Sorumluluk, Afet Dönemi, Marka Denkliği, Müşteri Tatmini, Yapısal Eşitlik Modeli

Introduction

In the intensely competitive landscape of business, differentiation among enterprises is crucial for them to stand out. Emotional elements such as brand promise provide a path for this differentiation. Having a strong brand shapes the future of businesses in competitive markets. (Sheth & Parvatiyar, 2000). Brand equity stands as a key element for an enterprise to gain an advantage over its competitors (Kim & Kim, 2004). In today's society, consumers expect more from a brand than just low-priced, high-quality products. For this reason, CSR is accepted as a valuable strategic marketing tool that allows a brand to position itself uniquely among competitors (Kuokkanen & Sun, 2020). Additionally, it is recognized that CSR activities have the power to influence consumers' intent to purchase a brand (Wang et al., 2021). As brands that engage in CSR activities are preferred by consumers (Porter & Kramer, 2006,a), it is asserted that CSR affects consumer behavior (Kuokkanen & Sun, 2020). In addition, it is well-established that CSR activities have the power to influence consumers' intent to purchase a brand (Wang et al., 2021). It is stated that CSR affects consumer behavior depending on the preference of brands (Kuokkanen & Sun, 2020) that carry out CSR activities by consumers (Porter & Kramer, 2006, a).

Activities on CSR contribute to enhancing the reputation of businesses in the eyes of consumers (Brickley, Smith & Zimmerman, 2002). CSR impacts various individual terms such as brand awareness, perceived quality, brand associations, and brand loyalty, collectively shaping brand equity. CSR, having a positive perception among consumers also influences their purchasing behavior, contributing to increased revenue for businesses (Brown & Dacin, 1997; Du et al., 2007).

CSR activities are projects aimed at advancing the comfort of the community in which a business operates, encompassing environmental conservation and support for societal development. These projects are planned, budgeted activities integrated into a business's marketing plans (Wood, 1991). However, because the timing of natural disasters is unpredictable, businesses also demonstrate their commitment to

the community during these times, showing that they are an integral part of the same society, sharing the same hardships. Individual-contributing customers expect businesses to actively participate in addressing diverse needs during times of disaster.

The 2023 Kahramanmaraş earthquakes, which were felt across the entire country and caused significant devastation in 10 provinces, deeply affected the nation. While the loss of lives is irreparable, it is essential to meet the basic needs of those who survived and lost their homes. In addition to government agencies, individual citizens and businesses at the corporate level have rallied to address these needs. The events during this period have left a lasting impact on consumers' collective memory. Therefore, this study aims to investigate the impact of CSR activities during disaster periods on brand equity and customer satisfaction. The research focuses on understanding the relationship between CSR, brand equity, and customer satisfaction. Data were collected through online surveys to explore this relationship. Quantitative research methods were employed to analyze the surveys. Hypotheses were tested within the framework of the connection between CSR, brand equity, and customer satisfaction using Structural Equation Modeling.

In the opening part of the article, the concepts of CSR activities, brand equity, customer satisfaction will be explained theoretically. The second section will offer information about the theoretical framework on which the research hypotheses are based. Following the explanation of the research methodology, the findings will be interpreted. Following the conclusion part, the factors limiting the research are mentioned. In line with the results of the research, directions that can be made to the managers related to this field will be included.

Corporate Social Responsibility

The development of the CSR concept dates back to the 1950s. Businesses shape all their activities around their customers. Herein, CSR is explained as the responsibility of enterprises as an institution to their target audiences, which have a wider scope

than their customers (McWilliams et al., 2006). The assumed responsibility as an institution goes beyond economic and legal issues to encompass responsibilities that consider the interests of society as a whole (Özyürek, 2020: 4).

Kotler and Lee underline that CSR is voluntary on the part of businesses, expressing that businesses aim to improve the welfare levels of society. It is emphasized that through CSR activities, businesses should parallel society's interests (Kotler & Lee, 2017: 2-3).

The concept of CSR is closely associated with stakeholder theory (Freeman & Dmytriiev, 2017). Elements in the internal and external environments of businesses are affected by business operations. In this context, businesses focus on activities that benefit stakeholder groups related to the organization. It should be noted that these beneficial social activities are based on voluntariness (Carroll & Shabana, 2010). As a result, stakeholder theory includes plans and applications related to solving societal issues beyond the operations of businesses (O'riordan & Fairbrass, 2008)

It is well-known that businesses are customer-focused to gain a competitive advantage. However, according to stakeholder theory, CSR activities are not solely customer-oriented. Businesses undertake actions that benefit other stakeholders, such as shareholders, investors, employees, and the community as well. Contributing to the improvement of the community and society is considered a responsibility of the business (Chen, 2011; Galbreath, 2010; Moir, 2001). Stakeholders evaluate the outcomes of business activities. Businesses interact with their environments to carry out their activities. The success of businesses is shaped by their relationships with stakeholders. Each of these stakeholders has different interests, so their expectations from the business vary. However, a common expectation for each stakeholder is for the organization to have a high reputation (Fadun, 2014). Therefore, as CSR activities are a common expectation of all stakeholders, all stakeholders acknowledge that CSR activities contribute to societal welfare.

With the widespread use of the internet, communication knows no boundaries, and

information is shared rapidly, making the public aware of every development. Consequently, businesses, knowing that they are constantly in the public eye, are more sensitive to consumer demands (Sun et al., 2010: 3736). It is possible to access CSR practices determined within short-term and long-term strategic marketing plans on business websites (Moreno & Capriotti, 2009; Smith & Alexander, 2013). However, even during times of unpredictability, such as natural disasters, businesses actively participate as part of society.

Brand Equity

Hoeffler and Keller (2002) state that CSR assists in constructing brand equity for an organization by creating brand awareness and enhancing brand image.

Brand equity is defined as "a set of assets (and liabilities) linked to a brand's name and symbol that adds to (or subtracts from) the value provided by a product or service to a firm and/or that firm's customers" (Aaker, 2007). Strong brand equity distinguishes the brand from competitors and signifies a positive relationship between the brand and its customers and other stakeholders.

Consumers shape the brand's place and value in their own minds by comparing a brand with other brands. (Burmman et al., 2009). Brand equity is defined by Burnman et al. (2009) for "current and afterwards [assessment](#)". Aaker (2007) explains "brand equity as what consumers associate with a brand's name, logo, or symbol."

Among numerous proposals for classifying and dimensioning brand equity, the most famous one was presented by Aaker (2007). Aaker (2007) categorizes brand equity into five dimensions from a consumer capital perspective: brand awareness, brand associations, perceived quality, brand loyalty, and other assets related to the company. Typically, in consumer-based brand equity analysis, the first four dimensions are considered, so this study will be organized around these initial four dimensions.

Brand Loyalty

Brand loyalty is a situation that indicates a customer's likelihood of sticking with a brand even

when changes are made to the brand, especially in terms of price or other aspects of the product (Esmailpour & Barjoei, 2016: 58). When competing products align with customer expectations and remain at lower price levels, yet the customer still doesn't change their brand preference, it's said that the customer is loyal to that brand. This indicates that the brand's equity value is high.

Brand loyalty is an indication that the customer has a sympathy for a brand or its product. This positive outlook suggests that the consumer will engage in repeat purchase behavior (Kim et al., 2003). Because loyal customers represent future sales, brand loyalty emerges as perhaps the most crucial element within the concept of brand equity (Aaker, 2007: 58). Loyal customers ensure the continuity of the business's profitability because they represent a long-term revenue stream.

Brand loyalty is significantly influenced by other dimensions of brand equity. It is influenced by elements such as brand awareness, associations, and perceived quality, which are also part of brand equity. However, it's not always possible to establish a direct relationship with these concepts. For instance, due to being perceived as an unhealthy food option, McDonald's has a low level of perceived quality. Despite this, the number of loyal customers to the McDonald's brand in the fast-food category is quite high. Conversely, Japanese cars can be perceived as having high quality, yet they may not always be preferred (Aaker, 2007).

Perceived Quality

Perceived quality represents an abstract, general feeling about a brand. However, it is often the product's performance that is associated with the brand.

To evaluate perceived quality, it's necessary to identify the factors that influence it. In terms of product quality, elements like "performance, features, conformance to specifications, reliability, durability, serviceability, and the perceived quality of materials impact perceived quality". Each of these elements has sub-dimensions, which can vary depending on the product category. For instance, in evaluating the performance of an

automobile, factors like acceleration, handling, cruising speed, and comfort are considered, but these criteria would not be applicable when assessing the performance of a dishwasher (Aaker, 2009). However, the third factor, conformance to specifications, has a general perspective. Reducing the percentage of defects is relevant for every product. Factors like reliability and durability, similar to conformance to specifications, apply to other products as well. Reliability is defined as the consistency of operability over time, and durability is related to the economic life of the product.

In services, perceived quality is assessed differently than in tangible goods. Tangible elements, reliability, competence, responsiveness, and empathy are the key factors that come to the forefront when evaluating perceived quality in services.

In addition to all these factors, price level also has an influence on perceived quality for each product. Consumers tend to perceive higher quality in higher-priced products. However, when it comes to relying on price as a signal of quality, consumers differ. Those without the knowledge and experience to evaluate product features may use price as a guide (Aaker, 2009).

Brand Awareness

Aaker (2009) defines "brand awareness as a consumer's ability to recognize and recall a specific brand in a particular product category".

This concept is measured by the question of which brand comes to mind first for a particular product category. This helps determine whether consumers are aware of the brand and to what extent it is stored in their memory.

There are three main factors mentioned regarding how brand awareness influences consumer purchasing behavior. First of all, it is important to be the first brand that comes to consumers' minds for a particular product category. Increasing brand visibility enhances the likelihood of the brand being considered for purchase among the brands in that product category (Nedungadi, 1990). Secondly, being aware of any brand among alternative brands, especially when there are no other brand associations, can influence purchase behavior.

Finally, brand awareness influences consumer decision making by influencing the design and power of brand associations. There are four distinct categories that differentiate levels of brand awareness: brand unawareness, brand recognition, brand recall, and top-of-mind brand awareness. These four groups also signify the level of brand equity (Aaker, 2009).

To establish brand awareness, brands should follow steps that help them remain in consumers' minds. Being distinctive, using slogans or jingles, and creating brand symbols are some initial activities. In addition, brand visibility in the media should be achieved through promotional activities like advertising. Brands should engage in sponsorship activities, as many of them aim to create brand awareness. Lastly, to maintain a high level of brand awareness, repetition should be employed.

Brand Associations

"A brand association is any symbol, character, emotion, product feature, lifestyle, consumer segment, or activity associated with the brand in the consumer's mind" (Aaker, 2009). For example, Harley Davidson is associated with a unique, independent, and freedom-loving lifestyle, McDonald's is linked to pre or post-movie activities, and Nike is associated with athletes and consumers engaged in sports. Some brands have associations with all of these factors, while others have fewer connections. As the number of factors associated with the brand increases, the strength of brand association also increases.

Brand associations are guided by brand identity. Therefore, developing and implementing a brand identity is crucial to creating powerful brands. (Aaker, 2009).

Customer Satisfaction

Despite the large number of studies in which customer satisfaction is associated with different concepts, no consensus has been reached in terms of definition (Giese and Cote, 2000). The primary source of inconsistency in these definitions appears to stem from the relationship between satisfaction and either the resultant outcome or the

preceding process. In essence, some studies characterize customer satisfaction as an occurrence during the utilization of a product, whereas others posit it as a phenomenon manifesting itself subsequent to product usage.

Customer satisfaction is intrinsically linked with the fulfillment of customer expectations. Customers engage in the purchase of goods or services with specific expectations in mind. Customers buy a good or service with certain expectations. Customer satisfaction can be expressed as "the general gladness level resulting in the ability of the goods and services to meet the wants, needs and expectations of the customers during or after the use of goods and services" (Hellier et al., 2003).

The perception of a customer that their expectations are met, whether during or following the utilization of a product, serves as a hallmark of their satisfaction with the product. When the desires, needs, and expectations of a customer are unmet, the customer is deemed dissatisfied. Conversely, if a product surpasses the customer's desires, needs, and expectations, it is indicative of a heightened level of satisfaction. It is imperative to recognize that customer satisfaction is intricately linked with the potential for repeat purchasing behavior.

Research Model and Hypotheses

Disaster Period and CSR

Earthquakes, floodings, and similar disasters cause devastating loss in Turkey. The 1999 Gölcük Earthquake and the 2023 Kahramanmaraş Earthquake were major disasters characterized by substantial casualties and extensive destruction. Apart from the efforts of the government, individuals, private sector enterprises, non-governmental organizations and other countries contributed significantly to search and rescue operations, immediate relief efforts, and the subsequent recovery process. Given that Turkey is situated within an earthquake-prone region, it frequently faces major disasters. The assistance provided by local, multinational, and global businesses operating in Turkey during times of disaster can be considered a form of CSR activity.

In the literature, there are studies related to CSR activities associated with disasters. Following the Izmir earthquake on October 30, 2020, Enser and Demirağ (2021) conducted research comparing the websites of two different businesses through content analysis. Gerdan (2019) focused on disaster education as a CSR activity.

An article analyzing the content shared on the Twitter accounts of universities during the one-month period following the Kahramanmaraş Earthquake has concluded that universities made contributions to society during this period (Özdemir, 2023). In another study, the interaction of content produced by Turkey's top 30 brands on social media was examined using qualitative research methods (Akcan et al., 2023).

There are studies investigating the antecedents and enablers of using CSR as an effective tool in demonstrating a strong attitude against disasters. (Kanji & Agrawal, 2020). Another study analyzed how the public responds to mobile CSR activities during natural disasters (Cheng et al., 2018). In a study that examined the content of CSR reports of Fortune 100 companies through content analysis, it was found that many companies engage in activities during local and international natural disasters for both instrumental and ethical reasons (Johnson et al., 2011).

As briefly mentioned earlier, analyses related to CSR activities during disaster periods, particularly those involving content analysis, are primarily qualitative studies aimed at examining corporate activities. The absence of any study in the literature on how consumers evaluate CSR activities during disasters points to a new research topic. For this reason, in this article, it is aimed to apply a questionnaire to consumers about CSR activities in the disaster period and to analyze the obtained data with quantitative research methods.

In the literature, there are various definitions of CSR. Carroll (1979) categorized CSR into four dimensions: economic, legal, ethical, and philanthropic. Carroll suggested "that economic responsibility should be the highest priority for businesses, with legal, ethical, and philanthropic responsibilities following. Economic responsibilities pertain to the company's obligation to generate profits. Legal responsibilities involve conducting economic

responsibilities within a fair legal framework." Philanthropic responsibilities concern activities undertaken by a business to enhance societal well-being by committing itself to a specific cause (Dawood, 2019: 36). This research will focus on the philanthropic dimension of CSR.

CSR and Brand Equity

In today's competitive business environment, CSR is among the most imperative business strategies. (Alrubaiee et al., 2017; Flammer & Luo, 2017; Baumgartner, 2014).

For both local and international brands within their respective countries and on a regional and global scale, CSR activities have become one of the most powerful promotional activities that set businesses apart from their competitors (Du et al., 2007; Maignan et al., 2005). Globally recognized leading brands use CSR activities to demonstrate their sensitivity to societal issues.

Esmailpour and Barjeou (2016), in their study to measure the effect of CSR and brand image on brand equity, found that CSR has a significant positive contribution to brand image and brand equity.

In their study, Kang and Nam-Kung tried to determine the effects of customers' perceptions of the 4 dimensions of CSR activities on brand equity in the restaurant industry, through the example of Starbucks in Korea. They found that the ethical, legal, and economic aspects of CSR have a significant influence on consumers' perceptions of brand equity, but the philanthropic dimension of CSR does not have a significant impact on brand equity perceptions.

Abid et al. (2020) suggest that brands can promote consumer commitment by conveying values that they can identify through their environmental and philanthropic activities. The study emphasizes the significant contribution of the philanthropic dimension of CSR to brand equity.

Many articles have been found that examine the relationship between CSR and brand equity and conclude that there is a significant relationship between them (Lin & Chung, 2019; Lai v.d., 2010; Torres, v.d. 2012, Guzmán & Davis, 2017, Cowan & Guzman 2020, Kim & Manoli, 2020, Zhao v.d.

(2021). Businesses that meet consumer expectations tend to have higher brand equity (Liu & Lu, 2019). Studies analyzing the effects of economic, legal, ethical and philanthropic dimensions of CSR on brand equity have also been identified. (Araújo et al., 2023; Lai et al., 2010). However, two different studies have been encountered above, which interpret the connection between the philanthropic dimension of CSR and brand equity in opposite ways. In the study of Kang and Nam-Kung (2018), it was concluded that the philanthropy dimension of CSR did not have a significant effect on perceptions of brand equity, while Abid et al. (2020) found the opposite.

In light of these findings, this article's purpose is to investigate the effect of the philanthropic dimension of CSR on brand equity during a disaster period:

H₁: During a disaster period, the philanthropic dimension of CSR significantly and positively contributes to brand equity.

CSR and Customer Satisfaction

Customer satisfaction is a concept of interest to researchers as it is the key to profitability. Since customer satisfaction is associated with long-term profitability, most research on customer satisfaction examines the link between customer satisfaction and customer retention (Reicheld & Sasser, 1990; Hennig-Turau & Klee, 1997; Bloemer & Kasper, 1995; Gustafsson, Johnson & Roos, 2005; Guo et al., 2009). Accordingly, customer satisfaction and purchasing behavior linkage is investigated by authors.

There are studies indicating that a satisfied customer repeats their purchasing behavior (Selnes, 1998; Bolton, 1998; Bloemer & Ruyter, 1998). Repeated purchasing behavior entails a process leading to customer loyalty. In other words, the concept of customer retention is directly related to brand loyalty. Loyal customers continue their relationships with the brand they are loyal to without considering other brands.

Businesses allocate marketing expenditures for their customers. Marketing expenses aimed at acquiring new customers are often higher than those aimed at retaining existing customers. Therefore, loyal customers are valuable assets for

businesses as they facilitate the achievement of profitability goals. Customer loyalty, being gained through customer satisfaction, is another important area of research for businesses (Bloemer & Kasper, 1994; Singh & Sirdeshmukh, 2000; Awan & Rehman, 2014; Nam et al., 2011).

Apart from customer satisfaction, there are many factors that influence brand loyalty. Businesses, particularly, focus on their customers' interests among stakeholders (Maignan, Ferrell & Ferrell, 2005). Customers no longer evaluate only the products and services they purchase; they also shape their decisions based on the value businesses provide to society. Therefore, when businesses engage in CSR activities, customers tend to show loyalty to these businesses (He et al., 2011; He & Lai, 2014).

He et al. (2011) and Bhattacharya and Sen (2004) indicate in their articles that CSR activities have an impact on customer satisfaction. In their study, Islam et al. (2020) examined the effects of CSR on brand loyalty and intermediary factors such as corporate reputation, customer satisfaction, and customer trust, concluding that CSR has significant and positive effects on all these factors.

When customers believe that the businesses from which they purchase products are engaged in initiatives that provide societal benefits using a portion of the profit they derive from customers, it leads to the perception that customers also contribute indirectly to these initiatives. In short, customers, with the awareness of their indirect contributions to CSR initiatives by businesses, find meaning in them and experience a sense of satisfaction. The charitable dimension of CSR has been proven to have an impact on consumer demand as customer satisfaction increases (Galbreath, 2010; Hassan et al., 2013). The positive effects of CSR, especially charitable initiatives, are listed as opening the door to customer satisfaction, positive brand purchase intention, and a positive impact on the organization's brand image (Sen et al., 2006). Given that a positive reputation is seen as a good sign in the eyes of consumers, it can be argued that CSR affects customer satisfaction (Irshad et al., 2017: 65).

Based on the preceding theoretical discussions, the following hypothesis can be formulated:

H₂: During a disaster period, the charitable dimension of CSR significantly and positively contributes to customer satisfaction.

The Mediating Effect of Brand Equity on CSR and Customer Satisfaction

For businesses to develop a successful CSR strategy that provides a competitive advantage, it depends on their attention to intermediary variables (Carroll & Sabana, 2010: 94). Due to the possibility that the dimensions of CSR may not directly impact customer satisfaction because of certain indirect factors, businesses should also incorporate the factors influencing customer satisfaction into this equation (Mohammed & Rashid, 2018). In summary, there may be some intermediary factors in the impact of CSR dimensions on customer satisfaction. Luo and Bhattacharya (2006) stated in their study that the relationship between CSR and customer satisfaction is not direct.

H₃: Brand equity mediates the relationship between CSR's philanthropic dimension and customer satisfaction.

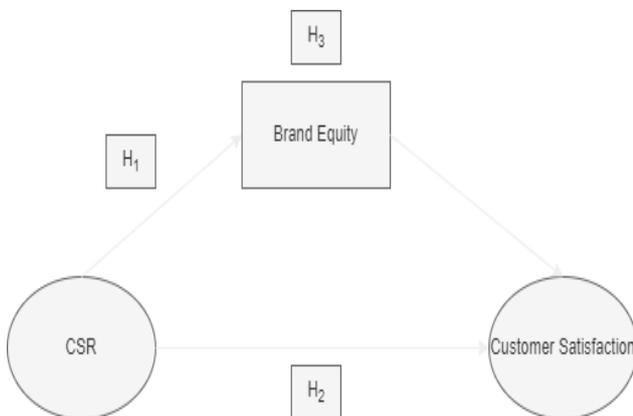


Figure 1: Research model

Research Methodology

The hypotheses for this research have been carefully formulated after a thorough review of the literature. Similar hypotheses have been identified in articles conducting research with analogous hypotheses. This study aims to validate the accuracy of hypotheses previously tested in the

literature regarding a specific process, namely the disaster period (Newman et al., 1998).

In particular, the lack of a study analyzing the measurement of CSR activities during disaster periods with quantitative techniques brings the use of quantitative techniques to the forefront in this study. At the same time, examining the effects of CSR activities on brand equity and customer satisfaction and also examining the mediating role of brand equity between CSR activities and customer satisfaction during the disaster period necessitated the research to be conducted on consumers. Another reason for preferring quantitative research methods is that quantitative research methods allow inferences to be made over a large number of samples

To test the validity of these assumptions, a questionnaire method was employed. The questionnaire consists of four sections. In the first section, consumers are informed about CSR and sample projects are mentioned. In this section, questions about demographic information are included. Minimum wage as the minimum amount for income distribution, since working people are taken into account. The income level distinctions and age assessment were based on the information obtained from TUIK. Other demographic variables such as gender, marital status, age, income status, education level and occupation were not restricted. In the second section, a multiple-choice questionnaire was designed to measure consumers' CSR perceptions. In the third section, questions on the impact of brand equity elements on CSR were prepared. The consumer-based brand equity model was emphasized and the questionnaire form was organized by taking Aaker's (2007, 2009) brand equity elements into consideration in CSR activities. In the fourth part, there are questions to measure the effects of customer satisfaction on CSR.

The items were rated on a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The lack of a specific scale in the literature on the subject of the study caused the survey preparation process to be difficult and prolonged. In creating the scale used in the study, existing studies in the literature were utilized (Araújo et al. 2023; Lai et al., 2010; Guzman &

Davis, 2017). For the questions related to brand awareness, Lai et al.'s (2010) study was utilized, and for the other questions, the scales in Araújo et al.'s (2023) study were utilized. The questionnaire was subjected to a pilot test with a sample of 100 individuals (KMO=0.913, $p<0.01$). The Cronbach's Alpha value for the pre-test was found to be 0.94. As a result, only minor adjustments were made, primarily in terms of wording, and no questions were removed.

To reach the intended number of participants more easily, the surveys were distributed online from August 20, 2023, to August 23, 2023. A total of 429 individuals participated in the survey. Due to cost and time constraints, it is not possible to reach the entire universe. However, since the Kahramanmaraş earthquake on February 6 is still fresh in the memories of people from all walks of life and regions in Turkey, simple random sampling method was deemed appropriate for the sampling. In order to reach the targeted number of people more easily, the surveys were distributed online between August 20, 2023 and August 23, 2023, and 429 people participated in the survey.

Data collected for the study were analyzed using the Jamovi 2.3.19 statistical software package. Jamovi is an analysis program built on the R statistical programming language.

The analysis of the proposed theoretical model was carried out with the Structural Equation Model (SEM).

Findings

Demographic Information

The sample of the study consists of individuals aged 18 and above. Data for the research were collected through surveys, and the sample comprises 439 participants. Among the research participants, 290 (66.1%) are female, and 149 (33.9%) are male. The majority of participants (33%) fall within the 36-45 age range. A significant proportion of participants (83.6%) have completed at least one associate degree program. The income distribution table for the participants is as follows.

Table 1. Income distribution

Income	N	% Total	% Cumulative
35.000 TL +	181	41.2	41.2
25.000 TL-	73	16.6	57.8
35.000 TL			
18.000 TL-	67	15.3	73.4
25.000 TL			
11.402 TL-	63	14.4	87.4
18.000 TL			
0-11.402 TL	55	12.5	100

Exploratory Factor Analysis and Reliability Test Results for Brand Equity Scale

KMO value and Bartlett's Sphericity Test were examined for the Brand Value Scale (KMO=0.929, $p<0.01$). These values indicate the suitability of the data for factor analysis.

Table 6. Factor loadings

Latent	Factor				Uniqueness
	1	2	3	4	
Brand					
Awaraness1				0.706	0.538
Brand				0.775	0.427
Awaraness2				0.474	0.617
Brand				0.659	0.354
Awaraness4				0.558	0.392
Brand	0.761				0.506
Loyalty1					
Brand	0.842				0.229
Loyalty2					
Brand	0.814				0.231
Loyalty3					
Brand			0.769		0.244
Association2					
Brand			0.794		0.184
Association3					
Brand			0.737		0.247
Association4					
Brand			0.374		0.914
Association5					
Brand	0.485				0.364
Association1					
Perceived					
Quality1		0.792			0.193
Perceived					
Quality2		0.846			0.307
Perceived					
Quality3		0.818			0.239

Note: "Maximum likelihood" extraction method and "oblimin" rotation method were used.

Table 2 shows the breakdown of the factors and which statements are grouped under which factor.

are loaded under their own sub-scale except "Brand Association 1".

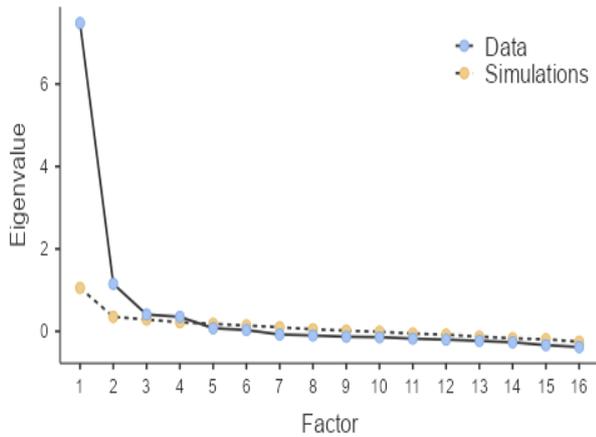


Figure 2. Scree pilot

Confirmatory Factor Analysis for the Proposed Model

Table 3. Model test

Label	X ²	df	p
User Model	586	214	< .001
Baseline Model	8496	253	< .001

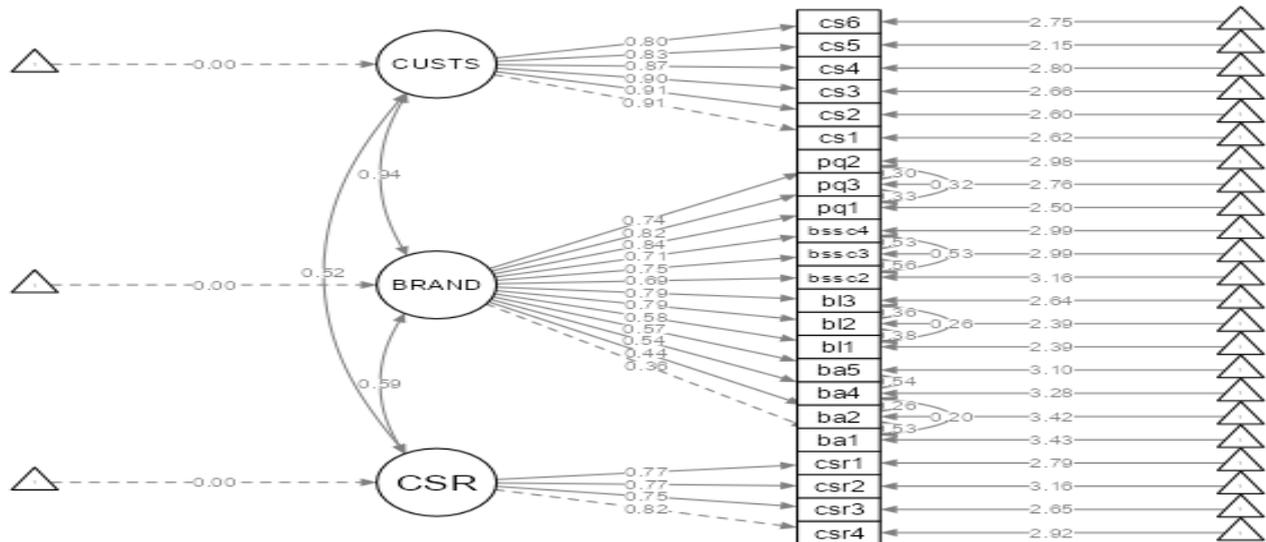


Figure 3. Confirmatory factor analysis

The statements "Brand Association 1", "Brand Association 5" and "Brand Awareness 3" were not included in the analysis due to low factor scores (Hair et al., 2018).

Figure 2 shows the graphical representation of the factor loadings of the statements.

The Cronbach's Alpha value for the Brand Value Scale was found to be 0.921, which is considered highly reliable according to Hair et al. (2018). A scale consisting of four factors was used for the Brand Value Scale; therefore, an exploratory factor analysis was conducted to examine whether these factors are correctly loaded. When the factor loadings are examined, it is seen that all of them

Figure 3 presents the path diagram for the confirmatory factor analysis of the proposed structural equation model.

Table 3 shows that the established models are statistically significant.

Table 4. Index of fit

SRMR	RMSEA	95% Confidence Intervals		RMSEA p
		Lower	Upper	
0.057	0.063	0.057	0.069	< .001

Table 5. User model vs baseline model

Comparative Fit Index (CFI)	0.955
Tucker-Lewis Index (TLI)	0.947
Bentler-Bonett Non-normed Fit Index (NNFI)	0.947
Relative Noncentrality Index (RNI)	0.955
Bentler-Bonett Normed Fit Index (NFI)	0.931
Bollen's Relative Fit Index (RFI)	0.918
Bollen's Incremental Fit Index (IFI)	0.955
Parsimony Normed Fit Index (PNFI)	0.787

In Tables 4 and 5 the goodness-of-fit indices for the model are displayed. Upon examination of these values, it is evident that the model is statistically significant.

Table 6. Measurement model

95% Confidence Intervals						
Latent	Observed	Estimate	SE	β	z	p
CSR	csr4	1.000	0.000	0.81		
			0	9		
	csr3	0.993	0.060	0.75	16.4	<.00
			2	4	8	1
	csr2	0.887	0.052	0.77	17.0	<.00
		2	4	0	1	
	csr1	0.985	0.058	0.76	16.8	<.00
		5	7	4	1	
BRAND E	ba1	1.000	0.000	0.35		
			0	6		
	ba2	1.258	0.144	0.44	7.73	<.00
			1	0	1	
	ba4	1.493	0.204	0.53	7.29	<.00
			7	9	1	
	ba5	1.623	0.240	0.56	7.75	<.00
			5	6	1	
	bl1	1.832	0.270	0.57	7.79	<.00
			0	8	1	
	bl2	2.605	0.352	0.79	7.40	<.00
			1	2	1	
	bl3	2.621	0.354	0.79	7.40	<.00
		2	3	1		
bassoc2	1.966	0.274	0.69	7.17	<.00	
		3	2	1		
bassoc3	2.176	0.297	0.74	7.30	<.00	
		9	6	1		
bassoc4	2.088	0.289	0.71	7.22	<.00	
		4	1	1		
pq1	2.678	0.357	0.84	7.49	<.00	
		7	0	1		
pq3	2.521	0.338	0.81	7.44	<.00	
		8	5	1		
pq2	2.109	0.289	0.73	7.28	<.00	
		7	9	1		
CUSTSA T	cs1	1.000	0.000	0.91		
			0	4		
	cs2	0.985	0.030	0.90	31.8	<.00
		9	9	2	1	
cs3	0.917	0.029	0.90	31.2	<.00	
		3	4	6	1	

cs4	0.886	0.031	0.87	28.4	<.00
		1	2	6	1
cs5	0.926	0.036	0.82	25.2	<.00
		6	9	9	1
cs6	0.873	0.037	0.79	23.2	<.00
		6	6	2	1

Table 7. Excellent and acceptable value ranges for fit criteria

Model Criteria	Fit	Excellent Fit	Acceptable Fit
RMSEA		$0 \leq RMSEA \leq 0.05$	$0.05 < RMSEA \leq 0.10$
NFI		$0.95 \leq NFI \leq 1$	$0.90 < NFI < 0.95$
CFI		$0.97 \leq CFI \leq 1$	$0.95 \leq CFI < 0.97$
SRMR		$0 \leq SRMR < 0.05$	$0.05 \leq SRMR < 0.10$
GFI		$0.95 \leq GFI \leq 1$	$0.90 \leq GFI < 0.95$
AGFI		$0.90 \leq AGFI \leq 1$	$0.85 \leq AGFI < 0.90$

The measurement values provided in Table 6 indicate that the statements included in the model are meaningfully related to the model. Table 7 shows the acceptable values and excellent values required for the model to be valid. When the values were examined, it was seen that the model met the validity values.

Structural Equation Modeling for the Proposed Model

Although the goodness-of-fit indices for the model initially did not yield satisfactory results, necessary adjustments were made following the modification indices suggested by the program, resulting in the desired model fit. When examining the reliability indices of the model, it is observed that the AVE (Average Variance Extracted) value for brand equity is 0.47. However, Fornell and Larcker (1981) suggest that in cases where AVE is less than 0.50, it may be acceptable if Composite Reliability is higher than 0.60. In this study, the Composite Reliability for Brand Equity is 0.91, indicating a sufficient level of reliability.

Table 8. Parameters estimates

95% Confidence Intervals						
Dep	Pred	Estimate	SE	β	z	p
CUST	BRAND E	28757	0.388	0.975	7.4	<.00
		2	1	1	1	
CUST	CSR	-0.0628	0.042	-	-	0.14
		7	0.052	1.4	1	
				7	7	
BRAND E	CSR	0.2373	0.037	0.587	6.3	<.00
		1	9	9	1	

In the absence of a mediating effect, when a regression equation is established, it is observed

organizations and businesses played an active role in providing assistance. Within the framework of

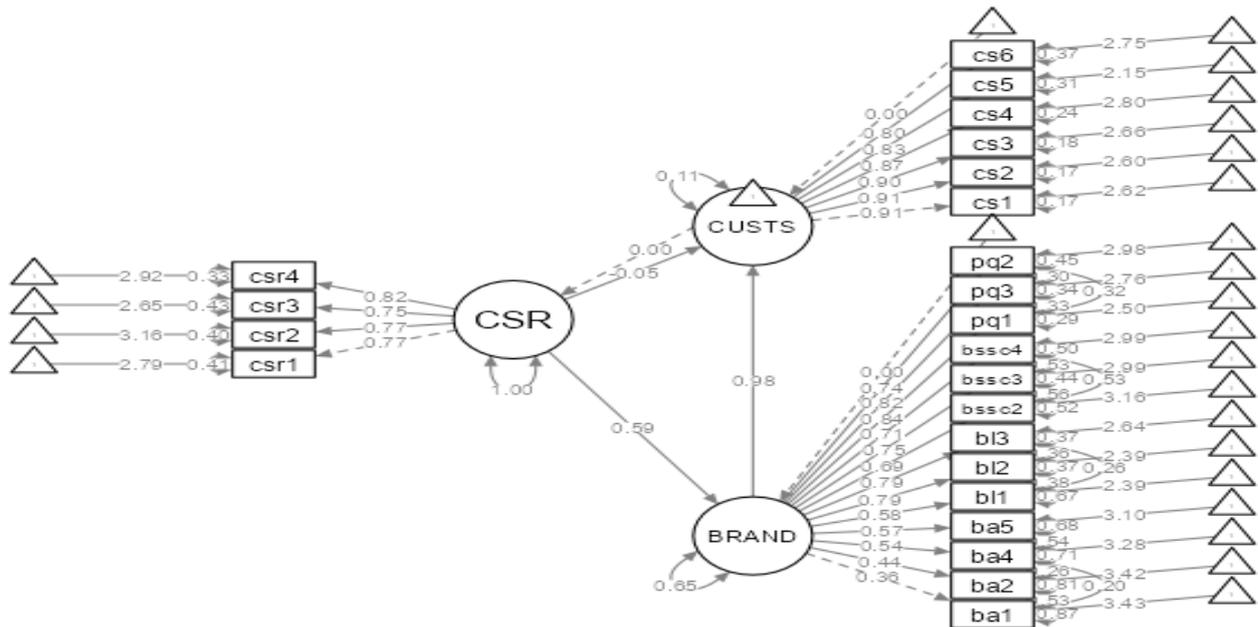


Figure 4. Structural equation model between corporate social responsibility, brand equity and customer satisfaction

that the relationship between CSR and customer satisfaction is significant ($\beta=0.52$, $p<0.001$). With the inclusion of the mediating effect, the direct relationship between CSR and customer satisfaction becomes non-significant, but a relationship is observed through the mediator. This situation is interpreted as a full mediation relationship (Gunzler et al., 2013). Table 8 shows the relationships between the variables in the model in the final model. In this table, it is seen that the direct relationship between customer satisfaction and corporate social responsibility is statistically insignificant.

Therefore, CSR has a significant positive effect on brand equity. CSR also has a positive and significant effect on customer satisfaction. Depending on the model established, when all three variables are simultaneously tested in the model, it is seen that the CSR variable does not have a direct significant effect on customer satisfaction, but it has an indirect positive effect on customer satisfaction through brand equity.

Conclusion

Following the images from the 2023 Kahramanmaraş earthquake affecting 10 provinces. Not only citizens but also civil society

Corporate Social Responsibility (CSR), businesses shared their contributions to the earthquake-affected region with the public.

This article aims to investigate whether CSR activities during a disaster period have an impact on brand equity and customer satisfaction. Existing literature predominantly focuses on analyzing business activities during disaster periods through content analysis of their websites and social media platforms (Enser & Demirağ, 2021; Özdemir, 2023; Akcan et al., 2023). However, a gap in the literature is identified regarding how consumers perceive these CSR activities. To address this gap, it is deemed appropriate to assess the ripple effect of these activities on consumers, rather than solely examining business actions. Given that one of the key concepts influencing consumers' perceptions is the concept of a brand, this study specifically targets the impact of CSR on brand equity during disaster periods. Therefore, this article contributes to the literature as the first study to examine how consumers perceive CSR during disaster periods and its implications for businesses.

There are studies in the literature that apply structural equation modeling, one of the quantitative analysis methods, to investigate the relationship between CSR and brand equity

(Araújo et al. 2023; Guzman & Davis, 2017,). However, in the literature, there is a lack of research specifically linking CSR activities during disaster periods to the philanthropic dimension with brand equity and customer satisfaction, and analyzing this relationship using structural equation modeling. The absence of such research in the literature highlights another contribution of this study.

In the first hypothesis of the research, it was tested whether the philanthropic dimension of CSR during a disaster period has a significant and positive contribution to brand equity. The results of the research indicate that the philanthropic dimension of CSR during a disaster period significantly and positively contributes to brand equity. This finding is consistent with other studies in the literature related to CSR and brand equity (Kang & Namkung, 2018; Guzman & Davis, 2017; Araújo, 2023). Based on the research findings, it has been demonstrated that the philanthropic dimension of CSR during a disaster period positively influences consumers' brand perception. This evidence strongly supports the view that CSR is strategically important for businesses (Gazzola & Colombo, 2014; Siltaloppi et al., 2021). Moreover, it can be argued that CSR provides a competitive advantage for businesses over others (Cegliński & Wiśniewska, 2016; Porter and Kramer, 2006; Saeidi et al., 2015). Therefore, during disaster periods, businesses should emphasize CSR activities to enhance their intangible asset, brand value, in their balance sheets.

The second hypothesis of the research aims to test whether the philanthropic dimension of CSR during a disaster period has a significant and positive contribution to customer satisfaction. This finding is consistent with other studies in the literature related to the relationship between CSR and customer satisfaction (Islam et al., 2020; Luo and Bhattacharya, 2006). Customer satisfaction is crucial because it represents a global measure of how a business's product and service are evaluated concerning the customer's past, present, and future experiences. Since customer satisfaction is linked to subsequent actions such as continued purchasing and brand loyalty (Al-Msallam, 2015; Cuong, 2020), the research's demonstration of the impact of the philanthropic dimension of CSR on

customer satisfaction underscores the importance of businesses being sensitive to their CSR activities.

The third hypothesis of the research aimed to test whether brand equity mediates the relationship between the philanthropic dimension of CSR and customer satisfaction. The research results indicate that brand equity mediates the relationship between the philanthropic dimension of CSR and customer satisfaction. Therefore, the questioning of brand equity's mediating role in this relationship for the first time and the acceptance of brand equity's mediating role within this relationship are another contribution of the article to the literature.

Note to Managers

This study has yielded valuable insights for marketing managers and other professionals in the marketing department. Based on the finding that the philanthropic dimension of CSR during a disaster period has a positive and significant impact on brand equity, it is recommended that managers actively engage in CSR activities during disaster periods. The research results demonstrate the significant importance of the philanthropic dimension of CSR. To enhance consumers' perceptions of the philanthropic dimension of CSR, businesses should communicate their contributions during disaster periods very effectively. Managers can particularly utilize social media channels to publicize these activities, especially during times of disasters.

The findings demonstrate that CSR activities during disaster periods positively impact brand equity and customer satisfaction. During disaster periods, businesses have the opportunity to maximize their brand value through CSR activities. In an era where consumers have better access to information, follow real-time developments, and particularly during times of disasters when the entire community tracks the needs in the earthquake-stricken area through social media, this research findings' suggest that consumers are grateful to businesses engaging in CSR activities and show their appreciation by rewarding them. Marketing managers and those responsible for CSR should consider CSR activities during disaster periods as a strategically important

area for developing ongoing relationships with customers.

Certainly, charitable activities are evaluated based on individuals' conscience. However, businesses are assessed through their financial statements. The concept of brand equity, which is the focus of our research, represents a value in the intangible assets section of a company's balance sheet. When businesses formulate their short-term, medium-term, and long-term plans, they aim to increase the value of this item. Budgets are planned systematically for this purpose. Therefore, the budget allocated by businesses for philanthropy within the scope of CSR is predetermined for the year. In the event of any disaster, businesses make decisions regarding philanthropic spending either within the budget or by altering the proportions in the budget, especially in the case of major disasters like what our country refers to as the "disaster of the century."

At this point, the assumption that the contributions stemming from the culture in Turkey should remain hidden should be questioned from the perspective of business managers. In a competitive environment, businesses engaged in the race to grab a share of the pie with other competitors should allocate time and effort to effectively communicate their philanthropic efforts, even if it goes against Turkey's culture. In addition to current messages, given that customers' memories are often filled with information and they may face attention issues due to technological habits, businesses should permanently showcase these communications under a dedicated section on their websites. This communication will not only contribute positively to the brand equity in terms of customers' perceptions of the business but also encourage other businesses to engage in philanthropy.

Constraints and Recommendations

The first limitation of the research is that it focuses only on the philanthropic dimension of CSR among the four dimensions during a disaster period and its association with brand equity and customer satisfaction. As explained in the theoretical framework on which the hypotheses

are based, there are two different studies indicating varying results for the impact of the philanthropic dimension of CSR on brand equity and customer satisfaction. Therefore, in this study, only the effect of the philanthropic dimension of CSR was measured. Additionally, since the assistance provided during a disaster period falls under the umbrella of philanthropy, only the philanthropic dimension of CSR was analyzed. In the future, research can be conducted that includes other dimensions of CSR specifically in the context of disaster periods.

Despite changing media habits driven by technology, CSR remains a popular research topic among academics. The fact that Turkey is located in a seismic zone, coupled with inadequate infrastructure planning that ignores this reality, increasing incidents of disasters such as fires and floods due to climate change, and insufficient precautionary measures, emphasize the significance of disaster-related research in Turkey. Preventing disasters should naturally be a top priority for everyone. However, acknowledging this fact, research on CSR activities during disaster periods should be diversified. This study's contribution to the field and marketing managers indicate the need for continued research on CSR activities during disaster periods and the existence of gaps in the current literature. In the national literature, qualitative research predominates in studies related to CSR during disaster periods. Another noteworthy point is that content analyses conducted by examining websites and social media accounts are common in national research. Studies questioning the relationship between disaster-period CSR and various topics such as consumer behavior, brand loyalty, brand image, and the continuity of purchases will enrich the literature. Another actor in disaster-period CSR studies in the table is businesses. Research not yet encountered in national and international literature on the impact of disaster-period CSR on marketing managers can be conducted in the future to fill this gap. Therefore, research on disaster-period CSR activities can be diversified in terms of consumers and businesses.

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RESEARCH ARTICLE

Investigation of The Impulsivity Levels and Substance Use Characteristics of Recidivists

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Abstract

Prevention of recidivism is the most important goal of today's criminal justice system. The aim of this study, which was designed in a cross-sectional design, was to examine the impulsivity levels and addiction characteristics of convicts with recidivism behavior and to reveal the factors that may be related. The sample of the study consisted of 230 male convicts in four different penal execution institutions; 100 of whom having a one-time offense history, and 130 with a history of recidivism. Personal information form, Barratt Impulsiveness Scale-11 (BIS-11) and Addiction Profile Index (API) were used as data collection tools. The findings of the study showed that lifetime substance use and risky substance use rates of recidivists were statistically significant compared to those without recidivism; impulsivity scores of recidivists were significantly higher than those of first-time offenders; and impulsive behavior increased as the severity of addiction increased in recidivists. As a result of the research, it was revealed that substance use and impulsivity may be a risk factor for re-offending. In this sense, it is thought that it is very important to carry out intervention programs effectively in both penal institutions and probation directorates within the criminal justice system in order to prevent recidivism and support rehabilitation.

Keywords: Recidivist, Substance Abuse, Impulsivity,

Öz

Yeniden suç işlemenin önlenmesi günümüz ceza adalet sisteminin en önemli amacıdır. Kesitsel desende tasarlanmış olan bu araştırmanın amacı tekrar suç işleme davranışında bulunan hükümlülerin dürtüsellik düzeylerini ve bağımlılık özelliklerini inceleyerek ilişkili olabilecek etkenlerin açığa çıkarılmasıdır. Araştırmanın örneklemini dört farklı ceza infaz kurumunda bulunan ve tek suç öyküsü olan (100) ile tekrar suç öyküsü olan (130) 230 erkek hükümlü oluşturmaktadır. Veri toplama araçları olarak kişisel bilgi formu, Barratt Dürtüsellik Ölçeği-11 (BIS-11) ve Bağımlılık Profil İndeksi (BAPİ) kullanılmıştır. Araştırma bulguları mükerrer olan hükümlülerin hayat boyu madde kullanım ve riskli madde kullanım oranlarının suç tekrarı bulunmayan hükümlülere göre istatistiksel olarak anlamlı olduğunu; mükerrer suçluların dürtüsellik puanlarının ilk kez cezaevine giren hükümlülere göre anlamlı olarak daha yüksek olduğunu ve suç tekrarı olan hükümlülerde bağımlılık şiddeti arttıkça dürtüsel davranışın da arttığını göstermiştir. Araştırma sonucunda madde kullanımı ve dürtüsellik için yeniden suç işleme için bir risk faktörü olabileceği ortaya koyulmuştur. Bu anlamda yeniden suç işlemenin önlenmesi ve iyileştirmeyi desteklemek için ceza adalet sistemi içerisinde gerek ceza infaz kurumlarında gerekse denetimli serbestlik müdürlüklerinde müdahale programlarının etkin bir şekilde yürütülmesinin oldukça önemli olduğu düşünülmektedir.

Anahtar Kelimeler: Suç, Mükerrer Suçlu, Madde Kullanımı, Dürtüsellik.

Introduction

Crime, one of the biggest social problems of today, has been the field of study of many disciplines from past to present due to its negative impact on social order. In the criminology literature, this phenomenon, which is defined as any behavior that is explicitly prohibited by criminal law and punishable by sanctions (Dolu, 2012), is a bigger problem when it comes to repetition; the repetition of criminal behavior by the individual reproduces the impact of crime on society. This feeds the structure of crime, which is always relevant and constitutes a "problem" in maintaining social order.

Recidivism and the factors that influence individuals to recidivate are important issues for policy makers and the public. In recent years, contrary to the registered crime rates, it is stated that the rate of repeated offences has exceeded 50% in many countries (Fazel & Wolf, 2015). In a study conducted in Türkiye as a result of retrospective examination of the forensic files of the cases for which criminal responsibility was requested to be investigated by judicial units, it was found that the recidivism rate was 14% (Koç & Parlak, 2023). The increase in crime rates in recent years and concerns about the personal and social consequences of crime necessitate a better understanding of crime and recidivism. A recidivist is defined as "a person who commits a crime again after being definitively convicted for a crime" (Arslan and Kayañççek, 2009:3), while recidivism refers to "re-entry to prison due to a new crime committed by the same person". According to Arslan and Kayañççek (2009:20); "the state of recidivism reveals that the person is not sufficiently affected by the sanction imposed on them; and that the punishment they are sentenced to does not rehabilitate them and their persistence in committing crimes pedagogically". In the literature, it has been shown that recidivism is associated with the male gender (Bonta et al., 1998; Thomas et al., 2002; Evans et al., 2011), adverse living conditions (Bonta et al., 1998; Topses, 2013; Kaya, 2022) and psychiatric morbidity (Baillargeon et al., 2009) (Hakansson & Berglund, 2012). Therefore, it is important to determine the variables of recidivism.

Convicts, who are the direct subjects of recidivism, are particularly vulnerable to substance use and abuse (Bernstein et al., 2015:2). Many studies show that substance use and criminal behavior are closely related (Wallace et al., 1998; Fazel and Danesh, 2002; Fazel et al., 2006; Fridell et al., 2008; Dart et al., 2015). While some of the criminal behavior is to finance the substance (Stewart et al., 2000), substance use is also clearly associated with other crimes. Untreated substance use behavior can lead people to commit new and differentiated criminal acts "to finance their addiction", which means that addiction is a risk factor for recidivism (Molina Coloma et al., 2022:37). One of the concepts frequently associated with substance use disorders is impulsivity.

Impulsivity, which is one of the core manifestations of psychiatric disorders (Kuştepe et al., 2019), can be defined as the tendency to respond to an internal or external stimulus quickly and without planning (Moeller et al., 2001; Gvion & Apter, 2011; Cservenka & Ray, 2017), without considering whether the outcome may be positive or negative for oneself or others. Impulsivity (Whiteside & Lyman, 2001), which indicates a personality structure that is indicative of sensation seeking, lack of forethought and urgency, is associated with alcohol and substance abuse (Hanson, Luciana, & Sullwood, 2008; Perry & Carroll, 2008; Rieser et al., 2019). A study has shown that people with a history of substance use prefer immediate reward at a higher rate (Özdemir et al., 2012:300). In this respect, substance users are typically more impulsive than non-users, and impulsivity is also a risk factor for people to try substances for the first time (De Wit, 2009). Impulsivity, which affects many areas of life, is associated with crime and problematic behaviors (Martin, et al. 2019).

Compared to the general population, prisoners are at higher risk for substance abuse (Mumola and Karberg, 2006) and are more impulsive (Patton et al., 1995). Although impulsivity is identified as a risk factor for substance abuse in the literature, it is a topic that has rarely been examined among incarcerated adults (Bernstein et al., 2015:3), despite the fact that substance use still exists as a significant problem and that it affects recidivism. There are a limited number of studies in the

literature to interpret the effects of substance use on criminal behavior and impulsivity. In this sense, the research has a quality that will contribute to the literature. Within the complex structure of criminal behaviour, drug-related criminals are a type of crime that needs to be examined separately in terms of evolving into recidivism. In this respect, the study has the qualifications to support state policies in the fight against recidivism. In addition, it is thought that this study will contribute to increasing the frequency of the impulsive behaviour prevention intervention programme and smoking, alcohol and substance addiction information programme carried out within the scope of improvement studies in penal institutions. Therefore, the aim of the study is to examine the addiction characteristics and impulsivity levels of convicts with recidivism and to reveal the factors that may be related. In this sense, the research has a quality that will contribute to the literature.

Method

This research is a cross-sectional study designed to reveal the factors that may be related by examining the impulsivity levels and addiction characteristics of the recidivists among convicts in the penal institution. Consent was obtained from the participants that they voluntarily agreed to participate.

Sample

The research was conducted between May 2023 and July 2023 in a total of four different penal execution institutions, in Izmir in Türkiye; the sample consists of 230 male convicts with a single criminal history (100) and 230 male convicts with a history of recidivism (130) who are serving their sentences for criminal offenses, selected by random sampling method.

The inclusion criteria were to be a convict between the ages of 18 and 50, to be able to read and write, to give voluntary consent to participate in the study after being informed, and to be in a penal execution institution for a judicial offense. The exclusion criteria were not being in the age group specified in the study (under 18 and over 50), being

under the influence of any substance or in a period of withdrawal during the information and interview, having a clinically low level of intelligence that would prevent the participant from understanding and answering the questions asked in the study, having a severe physical illness that could disrupt study compliance, and having an active psychotic disorder or an active mood disorder (mania or severe depression, suicidal thoughts).

The dependent variables of the study were the scores obtained from the Addiction Profile Index (API) and Barratt Impulsiveness Scale-11. The independent variables were the sociodemographic characteristics of the convicts (age, marital status, education level, income level) and substance use characteristics (duration of substance use, type of substance used, etc.).

Process

The study was conducted after obtaining permission from the Ministry of Justice, General Directorate of Prisons and Detention Houses. After the first admission to the institutions where permission was obtained, recidivist and non-recidivist convicts were determined. The scales were administered by face-to-face interviews with the determined convicts in groups of approximately 12 people in classrooms and group work rooms so as not to create a security vulnerability. The convicts completed the study between 30 and 50 minutes on average.

Data Collection Tools

Personal Information Form

The form was prepared by the researcher and consisted of detailed questions such as age, marital status, occupation, education level, family structure, crime committed, substance use (duration of substance use, type of substance used, etc.).

Barratt Impulsiveness Scale-11 (BIS-11)

It is a self-completed scale used to assess impulsivity. It consists of thirty items and has three subscales; attention (inattention and cognitive disorganization), motor (motor impulsivity, impatience) and non-planning (inability to maintain control, intolerance to cognitive confusion). When assessing the BIS-11, 4 different sub-scores are obtained; total score, non-planning, attention and motor impulsivity. The higher the total BIS-11 score, the higher the impulsivity level of the person. The Turkish validity and reliability study of the BIS-11 was conducted by Güleç et al. (Güleç et al., 2018).

Addiction Profile Index (API)

The scale consists of 37 items and 5 subscales. The development of the scale and its validity and reliability study was conducted by Ögel et al. in 2012. For the severe craving and motivation to quit questions, symptoms related to the last week are questioned, while the last year is evaluated in other categories (Ögel, 2012).

Data Analysis

Statistical analyses were performed using the SPSS (IBM SPSS Statistics 25) package program. The distribution of numerical variables was evaluated by Kolmogorov-Smirnov test and the p value was found to be less than 0.05, and it was determined that the distribution was not normal. Numerical variables were compared with Mann Whitney-U test. The Chi-square test was performed to test the relationship between two categorical variables and Pearson Correlation test was performed to test the relationship between two continuous variables. The significance level was evaluated as $p < .05$.

RESULTS

A total of 230 convicts, 130 recidivists (repeat offenders) and 100 non-recidivists, participated in the study. The average age of the participant group, which consisted of male convicts between 18-50 years old, was 33.30 ± 8.73 (31.80 ± 9.3 for repeat convicts and 30.80 ± 9.8 for non-repeat

convicts). It was concluded that 35.4% of 130 repeat convicts were primary school graduates, 47.7% were single, 83.8% were employed in a job before entering the penal institution, 57.7% had a history of traumatic events, 30% had a family history of divorce, 26.2% had a history of domestic violence, 26.2% had a history of childhood neglect, and 50% had self-harming behavior. Hence, there is a statistically significant difference between the groups in the variables of education, history of traumatic events, experience of domestic violence, suicidal ideation and attempt, self-harm and childhood neglect (Table 1).

Table 1. Characteristics of Convicts with and without Recidivism on Some Variables

	Convicts with Recidivism (N=130)		Convicts without Recidivism (N=100)		p
	Mean±SD		Mean±SD		
	N	%	N	%	
Age	31.80 ±9.3		30.80 ±9.8		.199
Marital Status					
Single	62	47.7	55	55	.542
Married	43	33.1	29	29	
Divorced	25	19.2	16	16	
Total	130	100	100	100	
Education					
Literate	10	7.7	4	4	.005*
Primary School	46	35.4	19	19	
Secondary School	45	34.6	36	36	
High School	25	19.2	27	27	
Associate's Degree	1	0.8	4	4	
Bachelor's Degree	3	2.3	10	10	
Total	130	100	100	100	
Defining School Success					
Good	12	9.2	5	5	.072
Bad	73	56.2	47	47	
Mediocre	43	33.1	48	48	
Other	2	1.5	0	0	
Total	130	100	100	100	
Employment Status Before Entering the Penal Institution					
Employed	109	83,8	86	86	.652
Unemployed	21	16,2	14	14	
Total	130	100,0	100	100	
History of Traumatic Events					
Yes	75	57,7	38	38	.003*
No	55	42,3	62	62	
Total	130	100,0	100	100	
Family History of Divorce					
Yes	39	30	19	19	.057
No	91	70	81	81	
Total	130	100	100	100	
Experience of Domestic Violence					.004*
Yes	34	26.2	11	11	
No	96	73.8	89	89	
Total	130	100	100	100	

Childhood Experience of Neglect					.008*
Yes	34	26.2	12	12	
No	96	73.8	88	88	
Total	130	100	100	100	
Suicidal Ideation					.012*
Yes	44	33.8	19	19	
No	86	66.2	81	81	
Total	130	100	100	100	
Self-Harm Behavior					.001*
Yes	56	43.1	11	11	
No	74	56.9	89	89	
Total	130	100	100	100	
Suicide Attempt					.001*
Yes	37	28.5	11	11	
No	93	71.5	89	89	
Total	130	100	100	100	
Post-Release Hardship					.479
Yes	14	10.8	8	8	
No	116	89.2	92	92	
Total	130	100	100	100	

*p<.05

Results Regarding the Characteristics of Substance Use of Convicts

In the study, it was concluded that there was a statistically significant difference between recidivist and non-recidivist convicts in terms of lifetime substance use (p<0.05). The lifelong substance use rate of recidivist convicts was found to be 81.5%, which is higher than the lifelong substance use rate of convicts without recidivism (36%). When the groups were compared in terms of whether there were people with substance abuse in their family and environment, a statistically significant difference was found (p<0.05). When the risky use rates obtained as a result of the Addiction Profile Index were analyzed, a statistically significant difference was found between the convicts with recidivism and the convicts without recidivism (p<0.05). It was found that 12.5% of the convicts in the repeat offense group had risky substance use with high addiction severity (Table 2). The mean age of which the convicts tried a substance for the first time was 19.91±7.68 and the first substance used by 50.4% of them was marijuana. It was concluded that there was a statistically significant difference between the repeat convicts and the convicts without recidivism in terms of the type of offence committed (p<0.05). It was determined that 56.9% of the convicts with recidivism and 36% of the

convicts without recidivism were in penal execution institutions due to drug offences.

Table 2. Characteristics of Substance Use of Convicts with and without Recidivism

	Convicts with Recidivism (N=130)		Convicts without Recidivism (N=100)		p
	Mean±SD		Mean±SD		
	N	%	N	%	
Lifelong Substance Use					
Yes	106	81.5	36	36	.000*
No	24	18.5	64	64	
Total	130	100	100	100	
Presence of People with Substance Use in the Family and Environment					.000*
Yes	79	60.8	24	24	
No	51	39.2	76	76	
Total	130	100	100	100	
Probation Measure					
Yes	79	60.8	14	14	.000*
No	51	39.2	86	86	
Total	130	100	100	100	
Frequency of cannabis use					
Never	25	19.2	67	67	.000*
At least once	17	13.1	6	6	
More than three times	88	67.7	27	27	
Total	130	100	100	100	
Frequency of methamphetamine use					
Never	77	59.2	85	85	.000*
At least once	11	8.5	4	4	
More than three times	42	32.3	11	11	
Total	130	100	100	100	
Amount of Substances Used					
Single Substance	57	43.8	78	78	.000*
Multiple Substances	73	56.2	22	22	
Total	130	100	130	100	
Addiction Profile Index (API) Risky Use Rates					
Low Addiction Severity	103	80.5	96	96	.002*
Moderate	9	7	2	2	
High Addiction Severity	16	12.5	2	2	
Total	128	100	100	100	

*p<.05

Results on Addiction and Impulsivity Levels of Convicts

The total score and sub-score mean scores of the BDI-11 of the convicts with and without recidivism were compared and it was found that the total score and sub-score mean scores of the impulsivity scale of the group with recidivism were statistically significantly higher than the group without recidivism (Table 3).

Table 3. Comparison of the Mean Impulsivity Scores of Convicts with and without Recidivism

	Convicts with Recidivism (N=130)	Convicts without Recidivism (N=100)	
	Ort±SD		
Total Score	59,10±12,04	54,71±12,50	p<0,05 ^a
Non-planning	23,80±4,75	22,06±5,21	p<0,05 ^b
Motor	19,66±5,23	17,97±4,59	p<0,05 ^c
Impulsivity			
Attention	15,13±3,98	14,22±4,01	p<0,05 ^d

^a U= 4990,000, p=0,03

^b U= 5491,000, p=0,04

^c U= 5233,000, p=0,01

^d U= 4963,500, p=0,00

Pearson correlation analysis was used to determine the relationship between Addiction Profile Index (API) risky substance use severity and impulsive behavior. The findings obtained are shown in Table 4.

Table 4. The Relationship Between API and BIS Scores of Convicts with Recidivism

		Impulsivity Total Score
API	Pearson r	,325*
Total Score	p	,000
	n	228

*Correlation is significant at p<0.01.

There was a moderate (r=0.349) positive and significant (p<0.05) relationship between addiction severity and impulsive behavior. According to the findings obtained, as the severity of addiction increases, impulsive behavior also increases.

Discussion

In the study, it was concluded that there was a significant difference between recidivists and first-time offenders in the variables of education,

history of traumatic events, experience of domestic violence, suicidal ideation and attempt, self-harm and childhood neglect. Consistent with the findings of this study, there are studies (Steurer & Smith, 2003; Hill, 2015; Cheeks, 2021) that find a direct and strong relationship between education level and recidivism. According to Yukhnenko et al. (2019:7), educational problems may influence the onset of criminal behavior and may be associated with persistent problems related to social adjustment that may complicate an offender's reintegration. Research has reported a consistent relationship between childhood maltreatment and involvement in the criminal justice system (Evants and Burton 2013; Smith et al., 2005). Understanding the potential relationship between maltreatment and recidivism is critical for planning rehabilitative treatments (Vitopoulos et al., 2019:360). Many convicts may have problems stemming from adverse childhood experiences characterized by family breakdown, physical and sexual abuse, failure in education and professional life, negative parental attitudes, and substance abuse (Eccleston & Sorbello, 2002:237). In addition to all these, there are also studies showing that family problems predict future recidivism among first-time adult offenders, but not among convicted offenders with a known criminal history (Harris, 2011).

Another critical factor in penal institutions is suicide and self-harm behavior. Daniel and Fleming (2006) identified previous criminal behavior as a risk factor in prison suicides. According to the study, the significant difference in suicide and self-harm behaviors in recidivists supports the results of other studies on this group, which also has high impulsivity. Berg et al. (2015) associated impulsivity with alcohol and substance use, depression, suicidal tendency, non-suicidal self-harm, aggression towards others and disordered eating. While one manifestation of impulsive behavior is self-harm, another can be expressed as aggression towards others (Coccaro, 2015; Paris, 2005).

The study concluded that the lifetime substance use rate of recidivists was higher than the lifetime substance use rate of non-recidivists. In another study on this subject, in which participants were recidivists, all participants reported lifetime use of

alcohol and illicit substances, and most participants reported using at least one illicit substance in the month prior to their current incarceration (Lattimore et al., 2010). In the study conducted by Hakansson and Berglund (2012), in their comparison between recidivists and non-recidivists in terms of clinical personality patterns and clinical syndromes, it was concluded that recidivists exhibited more antisocial, aggressive-sadistic and borderline personality traits as well as more substance and alcohol dependence. In the same study, recidivism was associated with heroin and amphetamine use, injection drug use and polysubstance use rather than alcohol, opioid analgesics and hallucinogenic drugs. According to many studies on recidivism and psychopathology (Chang et al., 2015; Krueger, et al., 2007), externalizing psychopathology is characterized by individuals who reoffend.

When the findings related to the substance use characteristics of the convicts are analyzed, it is observed that the presence of people with substance use in the family and social environment of repeat offenders is higher than the convicts who are in prison for the first time. This finding supports the view that, as stated in the social learning theory, individuals cannot be evaluated separately from their social environment. As social beings, humans, through interaction with others, observe and model behaviors, and as a result of these observations, they acquire certain behaviors which they exhibit in either a positive or negative manner (Korkmaz, 2003). Similarly, the acquisition of delinquent behavior is influenced by the frequency of communication, the amount of time spent, and the locations in which individuals with deviant behaviors interact (Geçkin, 2019). In a study conducted by Lattimore et al. (2010) with repeat offenders who committed violent crimes, it was concluded that the participants had extensive criminal and substance use histories, low educational and employment skills, and families and peers involved in the substance and criminal justice system.

Numerous studies confirm that impulsivity and risk taking are associated with a wide range of problematic behaviors such as substance use disorder (Lejuez et al., 2003; Verdejo-García et al., 2008; Smith et al., 2014) and criminal behavior

(White et al., 1994; Ribeaud & Eisner, 2006). According to the research findings, it was concluded that as the severity of addiction increases, impulsive behavior also increases. In a study conducted by Bernstein et al. (2015) with convicts, impulsivity was found to be higher among all substance users except cannabis compared to non-users. In the study, use of multiple substances was found to be at a higher level in recidivists than in first-time offenders. This finding is consistent with the results of other studies. Hakansson and Berglund (2012), who examined the risk of recidivism due to substance use problems, found a significant relationship between multiple substance use and recidivism and concluded that as the number of substances used before incarceration increased, the risk of recidivism also increased. Hopley and Brunelle (2012) examined the relationship between drug use and impulsivity more specifically by evaluating alcohol, cannabis, opioid, stimulant and hallucinogen dependence separately. For each of these substances, convicts with probable dependence scored higher on impulsivity than those without probable dependence.

In the study, it was concluded that the group of convicts with recidivism had higher levels of impulsivity than the group of convicts without recidivism. This finding is consistent with the findings of other studies examining the relationship between recidivism and impulsivity. In order to reveal the effect of psychopathy, impulsivity and aggression on recidivism, a recent study (Martin et al., 2019), which revealed the relationships between these dimensions in convicts with and without antisocial personality disorder, emphasized that impulsivity and aggression are at the center of recidivism by revealing that psychopathy is associated with recidivism. In addition, there are studies in which impulsivity was not found in convicted recidivists (Molina-Coloma, 2022). These studies have been explained by the notions that impulsivity is not found at a high rate in many offenders, or that impulsivity is present in many offenders, whether they have reoffended or not (Griffin et al., 2018), and at the same time, it occurs in a wide variety of internalizing and externalizing psychiatric disorders (Berg et al., 2015).

Limitations of the study

All participants were male. The fact that all of the participants were male limited the determination of a possible difference according to the gender variable. This is due to the fact that the institutions where the application was made are only composed of adult male convicts and detainees. In addition, the scales used are based on the subjective reports of the participants since they are self-report scales. Therefore, it is thought to be a limitation in the sense that it may have caused the person to enter into an approach (social desirability) such as showing themselves different from what they are. In addition to the subjective reports of the participants, it is considered that forensic toxicological methods should be used to obtain more reliable information about substance use. In addition, this study is limited to Izmir province. Based on the fact that offender profiles cannot be evaluated separately from the environmental and socio-cultural context in which they are located; it is thought that conducting longitudinal studies in addition to scientific studies and comparative studies to be conducted on a city basis in the prevention of recidivism will provide an opportunity for healthier evaluations.

Conclusion

This study focused on examining substance use and impulsivity in determining the factors that promote recidivism. In addition, the findings obtained in terms of some predicted variables (education, history of traumatic events, experience of domestic violence, suicidal ideation and attempt, self-harm and childhood neglect) require awareness about the effects of these variables in repeat offenders. At this point, continuing to apply the screening tools (ARDEF, DEPAR), which are currently applied in the penal institutions in our country (Maschi and Schwalbe 2012), by revising them according to the needs in the process and supporting them with up-to-date scientific information will enable early intervention.

Identifying the factors that lead to recidivism is crucial for the rehabilitation of individuals

involved in the penitentiary system. The literature shows that risk and protective factors should be assessed in order to understand how to intervene with convicts in prison (Sousa et al., 2019). This study revealed that substance use and impulsivity may be a risk factor for recidivism. In this context, the need for more effective implementation of the Impulsive Behavior Prevention Intervention Program prepared within the scope of Evaluation, Profile Tools and Rehabilitation Programs (DEPAR) for convicts in penal institutions who have impulse control problems or who are observed to need support due to these behavior patterns has emerged.

It is thought that identifying the characteristics of convicts with a high risk of recidivism can maximize the effectiveness of programs implemented as crime prevention strategies in penal institutions. An important point here is that the ultimate goal of risk assessment is the prevention of recidivism rather than its prediction (Olver et al., 2009). Today's criminal justice paradigm is in the direction of focusing on the psycho-social needs of the individual who has turned to criminal behavior; the most important of the goals of the criminal justice system is to carry out improvement activities. It is thought that the studies to be carried out in order to prevent recidivism in penal institutions in our country will enable the evaluation of the effectiveness of the penal execution system. For this reason, it is important to increase the number of scientific researches in this field. In addition, the results obtained emphasize that the improvement activities implemented in penal institutions should target reintegration into society. In this sense, the implementation of intervention programs such as Smoking, Alcohol, Substance Abuse Information Program (SAMBA), Pre-Release Prisoner Development Program and Impulsive Behavior Prevention Intervention Program, which are among the structured programs prepared for implementation in penal institutions to prevent recidivism and support improvement, reveals the importance of psycho-social service support programs.

As a result, the development of effective crime prevention and social reintegration programs should include not only the accurate identification

of the factors that increase the likelihood of crime or recidivism, but also the services to be provided after release. In this sense, supportive work to be carried out in probation directorates and the development of social policies at the macro level in the fight against crime are also very important.

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RESEARCH ARTICLE

Intolerance of Uncertainty as a Mediator on the Relationship Between Adult Attachment and PTSD

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Abstract

Established evidence suggests that intolerance of uncertainty (IU) is associated with both adult attachment and traumatic stress, yet the role of IU as an underlying mechanism between attachment and posttraumatic stress disorder (PTSD) is to be explained. This study aimed to examine the mediating role of IU in the relationship between adult attachment styles and PTSD. A cross-sectional study with 335 university students was conducted in Türkiye. Life Events Checklist for DSM-5 (LEC-5), The Experiences in Close Relationships Revised (ECR-R) Questionnaire, The Intolerance of Uncertainty Scale (IU) and PTSD Checklist for DSM-5 (PCL-5) were used to measure potential traumatic events (PTE), adult attachment styles, intolerance of uncertainty and PTSD, respectively. Results revealed that IU mediated the relationship between anxious and avoidant attachment and PTSD. The results offer a valuable understanding of the intricate interplay between attachment styles and PTSD, shedding light on the underlying factors that contribute to the emergence and persistence of PTSD symptoms. For those who have experienced trauma and show anxious or avoidant attachment patterns, combining strategies to address intolerance of uncertainty with attachment-oriented therapies could have beneficial effects on conditions like PTSD, which are often passed down between generations.

Keywords: Intolerance Of Uncertainty, Anxious Attachment, Avoidant Attachment, Post Traumatic Stress Disorder

Öz

Bulgular belirsizliğe tahammülsüzlüğün (BT) hem yetişkin bağlanması hem de travmatik stres ile ilişkili olduğunu ileri sürmektedir, ancak BT'nin bağlanma ile travma sonrası stres bozukluğu (TSSB) arasındaki temel mekanizma olarak rolü henüz ortaya konulmamıştır. Bu çalışmanın amacı yetişkin bağlanma stilleri ile TSSB arasındaki ilişkide BT'nin aracı etki rolünü incelemektir. Türkiye'de yaşayan 335 üniversite öğrencisinin katıldığı çalışmada kesitsel araştırma yöntemi kullanılmıştır. Potansiyel travmatik olaylar (PTO), yetişkin bağlanma stilleri, belirsizliğe tahammülsüzlük ve TSSB'yi ölçmek üzere sırasıyla Yaşam Olayları Kontrol Listesi (YOKL), Yakın İlişkilerde Yaşantılar Envanteri-II (YİYE-2), Belirsizliğe Tahammülsüzlük Ölçeği (BTÖ) ve DSM-5 TSSB Kontrol Listesi (TSSBBKI) kullanılmıştır. Sonuçlar, BT'nin kaygılı ve kaçınan bağlanma ile TSSB arasındaki ilişkiye aracılık ettiğini ortaya koymuştur. Çalışmanın bulguları bağlanma stilleri ile TSSB arasındaki karmaşık etkileşimi anlamamıza yardımcı olarak, TSSB semptomlarının ortaya çıkmasına ve kalıcı olmasına katkıda bulunan altta yatan faktörlere ışık tutmaktadır. Travmaya maruz kalmış ve kaygılı ya da kaçınmacı bağlanma stillerine sahip kişiler için, belirsizliğe karşı tahammülsüzlüğü azaltmaya yönelik stratejileri bağlanma odaklı terapilerle birleştirmek, nesiller arasında aktarılan TSSB semptomları açısından faydalı etkiler sağlayacaktır.

Anahtar Kelimeler: Belirsizliğe Tahammülsüzlük, Kaygılı Bağlanma, Kaçınan Bağlanma, Travma Sonrası Stres Bozukluğu

Introduction

Traumatic events are common life experiences and their prevalence varies across the world due to differences in countries' income levels, historical, socio-cultural, and economic characteristics (Atwoli et al., 2015). Data obtained from various countries on different continents worldwide indicate that the rate of exposure to traumatic events approaches around 70%, with approximately 30% of these individuals reporting five or more traumatic experiences (Benjet et al., 2015). Similarly, a study conducted with older adults who are likely to be excluded from such surveys also revealed a high rate, approaching 90%, of exposure to one or more potential traumatic events (Ogle et al., 2013). Although a significant portion of individuals exposed to traumatic events do not develop Post-Traumatic Stress Disorder (PTSD), a notable minority, about 5.6%, develop PTSD following traumatic experiences (Koenen et al., 2017).

When faced with traumatic stress, one of the fundamental factors that helps maintain psychological well-being is the support provided by our social bonds (Fredette et al., 2016; Ozer et al., 2003). Attachment theory, one of the foundational theories explaining our connections with others, defines attachment as an innate motivational system that allows us to form meaningful emotional bonds (Bowlby, 1982, as cited in Fraley, 2019). Through the attachment system, when we encounter difficulties, we turn to our attachment figures who can provide us with social support, care, and protection. Situations where attachment figures do not meet these needs, or are not accessible or sufficient, can lead to hyperactivation (increased intense need for closeness and approach behaviours) or deactivation (denial of the need for closeness and avoidance of activation of the attachment system) of the attachment system, and both of these strategies are associated with insecure attachment (Leary & Hoyle, 2009).

Attachment theory provides guidance in understanding interpersonal relationships and their functionality both in childhood and adulthood (Candel et al., 2019; Groh et al., 2014). Attachment styles related to the functionality of

interpersonal relationships are also associated with responses to stress-inducing experiences in adulthood (Pietromonaco et al., 2013; Pietromonaco & Powers, 2015). For instance, a meta-analysis on PTSD and adult attachment (Woodhouse et al., 2015) found that insecure attachment was associated with an increase in traumatic stress symptoms, while secure attachment was related to a decrease in PTSD symptoms. Individuals with secure attachment representations, characterized by accessible, sensitive, and responsive attachment figures, may hold beliefs that the world is a reliable place and that others will support them when needed (Leary & Hoyle, 2009), which can offer insight into the relationship between PTSD and attachment styles.

Individuals with a secure attachment style may perceive the world as secure, and therefore, they may view the outcomes of unexpected negative experiences as manageable. For example, an insecure attachment style has been associated with an increased intolerance of uncertainty towards ambiguous, unclear, and yet-to-occur life events (Zdebik et al., 2018). Intolerance of uncertainty (IU), based on cognitive-behavioural models of anxiety, refers to a tendency to exhibit excessive intolerance towards the possibility of a negative event occurring, regardless of the likelihood of its actual happening (Dugas, Gosselin, & Ladouceur, 2001). Beliefs about IU can be either prospective or inhibitory (Buhr & Dugas, 2002; Carleton, Norton, & Asmundson, 2007). This cognitive mechanism, which is also related to attachment styles, has been found to be highly correlated with worry both in clinical and non-clinical populations (Carleton et al., 2012, p.470; De Bruin et al., 2007).

In recent years, studies have suggested that IU could play a role as a transdiagnostic mechanism in explaining the development of mood and anxiety disorders (Boswell, Thompson-Hollands, Farchione, & Barlow, 2013, p. 635; Rosser, 2018). There is yet scarce evidence on the role of intolerance of uncertainty in the relationship between adult attachment styles and PTSD. The present study aims to understand the mediating role of intolerance of uncertainty in the relationship between adult attachment styles and PTSD. We specifically predicted that:

(1) The mediating role of intolerance of uncertainty in the relationship between anxious attachment and PTSD symptoms will be statistically significant.

(2) The mediating role of intolerance of uncertainty in the relationship between avoidant attachment and PTSD symptoms will be statistically significant.

Methods

Sample

The sample of the study consists of 335 (275 Female, 82.09%) university students between the ages of 18-57 (Mean=22.58, SD=5.10) studying at the universities in (concealed) at the undergraduate, graduate and doctorate levels. Participants were volunteers. The inclusion criterion of the study was determined as being over 18 years old.

Measurements

Life Events Checklist for DSM-5 (LEC-5)

The list, which consists of 17 items and evaluates potential traumatic events (PTE) throughout life, was adapted according to the DSM-5 definition of trauma (LEC-5; Weathers et al., 2013). Accordingly, six different categories of nominal responses are used for each life event (happened to me, witnessed, learned, part of my job, not sure and not suitable for me). LEC-5 does not have a standard scoring system. In this study, participants choosing one or more of the answers 'happened to me', 'witnessed', 'learned' or 'part of my job' were included to create the PTE index indicating trauma exposure (Table 1).

The Experiences in Close Relationships Revised (ECR-R) Questionnaire

The scale developed by Fraley, Waller, and Brennan (2000, p. 360), consisting of 36 items, measures adult attachment styles and includes two subscales assessing anxious and avoidant attachment. Anxious attachment evaluates the extent to which participants feel insecure about the

accessibility of their romantic partners and how they respond to them. On the other hand, avoidant attachment measures the degree to which individuals are uncomfortable with being close to others and relying on them for safety. The scale is scored using an 8-point Likert rating (1: Strongly Disagree, 7: Strongly Agree). Sümer (2006), by examining the factor structure of the scale, identified the anxious ($\alpha = .86$) and avoidant attachment ($\alpha = .90$) subscales in the Turkish sample. In this study, the reliability coefficient was found to be .86 for the anxious attachment subscale and .67 for the avoidant attachment subscale.

The Intolerance of Uncertainty Scale (IU)

This scale consists of a total of 12 items (Carleton et al., 2007). The scale, which includes subscales for prospective anxiety and inhibitory anxiety, used a 5-point Likert-type rating (1: Not suitable for me at all, 5: Completely suitable for me). The items in the prospective anxiety subscale assess the desire for cognitive predictability regarding future events, while the inhibitory anxiety subscale measures avoidance or experiential inhibition in the face of uncertain events. The scale was adapted into Turkish by Sarıçam et al. (2014), and the validity coefficient of the scale for the total score was reported as .88. In this study, the total score of the scale was used, and a reliability coefficient of .91 was reported.

PTSD Checklist for DSM-5 (PCL-5)

This self-report scale, consisting of a total of 20 items, has four subscales that measure the re-experiencing (Criterion B), avoidance (Criterion C), negative alterations in cognitions and mood (Criterion D), and hyperarousal (Criterion E) criteria of PTSD as outlined in DSM-5 (Weathers et al., 2013). It employs a 5-point Likert rating (0: Not at all, 4: Extremely) and provides a total scale score range of 0 to 80. In the Turkish adaptation study, the scale's cutoff score was reported as ≥ 47 (Boysan et al., 2017, p.305). In this study, the Cronbach's alpha value for the total score was found to be .94.

Statistical Analysis

A Kolmogorov-Smirnov test was conducted to assess the normal distribution of the data. The results of the test showed normal distribution for the variables of PTSD, anxious and avoidant attachment, intolerance to uncertainty and PTE ($p > .05$); whilst the normality assumption was not met for age. Descriptive and correlational analyses of the data were conducted using the SPSS 29 program, while the mediation role was assessed using the PROCESS macro (Hayes, 2017). Simple Mediation Analysis was employed to test the mediating role of intolerance of uncertainty between attachment styles and PTSD symptoms. Pearson’s Correlation Analysis was conducted to assess the strength and direction of the relationship between continuous variables, i.e. age, PTE, PTSD, attachment styles and IU. Additionally, an independent samples t-test was run to examine whether there was a significant difference in PTSD, attachment styles, and intolerance of uncertainty between females and males.

Process

In this study, a cross-sectional design, a quantitative research method, was employed. Ethical permission for the study was obtained from the Ethics Committee of the Faculty of Social Sciences at (concealed) (Date: 16/04/2021, Decision Number: 2021/235). Participants consisted of university students majoring in psychology, sociology, business, and economics from two universities. Demographic information (age and gender) and questionnaires consisting of four scales with established Turkish validity and reliability were administered to students via Google Forms. Participation was based on voluntariness, and a Consent Form was presented before the study questionnaires. The completion time for the questionnaires were approximately 15 minutes.

Results

Descriptive Statistics

The frequency and percentages of participants' lifetime traumatic experiences (PTE) are provided in Table 1. According to this, the most commonly reported PTEs were natural disasters, motor vehicle accidents, and fire/explosion, respectively. It is observed that 98% of the participants ($n=330$) reported at least one PTE, and 79% reported four or more PTEs. Analyses were conducted with all participants regardless of their exposure to PTEs.

Table 1. Potential Traumatic Events Index of the Study Participants

PTEs	N	%
Natural Disasters	299	89.3
Fire/explosion	200	59.7
Motor vehicle accident	259	77.3
Other serious accident	155	46.3
Exposure to toxic substance	96	28.7
Physical assault	170	50.7
Assault with weapon	110	32.8
Sexual assault	89	26.6
Unwanted sexual experience	72	21.5
Combat	60	17.9
Captivity	30	9
Life-threatening injury/illness	147	43.9
Severe suffering	92	27.5
Witness violent death	122	36.4
Sudden death of important others	167	49.9
Caused death/injury of other	13	3.9
Other stressful events	197	58.8

An independent samples t-test was conducted to determine whether there was a significant difference in PTSD, attachment styles, and intolerance of uncertainty between females and males. According to the analysis results, the total score of anxious attachment did not significantly differ by gender ($t(333)=0.75, p=.45$); whilst, the total score of avoidant attachment showed a statistically significant difference between females and males ($t(333)=4.41, p<.001$). Females had higher scores in avoidant attachment (Mean=91.04, SD=10.34) compared to males (Mean=84.67, SD=9.13). Additionally, the total score of PTSD also differed by gender ($t(333)=3.80, p<.001$). Females had higher PTSD scores (Mean=48.034, SD=18.07) compared to males (Mean=38.63, SD=17.17). However, the total score of intolerance of uncertainty ($t(333)= -.22, p=.82$) did not significantly differ by gender.

The Mediating Role of Intolerance of Uncertainty

Due to the differentiation of adult attachment styles and PTSD by gender, as well as the statistically significant correlations between age and traumatic events; gender, age, and total traumatic event scores were included as control variables in the simple mediation analysis, as these variables correlated with the scale scores used in the study. Descriptive and correlational analysis results of the employed scales in the study are presented in Table 2.

Table 2. Descriptive and Correlation Analysis Results of the Employed Scales in the Study

N=33	M	SD	1	2	3	4	5	6
5								
1.	46.6	18.2	-	.44**	.26**	.48**	.18**	.23**
PCL	0	7		*	*	*	*	*
Total								
2.	66.1	18.6		-	.34**	.45**		.10*
Anx	1	1			*	*		.17**
A								
3.	89.9	10.4			-	.30**	.19**	.09
Avo	0	1				*	*	
A								
4.	25.5	5.97				-	-.12*	.04
IU	6							
Total								
5.	22.5	5.10					-	.03
Age	8							
6.	6.80	4.11						-
LEC-5								
Total								

Note. PCL Total=Total score of PTSD; AnxA=Anxious attachment; AvoA=Avoidant attachment; IU=Total score of Intolerance of Uncertainty; LEC-5 Total=Total score of PTE; *** $p < .001$; ** $p < .005$; * $p < .05$

The first model tested the mediating role of intolerance of uncertainty in the relationship between anxious attachment and PTSD and found that anxious attachment significantly predicted the total score of IU (path a; $B=.25$, $SE=.02$, $p < .001$, 95% CI [.20, .31]), and the total score of IU also significantly predicted the total score of PTSD (path b; $B=.62$, $SE=.08$, $p < .001$, 95% CI [.45, .79]). After controlling for gender and age, anxious attachment had a significant direct effect (path c'; $B=.22$, $SE=.04$, $p < .001$, 95% CI [.13, .32]) and a significant total effect on PTSD (path c; $B=.38$, $SE=.04$, $p < .001$, 95% CI [.29, .48]) on PTSD. As stated in Hypothesis 1, the mediating role of intolerance of uncertainty in the relationship between anxious attachment and PTSD was confirmed (path a1b1;

95% CI [.11, .21]). The model explained 38% of the variance. The model depicting the mediating role of intolerance of uncertainty in the relationship between anxious attachment and PTSD is presented in Figure 1.

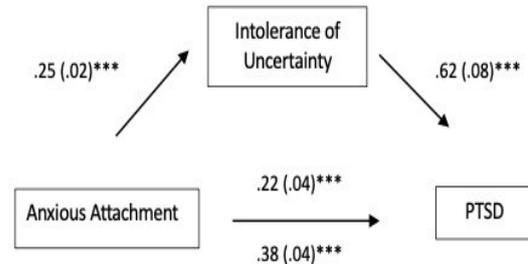


Figure 1. The Mediating Role of Intolerance of Uncertainty in the Relationship Between Anxious Attachment and PTSD

The second model tested the mediating role of intolerance of uncertainty in the relationship between avoidant attachment and PTSD (see Figure 2). The results showed that avoidant attachment significantly predicted the total score of IU (path a; $B=.31$, $SE=.05$, $p < .001$, 95% CI [.20, .42]), and the total score of IU significantly predicted the total score of PTSD (path b; $B=.77$, $SE=.08$, $p < .001$, 95% CI [.61, .93]). After controlling for gender, age, and traumatic events, the direct effect of avoidant attachment on PTSD was not statistically significant (path c'; $B=.08$, $SE=.08$, $p=.34$, 95% CI [-.08, .25]). However, the total effect of avoidant attachment on PTSD was significant (path c; $B=.32$, $SE=.09$, $p < .001$, 95% CI [.13, .50]). Intolerance of uncertainty fully mediated the relationship between avoidant attachment and PTSD, confirming Hypothesis 2 (path a1b1; 95% CI [.15, .33]). The model explained 34% of the variance.

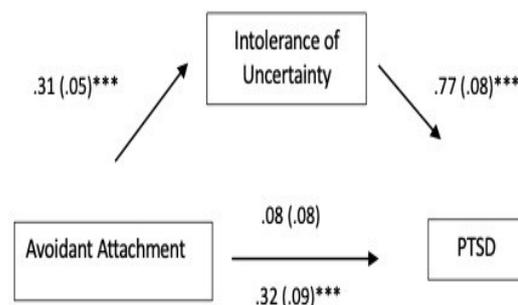


Figure 2. The Mediating Role of Intolerance of Uncertainty in the Relationship Between Avoidant Attachment and PTSD

Discussion

This study aimed to investigate the mediating role of intolerance of uncertainty in the relationship between adult attachment styles and PTSD symptoms. The findings supported the hypotheses of the study: Intolerance of uncertainty mediates the relationship between anxious and avoidant attachment styles, and PTSD symptoms. Both models controlled for demographic variables of age and gender, and the effects of potential traumatic events that could influence the relationship.

Results indicated a significant relationship between anxious and avoidant attachment, and PTSD. This is consistent with findings in the literature regarding insecure attachment styles and PTSD (Mikulincer et al., 2015; Nielsen et al., 2017). Higher anxious and avoidant attachment scores are associated with the development of more severe PTSD symptoms (Schuman et al., 2023). According to attachment theory, attachment relationships established in the early years of life can subsequently affect emotion regulation and interpersonal skills (Barazzone et al., 2018; Benoit et al., 2010). The lower likelihood of individuals with anxious or avoidant attachment seeking and accessing necessary social support to effectively process traumatic experiences (Cloitre et al., 2008) helps us understand the relationship between insecure attachment styles and PTSD symptoms.

Another finding of this study consistent with the evidence is the relationship between intolerance of uncertainty and PTSD (Fetzner, et al., 2013; Oglesby et al., 2017). A study conducted with university students who experienced an armed attack in the United States showed that intolerance of uncertainty predicted post-traumatic symptoms (Oglesby et al., 2016). Individuals who struggle to develop adaptive coping strategies in the face of uncertainty may experience increased distress when confronted with reminders of traumatic events. Particularly, individuals with high inhibitory anxiety, a component of intolerance of uncertainty, may develop a fear of being unable to effectively respond to current threats or cope with the stress

generated by trauma-related triggers (Fetzner et al., 2013).

In this study, both anxious and avoidant attachment styles are shown to be significantly related to intolerance of uncertainty. Similarly, the relevant literature indicates that insecure attachment predicts intolerance of uncertainty (Sternheim et al., 2017). Individuals with anxious and avoidant attachment styles commonly perceive the world as unsafe and dangerous, and they may lack the necessary resources to cope with uncertain events. Especially in anxious attachment characterized by seeking excessive reassurance and approval, individuals may have a high need for predictability and control to minimize the anxiety caused by the threat of abandonment. This situation can pose a risk of developing high levels of intolerance of uncertainty (Wright et al., 2017).

These findings emphasize the existing evidence on the associations between insecure attachment types, and PTSD and intolerance of uncertainty. The current study extended our knowledge by showing the mediating role of intolerance of uncertainty in the relationship between insecure attachment and PTSD symptoms. To our knowledge this finding is a significant contribution to the present studies on explaining how PTSD symptoms might develop in individuals with insecure attachment styles and provide a potential pathway which require further research with more robust methodologies.

The findings of the study should be evaluated in light of several limitations. Firstly, the cross-sectional nature of the data prevents establishing cause-and-effect relationships. Longitudinal studies can provide more reliable information about the temporal sequence and potential bidirectional relationships between attachment styles, intolerance of uncertainty, and PTSD symptoms. Additionally, the use of self-report measures in the study can introduce issues of reliability in the provided responses. The reliability of the findings could be enhanced in future research by incorporating physiological measurements and clinician assessments.

Having patterns of insecure attachment is associated with the effectiveness of psychotherapy targeting trauma symptoms (Stalker et al., 2005). There are also studies that demonstrate the

positive impact of trauma-focused psychotherapy on attachment styles (Rimane et al., 2021). One way to enhance the effectiveness of psychotherapies for individuals with insecure attachment who have developed PTSD could be to incorporate maladaptive cognitive mechanisms related to attachment patterns into treatment goals. The findings of the current research suggest that interventions aimed at increasing tolerance for uncertainty could be important in the psychotherapy of individuals with insecure attachment patterns and a history of traumatic life events. Controlled intervention studies conducted with clinical samples should investigate whether any observed changes in tolerance towards uncertainty have an impact on the effectiveness of trauma-focused treatments in individuals with different attachment styles.

Conclusion

The findings provide valuable insights into the complex interaction between attachment styles and PTSD, aiding our understanding of the underlying mechanisms contributing to the development and maintenance of PTSD symptoms. For individuals with a history of trauma who exhibit anxious and avoidant attachment, developing adaptive strategies to cope with intolerance of uncertainty alongside attachment-focused psychotherapies may yield positive outcomes in psychopathologies with high intergenerational transmission, such as PTSD.

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RESEARCH ARTICLE

White-Collar Crime: Awareness and Perception Analysis

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Abstract

The present study comparatively examined the perceptions and experiences of participants on white-collar offences in relation to traditional street level offences in the cities of Ankara and Eskişehir. For this objective, a wide range of information was collected, including the perceived seriousness of offences, victimization, high risk behaviors that may be related to victimization, crime control, and the perceived victim profile. A total of 381 participants living in Ankara and Eskişehir were selected via convenience sampling methods. The results were analyzed with descriptive statistics as well as T-test, and ANOVA. The results revealed that the participants perceive white-collar offences as significantly serious criminal acts in comparison to common street level offences and that they believe that states should allocate equal funds to white-collar offences as well as common street level offences. We also found that there were significant differences between the participants' attitudes towards the potential victim profile and their attitudes towards actual victims. The findings are believed to be significant for law enforcement agencies, consumer protection organizations and other experts working in the field.

Keywords White-collar Offences, Economic Offences, Street Crimes, Crime Seriousness, Crime Victimization

Öz

Çalışmada Ankara ve Eskişehir illerinde yaşayan katılımcıların beyaz yaka suçlarına yönelik algı ve deneyimleri karşılaştırılmalı olarak araştırılmıştır. Bu doğrultuda uygulanan mülakatlar aracılığıyla suçun ciddiyeti, suç mağduriyeti, suç mağduriyeti oluşturabilecek yüksek riskli davranışlar, suçun kontrolü ve algılanan mağdur profiline yönelik geniş çerçevede bilgi toplanmıştır. Araştırmanın örneklemini kolay ulaşılabilir örnekleme yöntemiyle belirlenen Ankara ve Eskişehir illerinde yaşayan toplamda 381 katılımcı oluşturmaktadır. Elde edilen sonuçlar betimleyici istatistikler, T-testi ve ANOVA testleri kullanılarak analiz edilmiştir. Araştırma sonuçlarına göre katılımcılar geleneksel sokak suçlarıyla karşılaştırıldığında beyaz yaka suçlarını anlamlı derecede ciddi olarak algıladıkları; beyaz yaka suçları ve geleneksel suçlara devletin eşit oranda fon ayırması gerektiğine inandıkları bulunmuştur. Ayrıca, katılımcıların olası mağdur profiline yönelik tutumları ve gerçek mağdurlara yönelik tutumları arasında anlamlı farklar olduğu sonuçlarına ulaştığını bulduk. Elde edilen sonuçların kolluk kuvvetleri, tüketici koruma örgütleri ve alanda çalışan tüm uzmanlar için önemli olabileceği değerlendirilmektedir

Anahtar Kelimeler: Beyaz Yaka Suçları, Ekonomik Suçlar, Sokak Suçları, Suç Ciddiyeti, Suç Mağduriyeti

Introduction

In a given society, the interrelationships are regulated in order to maintain peace and security that differ based on a social context. Behaviors that occur as a result of violating these rules can endanger the peace and security of individuals. The phenomenon of crime is as old as the history of life and civilization. Moreover, it is a universal phenomenon that has existed in every period of human history. Although there is no society and country free of criminal offences, the changing elements are only the quantity and quality of offences (Tören Yücel, 2004: 1).

The concept of white-collar crime was first introduced by Edwin Sutherland in 1939 and entered the literature with the same name (Ferguson, 2010: 13). Sutherland (1940) considered white-collar crimes as offences committed by people at high socioeconomic levels during the performance of their professions (Sutherland, 1940: 9). Also, while white-collar offences can be considered as economic crimes that do not involve violence (Ferguson, 2010: 55), while they can be categorized based on their relationship with the perpetrator's professional activities (Küçüktaşdemir, 2017). Compared to traditional street crimes, white-collar offences differ in many aspects, including financial and social cost (Sutherland, 1940), perpetrator profile (Friedrichs 2010: 13-16), victim profile (Titus et al., 1995), and perceived seriousness of offences (Rebovich et al., 2000).

The impact of white-collar offences on society and society's attitudes towards white-collar crime have great importance in terms of preventing such offences. White-collar offences are known to cause serious economic cost in comparison to street crimes. There is a controversy on the definition and sanctions of white-collar crime in the legal systems of countries and also the comprehensive research on white-collar crimes is scarce. Thus, research on attitude and perceptions on white-collar offences may yield significant results.

Conceptual Framework of White-Collar Offences

The definitions of "collar" in business environment was originated from the First Industrial Revolution

and its aftermath (Eriş et al., 2020). While more people were employed with the Industrial Revolution, categorized employees were categorized as blue collars and white collars. Employees who used arm/muscle power who generally wore blue overalls as work clothes were defined as blue collars, while salaried professionals, inspired by the color of the white shirts they wore, were defined as white collars. The white-collar concept defines the class that gains its status in society through education and professional training (Ercal et al., 1997: 56).

Sutherland made the first comprehensive definition of white-collar criminality and defined white-collar crime as: "*a crime committed in the course of one's occupation by a respected person of high socioeconomic status*" (Sutherland, 1949: 9). According to Braithwaite (1985: 3), there are problems with Sutherland's definition. The first problem is the relative definition of the respectability. The other issue is Sutherland's prediction that a white-collar crime will only be considered a white-collar crime if it is committed by a person with a high social status, even though Sutherland uses the pervasive nature of white-collar crime to refute class-based theories of criminality. Braithwaite acknowledged the existence of a definitional problem in white-collar crime and argued that Sutherland's overarching definition of white-collar crime should be adhered to, but that we should then distinguish between types of white-collar crime (Braithwaite, 1985: 3). Geis also argued that there is confusion about the definition of white-collar crimes (Geis, 1991). Therefore, he agreed with Braithwaite (1985: 19) on that "*the most sensible way forward is to stick to Sutherland's definition*". On the other hand, Croall (1989: 157) argued that white-collar crime is committed by people who are defined as *powerful, high status, and respectable*.

According to Weisburd and Waring (2004: 9), individuals with high social status are most likely to hold white-collar occupational positions, but when it comes to white-collar crimes such as bribery and tax evasion, the perpetrators of these crimes are quite average individuals in society. Individuals who are prosecuted for white-collar crimes often do not reflect the characteristics of a stereotypical white-collar criminal, and in today's

world, most of the society could commit white-collar offence (Weisburd and Waring, 2004: 10-11). Thus, we advocate an understanding that white-collar offences committed by the middle class can also be included. This difficulty in conceptually defining white-collar offences indirectly leads to the immeasurability of the related crimes. The uncertainty of the prevalence and measurement cause emergence of a problem of reaction and counter the offences by individuals and the state (Wall-Parker, 2019: 41). In order to provide conceptual clarity, we will review different types of white-collar offences next.

Economic Offences

The concept of economic crime (i.e., financial crime, economic crime, white-collar crimes) constitutes an extremely important area as it not only causes tangible damages but also destroys the economic morality in public (Dönmezer, 1985: 20). With the liberalization movements in the 1980s and the globalization movements in the 1990s, economic offences have started to increase in Türkiye and around the World. With the increase in economic offences, new approaches have developed in the prevention and prosecution of such offences (Dursun, 2005).

In the literature on economic crimes is examined they are defined differently by Anglo-American and French researchers. In this context, economic crimes are defined as crimes arising from the practice of certain professions and occupations in the Anglo-American literature, while in the French literature, such acts are included under the concept of commercial and industrial crimes (Dönmezer, 1985: 20-21). Accordingly, in the Anglo-American literature, economic crimes are based on the abuse of trust necessary for economic life and include the offences arising from the abuse of this trust. In the French literature, on the other hand, economic crimes are not accepted as a separate category and the acts committed against business and commercial life are considered within the framework of economic crime (Dönmezer, 1985: 20-22).

Economic offences are much more difficult to prosecute than other types of crimes and the financial damage they cause is much greater.

When compared in terms of the number of victims, economic crimes are more prominent than in traditional offences. For example, in relation to tax evasion offences, all citizen may be considered as victims. Also, the victims of economic offences may range from individuals to institutions, companies, governments, and entire economies (Gottschalk, 2010a: 442). When other differences are considered, criminal offences such as murder, rape, assault (i.e., offences committed by individuals against individuals) can be considered more serious than financial offences such as embezzlement and fraud (i.e., offences against property). This has an impact on the penal system and leads to more severe sentencing for offences against individuals. Also, financial offences are much more difficult to investigate and often evidence is more difficult to reveal, owing to the fact of frequent incidents of concealment, cover-up, and deception (Şentürk and Kasap, 2013: 149).

Embezzlement

Embezzlement occurs when a public official uses money or public resources with monetary value without authorization or illegally. Embezzlement is an offence that may be committed by public officials of different degrees and is mostly seen in public duties related to allocated money (Zeren & Bilken, 2021: 37). The embezzlement can also be committed during banking activities. As defined in the Banking Law, the perpetrator of the crime of embezzlement is a bank employee who has a contractual relationship with the bank and whose duty is related to banking activities (Atay, 2022: 635). İtişgen (2013: 669) argues that the offense of embezzlement committed by a bank employee is usually committed through tampering with customer accounts or providing unfair credit.

Qualified Fraud

The offence of fraud is defined in Article 157 of the Turkish Penal Code(TPC) as "*deceiving a person by fraudulent behavior via detriment of the person or another person*" and obtaining a benefit for oneself or another person", while Qualified fraud is defined as "*During the commercial activities of persons who are merchants or company managers or acting on behalf of*

the company; cooperative managers within the scope of the cooperative's activities, or by self-employed persons, by abusing the trust placed in them due to their profession, or for the purpose of collecting the cost of insurance".

Bribery

The offense of bribery is defined in Art. 252 of the TPC as *"Any person who directly or through intermediaries provides a benefit to a public official or another person to be designated, in order to perform or fail to perform a job related to the performance of his duty, is sentenced to imprisonment from four years to twelve years."*

A three-sided structure emerges in bribery as the bribe taker, bribe giver and the public administration; if the public administration does not reveal the related crime, bribery is normalized for the perpetrators of the crime by losing reputation (Ünlü, 2012: 333-334).

Characteristics of White-Collar Crime

Various types of white-collar offences in business and professions fundamentally involve a violation of trust (Sutherland, 1940: 3). The cost of white-collar crime is much higher than the financial damage caused by other offences, and the sentences given to the white-collar offenders may differ from those of traditional street offences (Sutherland, 1940, pp. 5-8). White-collar offenders are perceived differently in terms of the attitudes of the public. Rackmill (1992) stated that white-collar criminals do not fit the criminal stereotype and explained that it is difficult to punish them because they are in the same class with the law enforcement officers and more likely to share similar values. Berghoff and Spiekermann (2018), on the other hand, try to explain the issue through the prosecution process, stating that white-collar offences are difficult to prosecute because perpetrators utilize complex methods to conceal the offence and have political influence that can influence the legislative process in their favor.

In relation white-collar offences, Croall (2001: 8) argues that the identities of the victims often cannot be easily identified, and that victims may not be aware of the incident, and that victims may

consist of few or many people and may suffer a small amount of financial loss. Also, Giddens (2008: 874) agrees that the victims often do not see themselves as victims in such circumstances. He explains this is because as the physical proximity between the victim and the perpetrator is much less in white-collar offences, unlike traditional crimes, victims do not often realize that they are the victims.

White-collar offences also involve perpetrators with different characteristics. Weisburd and colleagues (1991) proposed that the characteristics of a stereotypical white-collar criminal are white, middle-aged men, above-average socioeconomic status, working in a regular white-collar job. In addition, they suggested that corrupt and bribe-taking politicians can also be included in this profile (cited in Croall, 2001: 51). In terms of ethnicity, whites are more involved in middle and high-level crimes and the rate of women in white-collar crime perpetrators is lower. Moreover, Friedrichs (2010:16) maintained that compared to traditional crimes, perpetrators of white-collar offences are well-educated, probably married and have a regular family life, and are more involved in communities and groups. Similarly, research findings suggest that the average age of the perpetrators was 41 years old and 44% of them had a university degree or higher (Holtfreter, 2005).

Given that some products and services may affect certain groups more depending on the lifestyles of individuals, the risk of being victimized may be higher, the victim profiles of white-collar offences may also be significant important in relation to crime prevention Croall (2001: 72). For example, females may have a higher risk of being victims of fraud in matters related to pharmaceutical products and the elderly in relation to pension. Lokanen and Liu (2021) examined the data of the Canadian Investment Industry Regulatory Authority on investment fraud between 2008-2019 and their findings support this idea. They found that older adults over the age of 60 and retirees are more vulnerable to investment fraud victimization; when the reasons for investments are examined, the current financial situation and the desire to improve retirement planning are the most significant causes (Lokanen & Liu, 2021). The findings on the

characteristics of white-collar offences victims are generally consistent. That is, younger and more educated people are more likely to be victimized (Titus et al., 1995; Van Wyk and Mason, 2001). Most of the victims are individuals who invest not because of any need, but because of the desire to earn more money, and that most of the victims are middle-aged men with professional occupations (Trahan et al., 2005). A recent study by Bar Lev et al. (2022), investigated victims of financial fraud offences in developing countries. The findings revealed that most of the victims are working, married or single men of different ages. In India, most of the victims are young and male; in China, women or people close to retirement age are victims; and in Malaysia and Bolivia, elderly individuals come to the fore (Bar Lev et al., 2022).

General Attitude towards White-Collar Crime

How individuals perceive the seriousness of white-collar crimes is a component of attitudes towards white-collar crimes. Perceived seriousness also affects reporting of an offence to authorities. Unreported offences and offences only known between the perpetrator and the victim constitute the dark area (Polat, 2008; Tören Yücel, 2004: 14). This causes a gap between the actual crime prevalence and judicial records and such discrepancy may occur for the following reasons (Tören Yücel, 2004: 14-15);

- i. Citizen reluctance to report crime;
- ii. Law enforcement lapses;
- iii. Failure to catch the perpetrators,
- iv. Victims' fear of criminals;
- v. The idea that it would be useless to appeal to the police,
- vi. The victim does not consider the crime worth reporting.

The victims of white-collar offences are known to hesitate to report the offences and it is estimated that only 15% of them report such allegations (Titus et al., 1995). The evaluation of crimes in terms of seriousness reflects the general attitude of the society towards offences (Benk et al., 2018). Although there are many studies on the seriousness of crime in the literature, most of the studies were conducted in the United States. These findings suggest that the perceived seriousness of

white-collar offences is equal to or higher than street level offences (e.g., Shahbazov & Afandiyev, 2020; Sever & Roth, 2012; Dodge, Bosick, & Antwerp, 2013; Holtfreter et al., 2008). Consequently, the present study aims to assess the perceptions of white-collar offences in Turkish context.

Method

In the present study, the following research questions were investigated;

- i. What is the perception of the seriousness of white-collar offences in Turkish context?
- ii. What is the rate of victimization experienced in the last 12 months and the rate of reporting their victimization to the authorities?
- iii. What are the perceived profiles of white-collar offence victims?

Participants

The present study utilizes the convenience sampling method (Koç Başaran, 2017). Convenient sampling method is used in cases where generalizability is limited in which it is impractical to identify and reach randomized sampling in the population (Özen & Gül, 2007). The age range of participants is between 18 and 60 and they are residents of Ankara or Eskişehir. A total of 381 people participated in the research: 297 participants participated in face-to-face surveys, and 84 participated in online surveys. Considering the COVID-19 pandemic period and economic conditions, the research was limited to two provinces by determining easily accessible cities by the researcher.

Procedure

Following the ethical board approval, the data were collected in two ways, through Google Forms and in person. In person interviews were conducted between August 2021 and January 2022, while online data were collected between December 2021 and January 2023. The participants were first provided with informed consent letters, followed by handing out the demographic forms

to them. Next, participants handed out the adapted version of the “National Public Survey on White Collar Crime Questionnaire”. It was adapted by the researcher to be used in the sample of Türkiye within the scope of white-collar offences. The questionnaire first translated by a focus group, and reverse translation was utilized to ensure the quality of interpretation of the questions. Once the questionnaire was adapted, a pilot study was conducted to measure the consistency and validity of the questions. In the pilot testing process, the cognitive interviewing technique was used. Cognitive interview technique is a process in which the researcher interviews the respondents about their thought processes to obtain information about the questionnaire and to develop the questionnaire, and it is ensured that the respondents think aloud while answering the questions (Neumann, 2017: 453). The final version of the questionnaire was used by making necessary adjustments according to the findings. The study took approximately 30 minutes and at the conclusion participants were thanked for their contributions.

Measurement Tools

The adapted version of the “National Public Survey on White Collar Crime Questionnaire” utilized in the current study (Rebovich et al., 2000) (Appendix A).

Findings

In relation to demographic characteristics, most of the participants are between the ages of 18 and 40. Approximately 50% participants had a university degree or higher. Also, most of the participants are reported to be married. The data were collected in Ankara (n=124, 32.5%) and Eskişehir (n=257, 67.5%). Of the data, 297 (78%) were obtained through in person interview method and 84 (22%) were obtained through the internet using Google Forms (see Table 1).

Table 1: Demographic characteristics of Participants

	Female		Male		Total	
	n	%	n	%	n	%
Participants	169	44,4	212	55,6	381	100,0
Age						

18-25	52	30,8	44	20,8	96	25,2
25-40	68	40,2	81	38,2	149	39,1
40-60	49	29,0	87	41,0	136	35,7
Education Level						
Primary school	21	12,5	21	9,9	42	11,1
Middle school	10	6,0	21	9,9	31	8,2
High school	44	26,2	74	34,9	118	31,1
University	70	41,7	91	42,9	161	42,4
MA/PhD	23	13,7	5	2,4	28	7,4
Marital Status						
Married	83	49,1	136	64,2	219	57,5
Single	86	50,9	76	35,8	162	42,5
Monthly Income						
0-2000/0-5000 ₺	35	21,2	16	7,6	51	13,6
2000-5000/5000-10000 ₺	74	44,8	101	47,9	175	46,5
5000-10000/10000-20000 ₺	45	27,3	84	39,8	129	34,3
10000/20000 >₺	11	6,7	10	4,7	21	5,6
Current Residence						
Ankara	81	47,9	43	20,3	124	32,5
Eskişehir	88	52,1	169	79,7	257	67,5
Data Collected						
In Person	115	68,0	182	85,8	297	78,0
Online	54	32,0	30	14,2	84	22,0

What is the perception of the seriousness of white-collar offences

One Sample Chi-Square (X²) Test was utilized to test whether there was a significant difference between the participants' choices in question. The result of Chi-Square Test revealed that the distribution of perceived crime seriousness between the categories showed a significant difference, except for the pairwise comparison of the insurance fraud crime committed by the citizen and the insurance fraud crime committed by the insurance company (See Table 2).

Table 2: Findings on Participants' Answers to the Seriousness of Crime Questions

Seriousness of the crime	N	%	X ²	df	p
Question 1a					
Street Crime	119	32,5	44,765	1	,000
White-Collar Crime	247	67,5			
Total	366	100			

Question 1b

Street Crime	142	39,1	17,193	1	,000
White-Collar Crime	221	60,9			
Total	363	100			
Question 2a					
Street Crime	144	39,6	15,868	1	,000
White-Collar Crime	220	60,4			
Total	364	100			
Question 2b					
Street Crime	151	41,5	10,560	1	,000
White-Collar Crime	213	58,5			
Total	364	100			
Question 3a					
The Crime of Impropriety	293	81,4	141,878	1	,000
Bribery (citizen)	67	18,6			
Total	360	100			
Question 3b					
The crime of impropriety	218	60,9	16,994	1	,000
Bribery (company)	140	39,1			
Total	358	100			
Question 4a					
Insurance fraud (citizen)	192	52,6			
Insurance Fraud Crime (insurance company)	173	47,4	0,989	1	,320
Total	365	100			
Question 4b					
Insurance fraud (citizen)	112	31,1	51,378	1	,000
Insurance Fraud (doctor)	248	68,9			
Total	360	100			

Among the 8 questions measuring the seriousness of crime, 5 pairs of questions compared white-collar crimes and street crime. The participants who found white-collar crime more serious were given 1 point for each question, while the participants who found street crime more serious were given 0 points. One Sample Chi-Square (X^2) Test was applied to test whether there was a significant difference between the participants' choices in the question pairs. The findings revealed that the distribution of perceived crime seriousness between categories showed a significant difference in a way that participant reported that white-collar offences are more serious in comparison to street offences ($X^2 (1) = 70,520; p < 0,001$) (see Table 2).

Table 3: Findings on Perceived Seriousness of White-Collar Crime

Perceived seriousness of crime	n	%	X^2	df	p
Street crime	98	27,7			
White-collar crime	256	72,3	70,520	1	,000
Total	354	100			

Control of Crime

Participants were given two scenarios and asked which offender is more likely to be caught. "A thief

who steals a bag containing 1000 liras from someone on the street or an employee who embezzles 1000 liras from his/her employer (bank vault)." (Question 5). 30.2% of the participants reported that the criminal who committed the crime of theft was more likely to be caught, 33.7% reported that the criminal who committed the crime of fraud was more likely to be caught, and 35% reported that they were equally likely to be caught.

The participants were asked which of the perpetrators in the scenario given in Question 5 would receive a more serious punishment (Question 6). While 15.9% of the participants stated that the theft offense would receive a more serious punishment, 52.9% stated that the fraud offense would receive a more serious punishment; 26.5% answered that they would receive an equal punishment.

The participants were asked in which scenario the offender should be punished more severely (Question 7). While 5.5% of the participants stated that the person who committed the crime of theft and 31.7% of the participants stated that the person who committed the crime of fraud should be punished more severely; 60.9% of the participants argued that they should be punished equally.

Perceived Crime Seriousness and Control of Crime for White-Collar Crime

Groups were formed in line with the total scores obtained by summing up the answers given for 5 pairs of questions in which the seriousness of white-collar offences and street offences were compared (Table 4). The relationship between the answers given to the seventh question (the question of who should be punished more severely) and the newly formed groups was analyzed by Two-Way Chi-Square was to determine whether there is a relationship between participants' perceived crime seriousness and their choice of which crimes should be punished more severely.

Table 4: Findings on Perceived Crime Severity and Control of Crime

Groups	Crime Severity (1a,1b,2a,2b,3a)		Total	X ²	df	p
	Street Crime	White- Collar Crime				
Control of crime (Question 7)	Street crime Whit e- collar crime	13 7 10 104	20 11 4	33,984	1	,000
Total		23 111	13 4			

93.69% of the participants who find white-collar crimes more serious think that white-collar crimes should be punished more severely, while this rate is 43.48% among those who find street crimes more serious. There is a statistically significant difference between those who find white-collar crimes serious and those who find street crimes serious ($X^2(1) = 33,984; p < 0,001$). The effect size is $\Phi = 0,531$, an indication of a large effect.

Perceived Motivations for Crime

The 13th question examined the perceived motivations for crime, the participants were asked "Below are some causal explanations for theft/fraud crimes (embezzlement, etc.) that occur in the workplace. You are required to rate each of the following causal explanations according to the extent to which you think each of them can be a valid reason (1-disagree strongly/6-totally agree)". The frequency, mean and standard deviation values are presented in Table 5.

Table 5: Findings on Crime Motivations

Question 13	n	Average	Standard Deviation
Poor financial situation of the family	327	3,47	1,925
Drug addiction	328	3,92	2,064
Greed	326	3,86	2,123
Poor upbringing of the person	327	4,28	1,920
Excitement, fun	320	2,38	1,670
Gambling debt/addiction	330	4,23	1,988
Overspending	320	3,17	1,984

Rate of victimization of white-collar offences?

Participants were also asked whether they or other people living in the same household had been victimized by a white-collar offence in the last 12 months. Only 8.8% participants reported being a victim of a white-collar offence in the question 23, "In the last 12 months, have you or other people you live in the same house encountered a higher invoice for the product you bought than the price you were told during the sale?".

The question 9 assess the attitudes in question 9, that is "If you were a victim of fraud in any way, would you report it?" 35% of the participants who declared that they would report their grievances, who were then asked questions 20 to 27 if they have had reported being a victim of a specific of white-collar offences that they experience. The findings are as follows; Approximately 35% participants indicated yes for Q20; 13% indicated yes for Q21, 85% indicated yes for Q22; 65% indicated yes for 23; 50% indicated yes for Q24; 50% indicated yes for Q25; 68% indicated yes Q26; and 100% indicated yes for Q27.

Victimization Questions and Demographic Variables

The relationship between demographic variables and victimization of white collar crimes were analyzed via Chi-Square. There was no statistically significant difference between gender, age and income level groups, but a statistically significant difference was found between the education level groups ($X^2(4) = 11,330; p = ,023$). The effect size was $V = ,178$, indicating a low-power effect. As a result of the pairwise comparisons, it was concluded that the victimization rates of individuals with primary school graduates (7.9%) were significantly lower than those of individuals with university (26.6%) and master's/doctorate (38.5%) degrees, while the victimization rates of individuals with high school graduates (19.5%) were significantly lower than those of individuals with master's/doctorate (38.5%) degrees.

Victim Confidence in the Face of White-Collar Crime

In the 28th question, the participants were asked "On a scale of 1 to 5 (1 being very insecure to 5 being

very secure), how secure do you feel about being victimized by such crimes in the future?" to measure how secure the participants feel in the face of white-collar crimes. Independent samples t-test was applied to test whether there was a gender difference in the confidence scores of the participants. The results showed that confidence scores of men (X=3,31, sd=1,37) were significantly higher than women (X=3,01, sd=1,15) $t(347,406) = -2,28, p < 0,05$. The results of the independent samples T-test are presented in Table 6.

Table 6: Confidence in Victimization in the Face of White-Collar Crime by Gender

Variable	Groups	N	\bar{x}	sd	t test		
					t	df	p
Trust scores	Woman	15	3,0	1,15	-2,28	347,406	,023
	Man	6	1	0			
	Male	19	3,3	1,37			
		4	1	3			

One-way analysis of variance (ANOVA) was applied to test whether the trust scores of the participants vary according to their education levels. Education was formed as primary and secondary school graduates were group 1, high school graduates was group 2 and university, and master's/doctorate graduates was group 3. ANOVA test showed significant mean difference between education levels. (F=7.18, $p < 0,01$). (Table 6).

Table 7: ANOVA Results of Confidence in Victimization against White-Collar Crime by Education Level

Variable	Groups	Source of variance	Sum of Square	df	Mean Square	F	p
Trust scores	Primary or Secondary Graduate	G. Between	22,94	2	11,47	7,18	,001
	High school graduate	G. Inside	552,69	346	1,60		
	University-Master's/PhD graduate	Total	575,63	348			

Notes: df: Degrees of freedom

Independent sample t-test was applied to test whether the trust scores of the participants vary according to their income levels. Since the differences between the number of people between the groups in income levels were high, the groups of 0-2000/0-5000 TL and 2000-5000/5000-10000 TL were combined to form group 1; 5000-10000/10000-20000 TL and over 10000/20000 TL were combined

to form group 2. According to the results, the confidence scores of the participants with an income between 0-10.000 TL (X=3,33, sd=1,29) were significantly higher than the participants with an income between 10.000-20.000 TL (X=2,97 sd=1,25) $t(344) = 2,591; p < 0,05$. (Table 8).

Table 8: Confidence in Victimization in the Face of White-Collar Crime by Income Levels

Variable	Groups	N	\bar{x}	sd	T test		
					t	df	p
Trust scores	0-10.000tl	202	3,33	1,29	2,591	344	,010
	10.000-20.000tl	144	2,97	1,25			

Fighting Crime

The participants were asked "Do you believe that the government should allocate more resources to fight against white collar crimes such as fraud, embezzlement or street crimes such as theft and purse snatching?" (Q29). One-sample Chi-Square test applied to test whether there is a significant difference between the answer categories. 13.9% of the participants stated that funds should be allocated for street crimes, 15.3% stated that funds should be allocated for white-collar crimes, and 62.9% stated that funds should be allocated equally. A single sample Chi-Square test showed that the distribution ratio between the categories was statistically significant. ($X^2(3) = 286,286; p < 0,001$). The majority of the participants stated that the state should allocate funds equally to the fight against street crimes and white-collar crimes.

Perceived Victim Profile

Three close ended questions (Q31 to Q33) assess the perceived victim profile in a five point Likert scale. The findings are summarized in Table 9.

Table 9: Frequency Values and Percentage Distributions of Participants' Answers to Perceived Victim Profile Questions

	Question 30		Question 31		Question 32	
	N	%	N	%	N	%
I agree.	256	68,4	152	40,9	190	50,8
Disagree	32	8,6	87	23,4	87	23,3
Undecided	62	16,6	103	27,7	74	19,8
I don't know	24	6,4	30	8,1	23	6,1
Total	374	100	372	100	374	100

The result indicated that people in the 61 and over age would be the most likely to be a victim (48.22%). Additionally, 66.67% of the participants believe that people with low-income levels are more likely to be victims of consumer fraud than people with other income levels. In relation to education level, 89.36% of the participants thought that people with low education levels are more likely to be victims of consumer fraud than people with other education levels.

Conclusion and Recommendations

The present study showed that participants perceive white-collar crimes as more serious in every pair of questions, except for one pair. Similar findings have been found in studies on crime seriousness in the literature (Holtfreter et al., 2008; Sever & Roth, 2012; Dodge et al., 2013; Shahbazov & Afandiyev, 2020). A notable finding in the research is that the participants tend to view offences committed by public officials and doctors as more serious than offences committed by the citizen.

Control of crime reflects the probability of apprehending offenders and the severity of sentencing. The perceptions of the participants regarding the probability of the criminals being caught were first investigated. The participants thought that both types of offenders were equally likely to be caught and 60.9% of the participants stated that both offenders should receive serious punishments.

The participants appeared to perceive the probability of being apprehended for common street offences and white-collar offences to be close to each other. They thought that white-collar offender may receive a harsher punishment, and suggested that the punishments of both offenders should be equal. Compared to the study conducted by Schoepfer et al. (2007), the data obtained in our study are quite different, and only the result of severity of crime was similar. We think that the participants' perceptions that white-collar offences should be punished more seriously is related to the perception of seriousness white-collar offences.

The participants were asked to rate each of question of possible motivations on a 5-point Likert scale, in which they rated "*poor upbringing,*

gambling debt/addiction and drug addiction" the most, respectively. The reason "*greed*", which has been widely mentioned in the literature, was ranked fourth

Considering the total victimization rates, 22.6% of the participants have experienced victimization of at least one white-collar crime in the last 12 months. When the results obtained are compared with the study of Kane and Wall (2006), the victimization rates appear to be low. However, given that study sample is not representative of Türkiye the findings should be considered with caution.

When the demographic variables were evaluated in terms of white-collar crimes, a significant difference was found in relation to education levels. The victimization rates of the graduates/doctorate graduates were found to be significantly higher than the victimization rates of primary school graduates. Thus, having a high level of education appears to be a high-risk factor for being a victim of white-collar offences. Kane and Wall (2006) stated that white-collar crimes are a phenomenon that can affect everyone equally, which seems to be valid for our study as well. The present finding that the variables related to victimization show a significant relationship only in the education level group is an important finding in terms of the heterogeneity of the victims of the related crimes.

The confidence level of participants was also assessed in relation to white-collar offences, as well as the relationship between their perceptions of confidence and demographic variables. Male participants reported feeling more secure against white-collar offences than female participants. Also, participants with primary, secondary, and high school degrees reported feeling more secure against white-collar offences than those with university and higher education levels. Finally, participants with low-income levels feel more secure against white-collar crimes than participants with high-income levels.

Approximately 63% of participants stated that an equal number of resources should be allocated for both types of offences. This is important to note that they see street level offences and white-collar offences equally serious. In relation to the perceived profile of white-collar offence victims,

participants reported older individuals being high risk victims. Also, most participants believed a low income and low education levels as high risk factors. Participants perceive a possible victim of white-collar crime as middle and older age group, low-income level and low education level individuals.

The present study aimed to examine the perceptions of participants about white-collar crimes. The overall results revealed the following findings in relation to research questions;

i. What is the perception of the seriousness of white-collar offences in Turkish context?

The participants are not indifferent towards white-collar crimes and report white-collar offences being more serious than traditional street crimes.

They believe that states should allocate equal resources to white-collar crime and traditional street crime.

ii. What is the level of victimization experienced by the participants in the last 12 months and what is the rate of reporting their victimization to the authorities?

The participants' level of victimization appears to be low. Considering the total victimization rates, it is seen that 22.6% of the participants were victimized by at least one white-collar crime in the last 12 months.

There is a discrepancy between what they think they would do in reporting an offence if they were a victim and what they actually do in case of being a victim. While participants stated that they would report the crime at high rates in the possible victimization questions, the rates of reporting the crime were found to be lower in the actual victimization questions.

iii. What are the perceived profiles of white-collar offence victims?

The participants' perceptions of white-collar offence victims have different characteristics from the actual victimization profile. Participants perceive that they are suffering from a possible white-collar crime in the middle and older age group, individuals with low-income levels and low education symptoms. The findings do not fully correspond to the research conducted on the victims. In research, young age groups and

educated individuals stand out in terms of victim characteristics (Van Wyk and Mason, 2001; Titus et al., 1995; Kane and Wall, 2006). There are also studies stating that certain crimes target certain groups and may leave certain groups more vulnerable in terms of variables such as age group and gender, but we cannot talk about an exact victim group (Croall, 2009; Lokanen and Liu, 2021).

Many white-collar offences require special investigative techniques, training, and equipment, and it is more challenging for law enforcement agencies to investigate them. It is important that government agencies act strictly in the fight against white-collar crime. Technological developments make a difference in the way white-collar crimes are committed. White-collar offences also cause severe costs in many areas. Therefore, it is important to counter white-collar offenses in many aspects, such as prosecution, education, preventive studies, and crime-specific investigation techniques and methods. We suggest organizing training programs on high-risk behaviors and victim profiles. In this framework, future studies should compare real victim profiles with the perceived victim profile of white-collar offences. Future studies should also include participants representative of Türkiye. Finally, more specific categories of white-collar offences may be analyzed for refined findings.

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Appendix A: Turkish Version of the Questionnaire

Aşağıda bazı senaryolar yer almaktadır. **Lütfen hangisinin daha ciddi (önemli, mühim) bir suç olduğunu düşünüyorsanız sadece o kutucuğu işaretleyiniz.**

1a.

- Bir kişi içinde 1000 lira bulunan çantayı sokakta birinden çalıyor,
- Bir banka memuru iş vereninden (banka kasasından) 1000 lira zimmetine geçiriyor.

1b.

- Bir kişi içinde 1000 lira bulunan bir çantayı sokakta birinden çalıyor,
- Bir müteahhit/apartman sahibi gereksiz bir tamirat yaparak karşıdaki kişiyi 1000 lira dolandırıyor.

2a.

- Bir kişi silah tehdidiyle karşıdaki kişiye fiziksel(ciddi) hasar vererek soygun yapıyor,
- Bir otomobil üreticisi arabanın çok önemli bir parçasını koymayı unutuyor ve üretilen otomobili piyasadan geri çekmiyor. Bunun sonucunda arabayı kullanan kişi ciddi bir şekilde yaralanıyor.

2b.

- Bir kişi silah tehdidiyle karşıdaki kişiye fiziksel(ciddi) hasar vererek soygun yapıyor,
- Bir market sahibi etin bozuk olduğunu bile bile satıyor ve bunun sonucunda eti alan kişi ciddi şekilde hasta oluyor.

3a.

- Bir kamu görevlisi rüşvet alıyor,
- Sivil bir vatandaş kamu görevlisine çıkar elde edebilmek için rüşvet veriyor.

3b.

- Bir kamu görevlisi rüşvet alıyor,
- Bir şirket, çıkarları doğrultusunda bir karar aldrabilmek için kamu görevlisine rüşvet veriyor.

4a.

- Bir kişi sigorta şirketinden haksız yere para alabilmek için sahte kaza raporu düzenleyerek sigorta şirketini zarara uğrattırıyor,
- Bir sigorta şirketi tasarruf edebilmek amacıyla müşterisinden gelen geçerli bir hak talebini geri çeviriyor.

4b.

- Bir hasta, sigorta şirketinden daha yüksek geri ödeme alabilmek için doktorla iş birliği yaparak sadece bir kere sağlanan hizmeti birden fazla almış gibi gösteriyor,
- Bir doktor, hastaya, kendisine daha yüksek ödeme yapması gereken bir teşhis koyuyor.

Aşağıda “sokak suçları” olarak adlandırılabilen hırsızlık ve kapkaç gibi suçların faileri ve “beyaz yaka suçları” olarak adlandırılabilen nitelikli dolandırıcılık suç faileri ile ilgili karşılaştırma soruları yer almaktadır. Lütfen dikkatlice okuyarak size göre hangisinin doğru olduğunu düşünüyorsanız **yalnızca o seçeneği** işaretleyiniz.

5. Kimin daha fazla yakalanma ihtimali olduğunu düşünüyorsunuz? İçinde 1000 lira bulunan çantayı sokakta birinden çalan hırsız veya iş vereninden (banka kasasından) 1000 lira zimmetine geçiren bir çalışan.

- Hırsızlık yapan
- Dolandırıcılık yapan
- İkisi de aynı şekilde
- Bilmiyorum

6. Yukarıda verilen senaryodaki suç failerinin ikisinin de yakalandığını ve suçlu bulunduğunu düşünün. Sizce hangi suçlu daha ciddi bir ceza (daha uzun süreli hapis cezası vb.) alacaktır?

- Hırsızlık yapan
- Dolandırıcılık yapan
- İkisi de aynı şekilde
- Bilmiyorum

7. Kimin daha ciddi cezalandırılması gerektiğini düşünüyorsunuz?

- Hırsızlık yapan
- Dolandırıcılık yapan
- İkisi de aynı şekilde
- Bilmiyorum

8. Telefonunuza gelen bir ödül kazanma mesajından şüphelendiniz (telefon, tablet, bilgisayar vb.) Bu ödülün doğruluğunu teyit etmek için kimi ararsınız?

-(Belirtiniz.)
- Kimseyi aramazdım
- Görmezden gelirdim
- Bilmiyorum

9. Eğer herhangi bir şekilde dolandırıcılık kurbanı olsaydınız ihbarda bulunur muydunuz?

- Evet. Bu durumu kime şikayet ederdiniz?
- Hayır. Bu durumu neden şikayet etmezdiniz?
- Ne olduğuna göre değişir. İhbarda bulunma durumunuz nelere göre değişirdi?.....

Bilmiyorum.

Aşağıda işyerinde yaşanan hırsızlık/dolandırıcılık (zimmete para geçirme vb.) suçları ile ilgili birkaç soru yer almaktadır. **Lütfen soruları dikkatlice okuyarak cevaplayınız.**

10.Hiç işvereninden bir şeyler çalan birini tanıyor musunuz?

- Evet. (11. soruya geçiniz.)
 Hayır. (12. soruya geçiniz.)
 Bilmiyorum. (12. soruya geçiniz.)

11. Bu kişi yakalandı mı?

- Evet.
 Hayır/Henüz yakalanmadı.
 Bilmiyorum.

12.Aşağıda verilen pozisyonlardan hangisinde yer alan kişilerin işyerinde hırsızlık/dolandırıcılık yapma (zimmete para geçirme vb.) ihtimalinin daha yüksek olduğunu düşünüyorsunuz?

- Yönetici
 İşyeri çalışanları
 İş sahipleri
 Diğer.....
 Bilmiyorum.

13. Aşağıda işyerinde gerçekleşen hırsızlık/dolandırıcılık suçlarıyla ilgili (zimmete para geçirme vb.) bazı nedensel açıklamalar yer almaktadır. Aşağıda yer alan nedensel açıklamalardan her birinin ne derecede geçerli bir sebep olabileceğini düşünüyorsanız ona göre derecelendirmeniz gerekmektedir. (1 hiç katılmıyorum-6 tamamen katılıyorum)

- | | |
|---|-------------|
| <input type="checkbox"/> Ailenin maddi durumunun kötü olması | ① ② ③ ④ ⑤ ⑥ |
| <input type="checkbox"/> Uyuşturucu bağımlılığı | ① ② ③ ④ ⑤ ⑥ |
| <input type="checkbox"/> Açgözlülük | ① ② ③ ④ ⑤ ⑥ |
| <input type="checkbox"/> Kişinin kötü yetiştirilmiş olması | ① ② ③ ④ ⑤ ⑥ |
| <input type="checkbox"/> Heyecan, eğlence | ① ② ③ ④ ⑤ ⑥ |
| <input type="checkbox"/> Kumar borcu/bağımlılığı | ① ② ③ ④ ⑤ ⑥ |
| <input type="checkbox"/> Çok harcama | ① ② ③ ④ ⑤ ⑥ |
| <input type="checkbox"/> İş verenine karşı kızgınlık veya intikam | ① ② ③ ④ ⑤ ⑥ |

13a. Sizin aklınıza gelen başka nedenler var mı? Varsa belirtiniz.

.....
.....
.....

Günlük hayatta yaptığımız eylemlerin çoğu bizi dolandırıcılık kurbanı olma riskine itebilmektedir. Aşağıdaki sorular normal olarak gördüğümüz ama bizi dolandırıcılık kurbanı olma riski içine sokan bazı aktivitelerden oluşmaktadır. **Lütfen günlük hayatta yaptığımız davranışları düşünerek aşağıdaki soruları cevaplayınız.**

14. Daha önce hiç, bir çekilişe katılabilmek için başka bir ürün satın almanız gereken bir reklama, mesaja, arama cevap vererek ürünü satın aldınız mı?

- Evet.
- Hayır.
- Hiç öyle bir mesaj, arama almadım.

15. Daha önce hiç, aile üyeniz olmayan bir insana kredi/banka kartı şifrenizi, telefon şifrenizi veya T.C. kimlik numaranızı verdiniz mi?

- Evet.
- Hayır.
- Bilmiyorum.

16.Telefondan arayarak/mesajla veya internetten (instagram vb.) yapılan satışlara karşı koymayı ne derecede zor bulursunuz?

- Çok zor
- Orta zor
- Hiç zor bulmam
- Bilmiyorum
- Hiç öyle bir şey yaşamadım

17.Ne kadar sıklıkla beraber çalıştığınız, hizmet aldığınız (avukat, doktor, mimar vb.) kişilerin geçmişini incelersiniz/güvenirliğini araştırırsınız?

- Her zaman
- Bazen
- Hiç
- Bilmiyorum

18.Ne kadar sıklıkla kişisel bilgilerinizi telefondan, internetten paylaşırsınız?

- Her zaman
- Bazen

- Bu tür bilgileri vermem
- Bilmiyorum

19. Cüzdanınızda/çantanızda kaç tane kredi kartınız var?

.....

Aşağıda son 12 ay içerisinde sizin veya aynı evde yaşadığınız kişiler tarafından yaşanmış mağduriyetlerle ilgili sorular sorulacaktır. **Lütfen soruları son 12 ayı dikkate alarak kendinizi ve aynı ev içinde yaşadığınız kişileri düşünerek cevaplayınız.**

20. Son 12 ay içerisinde, siz veya aynı evde yaşadığınız diğer kişiler, telefonunuza veya mailinize gelen “bedava ödül kazandınız” (tatil, cep telefonu vb.) mesajına cevap verdiniz ve daha sonrasında bunun doğru olmadığını öğrendiniz mi?

- Evet. (20a’ya geçiniz.)
- Hayır. (21. soruya geçiniz.)

20a. Bu olayı bildirdiniz mi?

- Evet. Kime/nereye bildirdiniz?(20b’ye geçiniz.)
- Hayır. (21. soruya geçiniz.)

20b. Bu olayın sonucunda neler oldu?

.....

21. Son 12 ay içerisinde, siz veya aynı evde yaşadığınız diğer kişiler, hiç yapılmamış veya sonradan tamamen gereksiz olduğunu fark ettiğiniz bir otomobil tamirine para ödediniz mi?

- Evet. (21a’ya geçiniz.)
- Hayır. (22. soruya geçiniz.)

21a. Bu olayı bildirdiniz mi?

- Evet. Kime/nereye bildirdiniz?(21b’ye geçiniz.)
- Hayır. (22. soruya geçiniz.)

21b. Bu olayın sonucunda neler oldu?

.....

22. Son 12 ay içerisinde, siz veya aynı evde yaşadığınız diğer kişiler, kayıp veya çalıntı kredi kartları sayılmaksızın, kredi kartı veya banka hesap numaralarınızı paylaşmanız için kandırılarak bunun sonucunda kartlarınızdan onayınız olmadan alışveriş yapıldı mı?

- Evet. (22a'ya geçiniz.)
 Hayır. (23. soruya geçiniz.)

22a. Bu olayı bildirdiniz mi?

- Evet. Kime/nereye bildirdiniz?.....(22b'ye geçiniz.)
 Hayır. (23. soruya geçiniz.)

22b. Bu olayın sonucunda neler oldu?

.....
.....
.....

23. Son 12 ay içerisinde, siz veya aynı evde yaşadığınız diğer kişiler, aldığınız ürünün karşılığında satış sırasında size söylenen fiyattan daha fazla bir faturayla karşılaştınız mı?

- Evet. (23a'ya geçiniz.)
 Hayır. (24. soruya geçiniz.)

23a. Bu olayı bildirdiniz mi?

- Evet. Kime/nereye bildirdiniz?.....(23b'ye geçiniz.)
 Hayır. (24. soruya geçiniz.)

23b. Bu olayın sonucunda neler oldu?

.....
.....
.....

24. Son 12 ay içerisinde, siz veya aynı evde yaşadığınız diğer kişiler, bankacınız veya mali planlayıcınız tarafından kasten yanlış yönlendirilerek paranız çalındı mı?

- Evet. (24a'ya geçiniz.)
 Hayır. (25. soruya geçiniz.)

24a. Bu olayı bildirdiniz mi?

- Evet. Kime/nereye bildirdiniz?.....(24b'ye geçiniz.)
 Hayır. (25. soruya geçiniz.)

24b. Bu olayın sonucunda neler oldu?

.....
.....
.....

25. Son 12 ay içerisinde, siz veya aynı evde yaşadığınız diğer kişiler, 800'lü veya 900'lü numaralar tarafından aranıp kandırılarak para veya mülkünüzü kaybettiniz mi?

- Evet. (25a'ya geçiniz.)
 Hayır. (26. soruya geçiniz.)

25a. Bu olayı bildirdiniz mi?

Evet. Kime/nereye bildirdiniz?.....(25b'ye geçiniz.)

Hayır. (26. soruya geçiniz.)

25b. Bu olayın sonucunda neler oldu?

.....

26. Son 12 ay içerisinde, siz veya aynı evde yaşadığınız diğer kişiler, internet üzerinden aldığınız bir ürün sonucunda para verdiğiniz ürünü elde edemeyip (aldığınız üründen başka ürün geldi/ürün hiç gelmedi) paranızın çalındığı oldu mu?

Evet. (26a'ya geçiniz.)

Hayır. (27. soruya geçiniz.)

26a. Bu olayı bildirdiniz mi?

Evet. Kime/nereye bildirdiniz?.....(26b'ye geçiniz.)

Hayır. (27. soruya geçiniz.)

26b. Bu olayın sonucunda neler oldu?

.....

27. Son 12 ay içerisinde, siz veya aynı evde yaşadığınız diğer kişiler, yatırım yaptığınız bir oluşum(birlik) tarafından kandırılarak paranız çalındı mı?

Evet. (27a'ya geçiniz.)

Hayır. (28. soruya geçiniz.)

27a. Bu olayı bildirdiniz mi?

Evet. Kime/nereye bildirirdiniz?.....(27b'ye geçiniz.)

Hayır. (28. soruya geçiniz.)

27b. Bu olayın sonucunda neler oldu?

.....

28. 1'den 5'e kadar derecelendirmede (1 çok güvensiz hissediyorum-5 çok güvende hissediyorum) bu tür suçlar tarafından ileride mağdur olma durumu konusunda kendinizi ne kadar güvende hissediyorsunuz?

Çok güvensiz hissediyorum ① ② ③ ④ ⑤ Çok güvende hissediyorum

29. Dolandırıcılık, zimmete para geçirme gibi beyaz yaka suçları veya hırsızlık, kapkaç gibi sokak suçları ile mücadelede devletin daha fazla kaynak tahsis etmesi gerektiğine inanıyor musunuz?

Sokak suçları ile mücadeleye daha fazla kaynak tahsis edilmeli.

- Beyaz yaka suçları ile mücadeleye daha fazla kaynak tahsis edilmeli.
- İkisine de eşit şekilde kaynak tahsis edilmeli.
- Bilmiyorum.

Aşağıda yer alan sorularda ortalama bir beyaz yaka suçu mağdurunun özellikleriyle ilgili birtakım cümleler verilmiştir. **Lütfen verilen cümleleri dikkatlice okuyarak kendi düşünceleriniz doğrultusunda cevaplayınız.**

30. Belirli bir yaş grubundaki insanların diğer yaş grubundaki insanlara göre tüketici dolandırıcılığı mağduru olma riski daha yüksektir.

- Katılıyorum. *Sizce bu hangi yaş grubu olabilir?
- Katılmıyorum.
- Kararsızım (Ne katılıyorum ne katılmıyorum)
- Bilmiyorum.

31. Belirli bir gelir seviyesindeki insanların diğer gelir seviyesindeki insanlara göre tüketici dolandırıcılığı mağduru olma riski daha yüksektir.

- Katılıyorum. *Sizce bu hangi gelir seviyesi olabilir?.....
- Katılmıyorum.
- Kararsızım (Ne katılıyorum ne katılmıyorum)
- Bilmiyorum.

32. Belirli bir eğitim seviyesindeki insanların diğer eğitim seviyesindeki insanlara göre tüketici dolandırıcılığı mağduru olma riski daha yüksektir.

- Katılıyorum. *Sizce bu hangi eğitim seviyesi olabilir?.....
- Katılmıyorum.
- Kararsızım (Ne katılıyorum ne katılmıyorum)
- Bilmiyorum.

33. Aklınıza gelen, dolandırıcılık mağduru olma riski daha yüksek olan başka gruplar var mı? Varsa lütfen belirtiniz.

.....
.....
.....

Appendix B: National Public Survey on White Collar Crime Questionnaire

To begin, I will read you some very short scenarios. I would like you to tell me which of the two scenarios you think is MORE serious. By MORE serious, we mean more significant, urgent, or important. Are you ready to begin?

Please tell me which crime is MORE serious...

- 1a. A person steals a handbag containing \$100 from someone on the street. -or-
A bank teller embezzles \$100 from his employer.
- 1b. A person steals a handbag containing \$100 from someone on the street. -or-
A contractor cheats a person out of \$100 by making an unnecessary repair.
- 2a. A person robs someone at gun point causing serious injury. -or-
An auto maker fails to recall a vehicle with a known defective part. One person is seriously injured.
- 2b. A person robs someone at gun point causing serious injury. -or-
Knowing a shipment of meat is bad, a store owner sells it anyway. One package is sold and a customer becomes seriously ill.
- 3a. A public official takes a bribe that influences his official duties. -or-
A private citizen bribes a public official to obtain a favor.
- 3b. A public official takes a bribe that influences his official duties. -or-
A corporation bribes a public official to obtain a favorable decision.
- 4a. A PATIENT files a false claim against an insurance company in order to receive a higher reimbursement. -or-
A DOCTOR lies on a claim he made to a health insurance company in order to receive a higher reimbursement.
- 4b. A PATIENT files a false claim against an insurance company in order to receive a higher reimbursement. -or-
A health insurance company knowingly denies a valid claim in order to save money.

Now I would like to ask you some questions about how you see white collar criminals as compared to other criminals.

5. Who do you think is MORE LIKELY to be caught by the authorities, someone who commits a robbery and steals \$1000 or someone who commits a fraud and steals \$1000?
Options: Someone who commits a robbery
Someone who commits a fraud
Equally likely
Don't Know
Refused
6. If they are both caught and convicted, who do you think WILL LIKELY receive the more severe punishment, the person who commits the fraud or the person who commits the robbery?
Options: Person who commits the fraud
Person who commits the robbery
Equally likely
Don't Know
Refused
7. Who do you think SHOULD be punished more severely, the person who commits the fraud or the person who commits the robbery?
Options: Person who commits the fraud
Person who commits the robbery
Equally punished
Don't Know
Refused
8. If you were to become suspicious about a telephone prize offer you received, who would you call to find out if the offer was legitimate?
Options: (specify) _____
Wouldn't call anyone
Would just avoid offer
Don't Know
Refused
9. If you were to become a victim of a fraud, would you report it?
Options: Yes [Go to Q9a]
No [Go to Q9b]
Depends [Go to Q9c]
Don't Know [Skip to Q 10]
Refused [Skip to Q10]
- 9a. Who would you report it to?
9b. Why wouldn't you report it'?
9c. What things would it depend on?

Now I would like to ask you some questions about workplace theft.

10. Have you known anyone who has stolen property from his or her employer?
Options: Yes [Go to Q 11]
No [Skip to Q12]

- Don't Know [Skip to Q12]
 Refused [Skip to Q12]
- II. Was the person caught?
 Options: Yes
 No or "Not Yet"
 Don't Know
 Refused

12

12. Who do you think is responsible for committing the most costly work place theft that now occurs: those in management, line workers, or business owners?
 Options: Management
 Line workers
 Business owners
 Other (specify) _____
 Don't Know
 Refused

13. There are several reasons that people commit crimes like workplace theft and embezzlement. On a scale of 1 to 6, with 1 being strongly disagree and 6 being strongly agree, tell me how much you agree that the following are reasons that people commit crimes like workplace theft and embezzlement. Is it because of...

Options:	Family financial need	1	2	3	4	5	6	DK	REF
	Drug habit	1	2	3	4	5	6	DK	REF
	Greed	1	2	3	4	5	6	DK	REF
	Poor upbringing	1	2	3	4	5	6	DK	REF
	Thrill	1	2	3	4	5	6	DK	REF
	Gambling debt	1	2	3	4	5	6	DK	REF
	Overspending	1	2	3	4	5	6	DK	REF
	Anger or vengeance	1	2	3	4	5	6	DK	REF

- 13a. Are there any other reasons people commit crimes like embezzlement and workplace theft?
 Options: Yes (specify) _____
 No
 Don't Know
 Refused

Many of our actions, which we take for granted, may place us at risk for becoming victims of fraud. I would now like to ask you some questions about your everyday activities.

14. Have you ever responded to a mailing, other than Publisher's Clearinghouse, by purchasing an item in order to become ELIGIBLE for a FREE prize?
 Options: Yes
 No
 Have never received such a mailing
 Don't Know
 Refused

- 14a. Have you ever responded to a mailing, WITHOUT purchasing something in order to become ELIGIBLE for a FREE prize? (other than Publisher's Clearinghouse)

Options: Yes
No
Have never received such a mailing
Don't Know
Refused

15. Have you ever given someone, other than an immediate family member, your PIN number, such as an ATM code or long distance telephone calling card code?

Options: Yes
No
Don't have any cards with PIN numbers
Don't Know
Refused

16. Do you find it very difficult, somewhat difficult, or not at all difficult to resist a telephone sales pitch?

Options: Very difficult
Somewhat difficult
Not at all difficult
Have never received sales pitch telephone call
Don't Know
Refused

17. How often do you check into the background of contractors who do work for you, such as roofers, driveway pavers, or remodeling contractors--Always, sometimes or never?

Options: Always
Sometimes
Never
Have never hired a contractor
Don't Know
Refused

18. Before you discard credit card solicitations you receive in the mail, do you tear them up--Always, sometimes, or never?

Options: Always
Sometimes
Never
Have never received credit card solicitations in the mail
Don't Know
Refused

19. How often do you give personal information such as your credit card number or social security number over a cordless phone--Always, sometimes, or never?

Options: Always
Sometimes
Never
Do not give personal information over the telephone
Do not have a cordless phone

Have scrambled cordless phone
 Don't Know
 Refused

20. How many credit cards do you carry in your wallet or purse?

Now I am going to ask you some questions about any experiences you or someone in your household may have had with fraud during the last 12 months.

21. In the last twelve months, have you or someone in your household ever responded to an offer for a free prize, a free vacation, or a free sample of a product, which turned out NOT to be free?

Options: Yes [Go to Q21a]
 No [Skip to Q22]
 Don't Know [Skip to Q22]
 Refused [Skip to Q22]

21a. Did you report the incident?

Options: Yes [Go to Q21b]
 No [Skip to Q22]
 Don't Know [Skip to Q22]
 Refused [Skip to Q22]

21b. To whom?

Options: Police or related law enforcement
 Better Business Bureau
 Other Consumer Protection Agency (specify) _____
 Business/Person involved in the swindle
 District Attorney or State Attorney General
 Personal Lawyer
 Other (specify) _____

21c. What was the outcome of the situation?

22. In the last twelve months, have you or someone in your household ever paid for repairs to an automobile that you later discovered were never performed OR that you later discovered were completely unnecessary?

Options: Yes [Go to Q22a]
 No [Skip to Q23]
 Don't Know [Skip to Q23]
 Refused [Skip to Q23]

22a. Did you report the incident?

Options: Yes [Go to Q22b]
 No [Skip to Q23]
 Don't Know [Skip to Q23]

- 22b. To whom? Refused [Skip to Q23]
Options: Police or related law enforcement
Better Business Bureau
Other Consumer Protection Agency (specify) _____
Business/Person involved in the swindle
District Attorney or State Attorney General
Personal Lawyer
Other (specify) _____

22c. What was the outcome of the situation?

23. In the last twelve months, not counting lost or stolen credit cards, has anyone ever tricked you or someone in your household into giving credit card or bank account number information, so that charges could be made without your knowledge?

- Options: Yes [Go to Q23a]
No [Skip to Q24]
Don't Know [Skip to Q24]
Refused [Skip to Q24]

23a. Did you report the incident?

- Options: Yes [Go to Q23b]
No [Skip to Q24]
Don't Know [Skip to Q24]
Refused [Skip to Q24]

23b. To whom?

- Options: Police or related law enforcement
Better Business Bureau
Other Consumer Protection Agency (specify) _____
Business/Person involved in the swindle
District Attorney or State Attorney General
Personal Lawyer
Credit Card Company
Other (specify) _____
No More

23c. What was the outcome of the situation?

24. In the last twelve months, has anyone ever lied to you, or someone in your household, about the price of a product or service when you were buying it and then billed you for more than what you were told it would cost?

- Options: Yes [Go to Q24a]
No [Skip to Q25]
Don't Know [Skip to Q25]
Refused [Skip to Q25]

24a. Did you report the incident?

- Options: Yes [Go to Q24b]
No [Skip to Q25]
Don't Know [Skip to Q25]
Refused [Skip to Q25]

24b. To whom?
Options: Police or related law enforcement
Better Business Bureau
Other Consumer Protection Agency (specify) _____
Business/Person involved in the swindle
District Attorney or State Attorney General
Personal Lawyer
Credit Card company
Other (specify) _____

24c. What was the outcome of the situation?

25. In the last twelve months, has a financial planner or stockbroker ever given you or someone in your household false or deliberately misleading information in order to cheat you out of money?

Options: Yes [Go to Q25a]
No [Skip to Q26]
Don't Know [Skip to Q26]
Refused [Skip to Q26]

25a. Did you report the incident?

Options: Yes [Go to Q25b]
No [Skip to Q26]
Don't Know [Skip to Q26]
Refused [Skip to Q26]

25b. To whom?

Options: Police or related law enforcement
Better Business Bureau
Other Consumer Protection Agency (specify) _____
Business/Person involved in the swindle
District Attorney or State Attorney General
Personal Lawyer
Other (specify) _____

25c. What was the outcome of the situation?

26. In the last twelve months, has anyone used an 800 or 900 number to cheat you or someone in your household out of money or property?

Options: Yes [Go to Q26a]
No [Skip to Q27]
Don't Know [Skip to Q27]
Refused [Skip to Q27]

26a. Did you report the incident?

Options: Yes [Go to Q26b]
No [Skip to Q27]
Don't Know [Skip to Q27]
Refused [Skip to Q27]

26b. To whom?

Options: Police or related law enforcement
Better Business Bureau

Other Consumer Protection Agency (specify) _____
Business/Person involved in the swindle
District Attorney or State Attorney General
Personal Lawyer
Phone Company (local or long distance carrier)
Other (specify) _____

26c. What was the outcome of the situation?

27. In the last twelve months, has anyone other than a family member used your or someone in your household's long distance telephone PIN number without permission?

Options: Yes [Go to Q27a]
No [Skip to Q28]
Don't Know [Skip to Q28]
Refused [Skip to Q28]

27a. Did you report the incident?

Options: Yes [Go to Q27b]
No [Skip to Q28]
Don't Know [Skip to Q28]
Refused [Skip to Q28]

27b. To whom?

Options: Police or related law enforcement
Better Business Bureau
Other Consumer Protection Agency (specify) _____
Business/Person involved in the swindle
District Attorney or State Attorney General
Personal Lawyer
Phone Company (local or long distance carrier)
Other (specify) _____

27c. What was the outcome of the situation?

28. In the last twelve months, have you or someone in your household ever been cheated out of money or property through an Internet transaction?

Options: Yes [Go to Q28a]
No [Skip to Q29]
Don't Know [Skip to Q29]
Refused [Skip to Q29]

28a. Did you report the incident?

Options: Yes [Go to Q28b]
No [Skip to Q29]
Don't Know [Skip to Q29]
Refused [Skip to Q29]

28b. To whom?

Options: Police or related law enforcement

Better Business Bureau
 Other Consumer Protection Agency (specify) _____
 Business/Person involved in the swindle
 District Attorney or State Attorney General
 Personal Lawyer
 Other (specify) _____

28c. What was the outcome of the situation?

29. On a scale of 1 to 5, with 1 being very unsafe and 5 being very safe, how safe you feel from being victimized by crimes like these in the future?

Options: 1 Very unsafe
 2 Somewhat unsafe
 3 Neither safe nor unsafe
 4 Somewhat safe
 5 Very safe
 Other (specify) _____

30. Do you believe the government should devote more resources to combating street crimes like robbery or to white collar crimes like fraud?

Options: More money to combating street crimes
 More money to combating white collar crimes
 Equal money
 Don't Know
 Refused

31. Do you agree or disagree with the following statement:
 Persons in certain age groups are more likely than persons in OTHER age groups to be victimized by some kind of consumer fraud.

Options: Agree [Go to Q31a]
 Disagree [Skip to Q32]
 Neither agree nor disagree [Skip to Q32]
 Don't Know [Skip to Q32]
 Refused [Skip to Q32]

31a. Which age groups would those be? _____

32. Do you agree or disagree with the following statement:
 Persons in certain income levels are more likely than persons of OTHER income levels to be victimized by some kind of consumer fraud.

Options: Agree [Skip to Q32a]
 Disagree [Skip to Q33]
 Neither agree nor disagree [Skip to Q33]
 Don't Know [Skip to Q33]
 Refused [Skip to Q33]

32a. Which income levels would those be? _____

33. Do you agree or disagree with the following statement:
Persons of certain education levels are more likely than persons of OTHER education levels to be victimized by some kind of consumer fraud.

Options: Agree [Skip to Q33a]
 Disagree [Skip to Q34]
 Neither agree nor disagree [Skip to Q34]
 Don't Know [Skip to Q34]
 Refused [Skip to Q34]

33a. Which education levels would those be? _____

34. Are there any other groups of people that you think are more likely to become victims of fraud?

Options: Yes [Go to Q34a]
 No [Skip to Q35]

34a. Which groups would that be? _____ ?

RESEARCH ARTICLE

The Evaluation Of Justice System Actors On Forensic Interviews With Children Victims Of Sexual Abuse¹

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Abstract

Forensic Interviewing is a method of communicating with subjects within the Investigation Process, in order to obtain the most accurate information. In recent years, the child's involvement in the legal system, both as victims of crime and witnesses, has increased. The problem facing the Researcher, is that there is not enough information in the literature regarding the evaluations of judges and professional staff on Forensic Interviews with children who are victims of sexual abuse. This study was planned in Istanbul and was carried out in three major courthouses in Istanbul. The research data was analysed using the Maxqda 2020 qualitative data analysis program. It was determined that the training on Forensic Interview with sexually abused children had been found sufficient by most of the judges, but insufficient by more than half of the professional staff according to the result of the research. It was determined that more than half of the judges did not attend the training and those who did attend, were unwilling to use the child- friendly interview rooms. Professional staff declared that there should be more practical training in the future training programs. It was found that in Istanbul, each judge was responsible for roughly 60 trials each month and this situation puts time pressure on them. This article was produced from a doctoral thesis.

Keywords: Abuse, Child, Evidence, Forensic Interview, System Theory

Öz

Adli görüşme maksimum kalitede bilgi elde etmek için soruşturma sürecinde herhangi biriyle iletişim kurma yöntemidir. Son yıllarda çocukların suç mağduru ve tanık olarak hukuk sistemine katılımı artmıştır. Araştırmanın problemi hakim ve meslek elemanlarının cinsel istismar mağduru çocuklarla yapılan adli görüşmeye ilişkin değerlendirmelerine yönelik literatürde yeterli bilginin bulunmamasıdır. Araştırma İstanbul ilinde planlanmış ve üç büyük adliyede yürütülmüştür. Araştırma verileri Maxqda veri analiz programı kullanılarak gerçekleştirilmiştir. Gerçekleştirilen araştırma sonucunda cinsel istismar mağduru çocukla adli görüşme eğitimini hakimlerin çoğunun yeterli, meslek elemanlarının yarısından fazlasının ise yetersiz bulunduğu belirlenmiştir. Eğitime hakimlerin yarısından fazlasının katılmamış olduğu ve eğitime katılmayan hakimlerin çocuk dostu adli görüşme odalarını kullanmak konusunda isteksiz oldukları belirlenmiştir. Meslek elemanları bundan sonraki eğitim programlarında daha fazla uygulama yapılması gerektiğini belirtmiştir. İstanbul'da bir hakimin ayda ortalama 60 davaya baktığı bu durumun hakimler üzerinde zaman baskısına yol açtığı tespit edilmiştir. Bu makale doktora tezinden üretilmiştir.

Anahtar Kelimeler: İstismar, Çocuk, Kanıt, Adli Görüşme, Sistem Teorisi.

¹ This study is derived from the doctoral thesis by Hüseyin Batman, under supervision of Elif Gökçearslan Çiftci titled as "Hakimlerin ve Meslek Elemanlarının Cinsel İstismar Mağduru Çocuklarla Yapılan Adli Görüşmeye İlişkin Değerlendirmeleri" in the Department of Social Work, Health Sciences Institute, Ankara University.

Introduction

Child sexual abuse is defined as any sexual activity performed with a child by an adult or another child who has power over the child without the child's consent (Munro, 2000 as cited in Chiteraka, 2012). All behaviors such as pornography, exhibitionism, touching the genital area and rape are identified as types of sexual abuse. In sexual abuse, it doesn't matter whether or not the child has consent (Polat, 2007). Child sexual abuse (CSA) has been found to be widespread in all nations (Barth, Bermetz, Heim, Trelle, & Tonia, 2013 as cited in Mathews & Vezina, 2019). For instance; according to the 2015–16 Crime Survey for England and Wales, 7% of people aged between 16 and 59 reported that they were sexually abused as a child. Although this survey did not include young children or all forms of sexual abuse, this still equates to over two million victims and survivors in that age bracket across England and Wales a substantial proportion of the population (Obe, Evans, Frank & Sharpling, 2018). In Turkey, according to statistics of the Ministry of Justice each month 650 children attend court in relation to child sexual abuse allegations (Child Sexual Abuse Report, 2016). Children can take part in the judicial system as defendants, witnesses or victims (Çağlar & Türk, 2019).

Forensic interview is the most important element of the investigation in terms of evidence in an abuse case (Korkman, Pakkanen & Laajasalo, 2017). During a criminal investigation police officers strive to answer two primary questions, namely what has occurred and who is responsible (Milne & Bull, 2006). When attempting to answer these questions and in order to bring the perpetrators of crime to justice, police officers require information. One of the primary sources of such information are witnesses and victims (Dando & Milne, 2009). The issues of child testimony are quite complex; the lack of physical evidence, the repetition of critical scenes and the witness's lack of maturity make the investigation very difficult. Because the alleged perpetrator is usually a relative of the child, details gained from an interview of a child are mainly used to characterize the offense and provide clues to

corroborate their testimony (Larsson & Lamb, 2009 as cited in Launay, 2015).

In recent years, there has been an increase in the number of children entering the judicial system in Turkey. Looking at the data of the Turkish Statistical Institute (TUIK), the number of children coming or brought to the security units in 2017 increased by 5% compared to the previous year and reached 335,242 (hurriyet.com.tr, 2019). The actual prevalence of sexual abuse is more difficult to document accurately, because few victims disclose such abuse for various reasons, including fear, guilt, repression, and shame (Finkelhor, 1979; Russell, 1983; Schultz, 1973 as cited in Palmer, Frantz, Armsworth, Swank, Copley & Bush, 1999).

There are three different models to interview sexually abused children in Turkey, Child Protection Units (Çocuk Koruma Birimleri), Child Monitoring Centers (Çocuk İzlem Merkezleri) and Forensic Interview Rooms (Adli Görüşme Odaları) (Batman, 2018). The first Child Protection Unit was established in 1998, the first Child Monitoring Center was established in 2012 and the first Forensic Interview Room was established in 2017 (Batman & Gökçearsan, 2021).

The main goal of the Child-Friendly Forensic Interview Room is described as enabling child protection through principles of interviewing children in a friendly environment by experienced staff. According to the standards, the interview is carried out by a judge in the presence of a psychologist/social worker (Ümit, Çavdar & Yağcıoğlu, 2014). It was stated by the participants in the research that the Ministry of Justice provided 5-day Forensic Interview Rooms Training for judges, prosecutors and professional staff in the province of Antalya between 2017 and 2018. However, it has been determined that among the judges and professional staff interviewed by the researcher, there are people who have not yet undergone forensic interview room training (Batman, 2021).

The aim of this research is to get information from judges and professional staff about forensic interviewing of children that has been carried out by victims of child sexual abuse and assess their answers in line with the literature. Moreover, the child friendly Forensic Interview Room (AGO) application, which is tried to be popularized by the

Ministry of Justice, is to be handled within the framework of the system theory approach. This study will start with literature review about forensic interview with sexual abused children the dynamics and effects of child sexual abuse and developments in forensic interview rooms in Turkey. Secondly information will be given about methodology of the research and it's findings.

Literature Review

Interviewing is at the heart of any police investigation and thus is the root of achieving justice in society (Milne, Shaw & Bull, 2007). The interviewing of witnesses and suspects is a core function of policing across the world (Griffiths & Milne, 2006). Gudjonsson (2006) states that investigative interviews are an important form of evidence gathering. The main goal of conducting an investigative interview is to obtain information that is detailed, complete, comprehensible, valid, and relevant to the legal issues in the case that need to be established and proved. Griffiths and Milne (2006) suggest that the interviewing of witnesses and suspects is a core function of policing across the world.

Child witness refers to any child who is a victim of, or observes as a spectator, an event and who subsequently furnishes a report for any investigation or trial (Towl et al, 2008). Prescott, Milne & Clarke (2011) assert that witness testimony is an important primary resource in the investigation of criminal acts. In a survey questioning 159 police officers in the UK, Kebbell and Milne (1998) found that 36% believed that witnesses always or almost always provided critical information to aid the investigation, and further 51% believed that witnesses usually provided critical information for the progression of the case (Santtila, Korkman & Sandnabba, 2004).

It has been suggested that (Paterson, 2001, p.15) over the last few decades the capabilities of child witnesses have been of great interest to professionals in the legal field of child protection. This interest reflects increased awareness of child maltreatment and a subsequent increase in children's involvement in the legal system (Malloy et al, 2011). In a number of countries legislation has been brought in to allow criminal courts to receive

children's evidence. For instance, in England and Wales in 1988, legislation was introduced permitting children to testify in criminal trials via "live video link" in another room in the court building (Milne & Bull 1999).

Children who are victims of crimes in the justice system have difficulties in communicating their experiences to the relevant authorities. The basis of these difficulties is the fact that children are exposed to sexual abuse in the event that they experience, in the absence of any witnesses other than themselves and in the absence of physical evidence (Powell & Barnett, 2015). The nature and dynamics of sexual abuse and sexually abusive relationships are often traumatic. When sexual abuse occurs in childhood it can hinder normal social growth and be a cause of many different psycho-social problems (Maltz, 2002 as cited in Hall & Hall, 2011). Children should be interviewed as early as possible, because the longer the delay between an experience and the initial interview, the more likely it is that children will forget the experience and consequently be vulnerable to suggestive influences. Increased delay is especially a problem in sexual abuse cases (Gitlin and Pezdek, 2009). Child sexual abuse differs from other forms of childhood victimization in that there is usually no witness apart from the victim and the accused and often no physical evidence. Therefore, children must tell someone about it or someone who suspects abuse questions the child about it (Bussey, 2009).

Interviewing is acknowledged as a complex skill. It is process of conversational exchange (Shepherd, 1991) in which both the witness and the interviewing officer play an integral role (Dando & Milne, 2009). Effective interviewing of witnesses requires a great deal of skill and ability on the part of the interviewer (Rogers & Lewis, 2007). The forensic interviewer is considered a fact finder, objectively gathering details of legal relevance and documenting children's statements verbatim, if possible. He or she is supportive but remains neutral to the veracity of the information provided and refrains from a relationship that could unduly influence children's reports (Saywitz & Camparo, 2009). Forensic interviewers have a duty to be familiar with current interview methods and the supporting literature (Stewart et al, 2011).

Establishing rapport with children is an essential step in investigative interviews and should precede and discussion of suspected child abuse (Hershkowitz, 2011). Cherryman and Bull (2000) suggest that rapport building is an important factor in the success of an interview (Cherryman & Bull, 2000). It has been stated that (Lamb & Garretson, 2003) interviewers should build rapport with witnesses because this facilitates disclosure and maximizes informativeness.

Method

The main purpose of this research was to determine the assessments of judges and Professional staff (who carry out forensic interview with the child) regarding the forensic interview with children who are victims of sexual abuse and to evaluate their responses within the scope of the literature. In addition, to that, to analyze child friendly interview room that has been tried to be disseminated by the Ministry of Justice within the framework of the system theory approach. The data of the study were collected using two methods, qualitative and quantitative. Qualitative data were obtained with homogenous sample. In the study, similar sampling was used as it was aimed to collect information about the evaluations of heavy penal judges and professional staff regarding the forensic interview with children who were victims of sexual abuse. Since there were no forensic interview room in all courthouses in Istanbul at the time the research conducted, the research was carried out only in three big courthouses of Istanbul. Legal permission was obtained from the Council of Judges and Prosecutors to apply the research to judges, and from the Ministry of Justice General Directorate of Personnel to apply it to Professional staff. Also, ethics committee approval for the study was obtained from Ankara University.

In this research, interviews were conducted with professional staff (Social worker, psychologists etc.) who met with children who were victims of sexual abuse in the courthouse and with the judges of the high criminal court who administered the sexual abuse cases. Before starting the research, it was planned to interview at least 15 judges and 15 professional staff, but

during the interview process, the researcher made face to face interviews with a total of 25 professional staff and 18 heavy penalty judges working in three courthouses in Istanbul with his personal efforts. The interviewed professional staff are social worker, psychologist and psychological counselor. 13 of the professional staff are female (58%), 12 are male (48%), 4 of the judges are female (22.23%), 14 are male (77.77%). The researcher coded three courthouses in Istanbul with the colours white, blue and yellow, also judges with "star" and professional staff with "flower" names.

Qualitative data were obtained through face to face interviews with judges and professional staff, accompanied by a semi-structured interview form prepared in advance. Qualitative data were obtained by asking 13 questions in the "semi-structured interview form" used in the research. Within the scope of the research, a Preliminary Information Form was created by the researcher based on the National Child Health and Human Development Institute Protocol information (NICHD), which is widely used in the United States for heavy criminal court judges and professional staff, and a Socio-Demographical Characteristics Form in order to obtain information about individual characteristics. The quantitative data obtained through these forms.

At the beginning of the face to face interviews, a brief information about the purpose of the research was given, and a voluntary participation form was signed, stating that the confidentiality of the information to be obtained from them would be provided by the researcher and would only be used for scientific purposes. Since the voice recording of the interviews with the professionals was taken within the permissions, the researcher did not rush to note the expressions of the professionals, the time was used optimally and there was no data loss. Few of the assize judges allowed audio recording, so the researcher took note of the judges' statements.

It was easier to interview professionals working in research an courthouses compared to judges. Conducting interviews with colleagues who share the same room with the interviewed professionals or work in a close room has been one of the issue that facilitated the process. Interviewing the judges

was one of the most challenging parts of the research process. Professional staff and clerks were asked in order to obtain information about which judge had a hearing and when it was available. Following the information obtained from here, permission was obtained from each judge in his room and a request was made to hold an interview. It was found remarkable that the two judges refused to hold an interview on the grounds that they did not use the “forensic interview rooms” and that they did not favor this practice. The audio recordings obtained from the interviews conducted by the researcher were transferred to Microsoft Word in the computer environment. Voice recording transcriptions of all participants, including 25 professional staff and 18 judges, were performed by the researcher. Within the scope of the research, the interviews were completed within a month, and the audio recording solutions of the data were completed between April and August 2019. Then, the analyzed data were printed out and read more than three times, and themes were tried to be determined. The analyses of the research data was carried out using the Maxqda 2020 qualitative data analysis program. In line with this program, the subheadings of the themes were created, tables

coding and making corrections when necessary (Yıldırım & Şimşek, 2016).

Findings

The research findings are given under the following headings: i) Definition of Child Victim, ii) Definition and Importance of Forensic Interview Room, iii) Child Statement, iv) Differences Between Child and Adult Victims, v) Forensic Interview Training with Child Victim. At the same time some findings are presented in tables.

Definition of Child Victim: Within the scope of this main title, the question of how that define the child victim was asked. The features most expressed by the participants are; exposure to trauma and in need of help.

The most frequently mentioned topics in the characteristics of victimized children were “Exposure to Trauma” and “To be in Need” The opinions of some of the participants were as follows.

The victim has traces of trauma, can be suicidal, attempts to cut himself, needs psychological support (Ancha, Judge, 50).

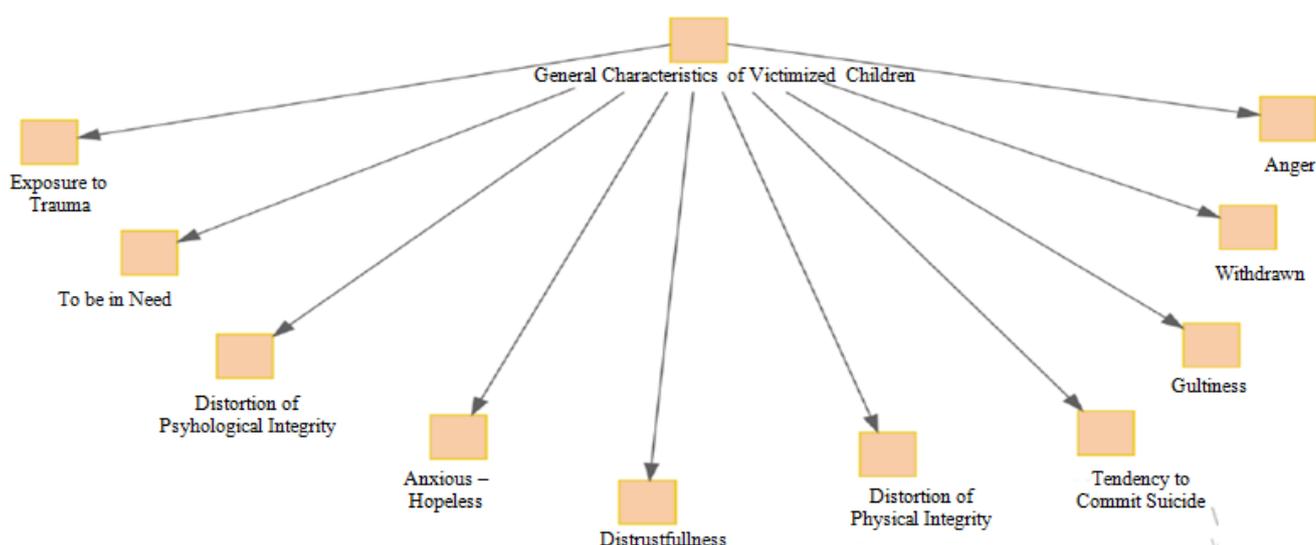


Figure 1. General Characteristics of Victimized Children

were prepared, and then the findings were interpreted by the researcher. Computer programs such as Maxqda offer advantages to the researcher in making the data analysis process more clear and systematic, controlling the process, reviewing the

There is trauma. Trauma, who needs help, definitely needs psychological support. ...I think that the people here should direct him somewhere, he should not be left alone (Karanfil, Professional Staff, 28).

A child in need of protection, that is, not adequately protected by his family, who should be protected by the

state, or at least an investigation should be made on this issue (Acrab, Judge, 63).

I mean, actually, any child, but of course, he has victimization and I think I can describe him as a child who needs more attention and help. I think that a child who has been exposed to anything should definitely be supported in some way (Kamelya, Professional Staff, 36).

Definition and Importance of Forensic Interview:

Participating judges and professional staff were asked to define the forensic interview according to themselves and their opinions about its place in the system. While more than half of the judges emphasized the idea that forensic interview was the process of collecting evidence, it was seen that the professional staff evaluated the issue as getting information from the child victim and ensuring justice. The most prominent among the responses of the participants were Information Retrieval Process and Helping the Victim Child.

One of the most emphasized issues by the most of the participating judges and professional staff regarding the definition of forensic interview is process of obtaining information. While more than half of the judges emphasized the idea that forensic interview was the process of collecting evidence, it was seen that the professional staff evaluated the issue as getting information from the child victim and ensuring justice. Shares of the participants are given below.

This is a job we do purely to obtain evidence, that is, whether the child is telling the truth, whether there is a contradiction, how much his statement will be respected, of course, we get help from the experts present at the hearing, we try to observe the child, we try to observe his reactions and we try to reach a conclusion because there is no other evidence fro these things, we are left alone with the victim (Almach, Judge, 46).

The process in which definition of the forensic interview with the child is reduced to the age and development of the child in a way that prevents secondary traumatization of the child and it is recorded that information about the incident is obtained from the child...(Kaktüs, Professional Staff, 40).

It is an interview to determine the required measures that should be taken and help the child. It is a very important in the justice system. AGO (Forensic interview room) has become for the benefits of children (Acrux, Judge, 50).

Child Statement: Participating judges and professionals were asked whether they saw a difference between the forensic interview with the child and the forensic interview with the adult. Opinions came to the for that children could access certain information more easily, or that they could come to the hearing with a script by hiding what

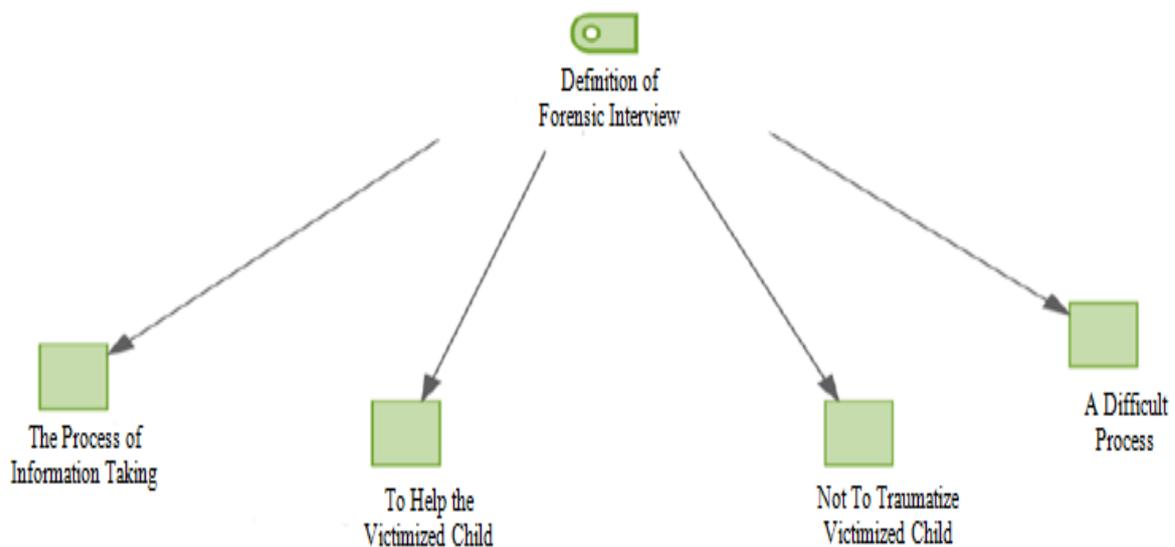


Figure 2. Definition of Forensic Interview

they had experienced, and that the young children narrated the event as it was.

...In the post-adolescent period, up to the age of 18, the child may be likely to lie for any reason. In other words, it can happen with family pressure, for example, in incest relationship, for example, the father can claim sexual abuse against his daughter, the mother may have pressure on the child, for example, from time to time, at least a question mark for us (Acrab, judge, 63).

As the child gets older, she learns some things by following them on social media, and she can come up

was definitely not enough...separately for each case..."disabled child", child with autism, that is, it would be better if there was a detailed drama education related to specific cases, yes I don't think it's enough in this respect (Çarkifelek, Professional Staff, 36).

The Assessment of Testimony of Children

In the training on Forensic Interview Rooms organized by the Ministry of Justice, participants expressed that the subject of interviewing children

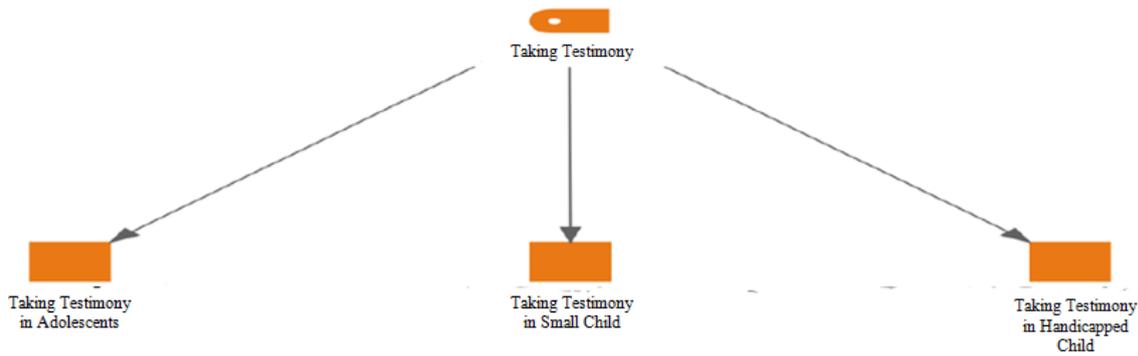


Figure 3. Taking Testimony

with a fiction...(Achird, judge, 49).

"..Now, of course, the child who is a victim of sexual abuse is now in such a situation that his psychological state, the huidance of his family, the guidance of the lawyer may be under pressure, he can tell about an event that did not happen, he can exaggerate, he can give the opposite statement. I am of the opinion that the sensitivity of the professional staff should also be at a very high level while taking the statements of the child and therefore the child here..." (Fesleğen, Professional Staff, 41).

"Personally, I can say about my own competence, I think that there is a serious knowledge and proficiency after the training we received, but of course that training

with disabilities was included. However, they stated that they did not find the training given to them sufficient.

In the research conducted; during the evaluation of the statement given by the child victim of sexual abuse, it was determined that the participating judges and professional staff mostly looked at the level of conformity of the child's statements with the material evidence, while the professional staff looked at the child's development level and the appropriateness and spontaneity of the expressions and whether they were in harmony.

Another question asked to the participants regarding the child's expression is what is

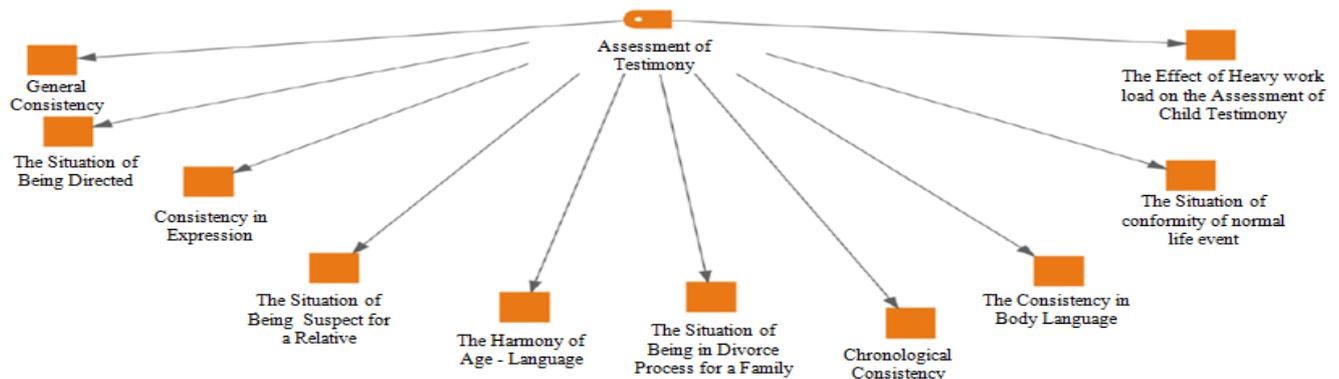


Figure 4. Assesment of Testimony

considered in the evaluation of the child's expression. The issue most frequently expressed by the participants was whether there was general consistency and misdirection.

Most of the participating judges and professionals stated that the most important factor when evaluating the interview with the child victims in the forensic interview room is general consistency. Participants stated that they looked at issues such as whether the child's statements matched with the material evidence, whether their narrative was stable, whether they told the events within the framework of time and space orientation, and whether they made eye contact. The statements of the participants are as follows.

I look at the general suitability, whether the child's description and the material findings match, whether it is in accordance with the doctor's report. You give the man a 10-year prison sentence with a statement given by the child, and there are problems in the execution process. With the child's statement, an innocent person can go to jail, a rapist can be released (Alcor, Judge, 58).

".. Whether the victim conveys the events with integrity while describing his gestures and mimics in what we call social heredity characteristics, whether he especially makes eye contact while expressing himself...Does he tell the events in terms of time and place orientation, one of the issues we pay attention to. Can he give details about the event while expressing himself, for example, we did this that day, but I wore black shoes, I had a yellow coat, if he can give such details, I can say that it affects us positively in terms of reliability (Çarkıfelek, Professional Staff, 36).

In the evaluation of the testimony given by the child victim of sexual abuse by the participating judges and professional staff, the judges mostly look at the level of conformity of the child's statements with the material evidence, on the other hand, it was seen that the professional staff looked at the child's development level and the appropriateness and spontaneity of her expressions and evaluated whether they were in harmony.

When evaluating the expression of the child who was the victim of sexual abuse, one of the issues that is mostly taken into consideration is whether the child is directed or not. Participants' opinions on the subject are as follows.

...During the interview with child the most important thing is whether she tells us the truth, if she is hiding something from us, whether she is under pressure of her family, being directed or not... (Almach, Judge, 46).

Now, of course, the child who is a victim of sexual abuse can tell about an event as if it didn't happen, exaggerate, and give the opposite statement...."(Fesleğen, Professional Staff, 41).

Participants particularly referring to incest cases, they stated that they paid attention to issues such as whether children looked at parents during the interview, whether they were exposed to pressure and whether they are affected by their families or not.

It is considered that, the victim's complaint must be submitted from the moment it is transmitted to the police station to the court as short as possible. It is thought that spending less time in police station and start the trial in a short time would be useful to protect children from being misdirected by their parents.

Differences Between Child and Adult Victims:

Another question asked to the participants within the scope of the research was about the differences between child and adult victims. The issues most frequently expressed by the participants in this regard were being more sensitive to child victims and the fear and possible effects of child victims. Most of the participants stated that they pay attention to the language they use when communicating with the child victim, they use a language that does not distress the child, and they act sensitively. The statements of the participants on the subject are presented below.

"There is a difference, we are kinder to children, we take care, we take statements using literature. We try to speak in a language that the child can understand and that will not put the child in trouble. In our interview with the adult, there are more comfortable and clearer determinations. We also direct our questions to the adult (Aladfar, Judge, 50).

"I think we need to be more sensitive, because I don't know at the moment what age you are talking about in the age range you call a child, but when you talk about sexual abuse in children at a young age, you can't ask your questions like an adult, that is, how much the child can come to you, sometimes you get blocked, that's all,

you can approach the child (Gülgoncasti, Professional Staff, 27).

The child is afraid during the forensic interview, so we approach her with caution, we look at her if there is any other evidence ... (Alchiba, Judge, 50).

There is also the fear part of the job, that is, you are trying to ensure that information is received from the child in an environment where he is not safe. Unless you make the child feel safe, it is not possible to receive information or healthy information... (Erguvan, Professional Staff, 25).

From the statements of the participants, the impression was obtained that they paid attention to be in an appropriate attitude and behavior to the age and situation of the child in the interview they made with the sexually abused child, and that they start to meet with the child by establishing rapport. It was found meaningful in terms of child-friendly policies.

Forensic Interview Training with Child Victim:

In this section, it was examined that whether judges and professional staff (Social worker, psychologists etc.) who work in courthouses attended forensic interview training of sexually abused children or not.

Five of the 18 judges (27.78%) and 23 (92%) of the 25 professionals who participated in the research stated that they had attended a training on forensic interviewing with a child who was a victim of sexual abuse in the past. Participants who stated that they attended the training organized by the Ministry of Justice in the past said that the trainings took place between 2 and 7 days. It is noteworthy that only 5 of the 18 judges interviewed had participated in forensic interview training with the child victim in the past. It has been determined that the judges who have participated in the forensic interview training have a higher interest in the subject and are in favor of the use of forensic interview rooms.

Participants who participated in the training on Forensic Interview Rooms by the Ministry of Justice expressed the titles of Forensic Interview Rooms and Stages, Interview Techniques with the Victim Child, Psycho-Drama Practices, Developmental Characteristics of the Child, and Theoretical and Technical Information on the content of the training.

Participants stated that they received training on interview techniques related to the Forensic Interview Rooms training organized by the Ministry of Justice, and they were informed about which methods would facilitate the interview with the child and how to communicate with the child. Some of the participants' thoughts on the subject are given below.

"I attended a 3-4 day training of the Ministry of Justice. It was quite sufficient, we also practiced in the practical training of a child in the forensic interview room, and we participated in the practical training of a child in the forensic interview room, I think it was a very sufficient training" (Acrab, Judge, 63).

"...After giving information about what we can use in interview techniques, what can help children's expression more, what information should be given to the child before entering the interview room, what can be done, what will help the child not to be abused it was actually a training in which we were directed to some brief summary techniques and to be informed and to improve our skills within the process (Erezya, Professional Staff, 40).

Participants stated that they found the practices in the training they attended on forensic interview rooms insufficient, that the cases that were applied were chosen from easy ones, that they could not come across any problematic sample cases, and that practice-based training should be provided. The statements of the participants are as follows

"No it wasn't enough. I mean, it's super blind. In fact, the information we know, that is, it is a bit like a repetition of the same things in our undergraduate or later trainings, but we feel that we are very inadequate in terms of practice. For example, in the last training, a book was prepared on the subject of...examples were given, but we received a booklet of the trainings there, based on 4-5 cases, but the cases went so smoothly. The child came and continued easily and finished. It's not like a troubling example... (Kamelya, professional staff, 36).

Not To Attend The Training and Its Effects

Another issue that the participants who attended the training on forensic interview rooms put forward regarding the training is that the training is unplanned. The opinions of the participants on the subject are given below.

It wasn't enough for me because I think it requires serious preparation, because, the information we acquired developmentally was the information we knew from the university, somehow we got and familiar with, you know, with minor differences, but for a 5 days it would settle in our head, digest it, and say, "It's like a they inserted a chip, did the installation, and left it". This information is both sitting in the brain and synthesizing in such a short time. It is not something that can be internalized in a such a way that it can be put into practice, and we will also need to get psychological support from time to time for this, because how to communicate with these children, how to approach a child who is highly traumatized, that is, how to approach them in more detail and I did not find it sufficient because it had to be endured for a longer period (Frezya, Professional Staff, 40).

Some participants complained about the inadequacy of the training period and stated that the training should be longer. The opinions of some participants regarding this are as follows

"I mean, it wasn't enough in terms of time, I don't remember exactly, but I think it was only once, that role-play work was only once, for example, it could have been more..." (Çalba, Professional Staff, 32).

In the interviews with the participants, it was determined that 13 out of 18 judges (72,22%) and 2 out of 25 professional staff (8%) did not attend the training on Forensic Interview Rooms. The title of Not To Get Training was evaluated under two headings: the reasons for not receiving education and the effects of not receiving education.

During the interviews with the judges who participated in the research, it was not clear why most of the judges did not attend the training at the time of the training. However, since it is known that the target audience of the 3-day Forensic Interview training conducted by the Ministry of Justice with the support of UNICEF in 2017 and 2018 for judges and prosecutors is 500 judges and prosecutors working in courthouses with AGO (Peker, 2018), it is considered that this quota is the barrier for reaching out more participants. The reasons for not participating in the training of the professional staff were to be in army service and being on maternity leave. The answers of the professionals on the subject are as follows

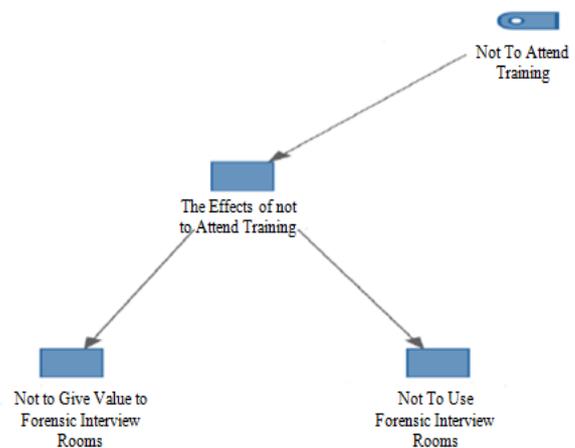
It was determined that some of the participants especially the professional staff, could not attend the training because they were in military service or were on maternity leave. Share of the participants regarding this issue are given below.

No I didn't get the training, I was in military service, therefore I couldn't attend it (Begonvil, Professional staff, 25)

I did not take. I was on maternity leave, that is, I was on unpaid leave to look after children (Begonia, Professional Staff, 26).

Data on not participating in the training and its effects are given below.

Figure 5. Not To Attend Training and Its Effects



13 out of 18 judges (72,22%) and 2 out of 25 professional staff (8%) declared that they did not attend the training on Forensic Interview Rooms. It has been observed that the professionals who did not have the opportunity to participate in the training but had a forensic interview with the child had positive thoughts about the application of forensic interview rooms. However, it was observed that some judges who did not attend the training did not use the Forensic Interview Rooms and did not care about this new practice. The effects of not receiving training were evaluated under two headings: not using the forensic interview rooms and not paying attention to the forensic interview rooms. Some of the participants' statements are as follows.

In the interviews with the judges who did not attend the forensic interview rooms training, it was determined that more than half of the judges who did not undergo the training did not use the

forensic interview rooms. Some of the judges' shares on the subject are presented below.

Now, the reason I didn't use it was because our colleagues used it a few times, there were complaints that there was a problem with the sound, that the contact could not be established properly, so that the heat of that child was not as good as the conversation we had with him, we did not use it until today, it may be if the problem is solved, but I am a supporter of the thing, so one to one. If necessary, there may be an environment where the court committee can go there, I don't know exactly how, this is not possible under today's conditions, I am in favor of the court committee making contact with the naked eye (Almach, Judge, 46).

Another prominent issue in the interviews with the judges who did not attend the training on forensic interview rooms was that the judges did not care about the forensic interview rooms. The opinions of the participants on the subject are as follows

The court should be able to touch the evidence, the AGO practice is against the "face to face principle"... I do not have a conscientious opinion on the camera screen. Let the doctor examine you in a camera environment, not in the hospital, and prescribe you medicine, do not go to the hospital, will you? I think this is a fiasco. 2 amateur police, a sociologist, social worker, an interview with 35 years in prison? I cannot base my decision on assumptions. The punishment you give to the person is not only imprisonment, it also destroys the reputation of the man...(Aladfar, Judge, 50).

Conclusion

Professional staff (social worker, psychologists) and judges who make contact with children victim of sexual abuse emphasized "trauma, need for help, deterioration in psychological and physical integrity and anxiety" when they were asked to define characteristics of children. It is thought that this situation emphasizes how much the children who are victims of sexual abuse need social support and the need to focus not only on the purpose of collecting information and reaching evidence, but also on the needs of the children in the forensic interviews to be made with them. The participants' definitions are compatible with the literature knowledge. The severity of the trauma experienced by children who are victims of sexual

abuse increases, especially if the attacker is a family member and the abuse lasts for a long time (Tower, 1999). One of the psychological problems that is likely to be seen in children who are victims of abuse often experience anxiety about the future (Polat, 2014).

It was also observed that there were differences in the views of the participants about taking statements from the young child. Professional staff stated that they mostly evaluate the expressions of young children based on consistency, not on right or wrong and generally find themselves sincere. Among the judges, opinions were expressed that the younger children had difficulty in expressing the concepts of time and space and that they could not express themselves. The phenomenon of consistency was mentioned by both professionals and judges in the evaluation of forensic interviews with the child. The consistency of the victim's statement plays an important role, especially in the decisions taken by judges (Gedik, 2019). Polat (2019) said that the most important issue in abuse cases is to obtain the abuse history from the child accurately.

The participants see the Forensic Interview as an important tool for the process of obtaining information about the incident, helping the child who is the victim of abuse. Children contribute to the provision of justice through forensic interviews, the judges see the forensic interview from the perspective of obtaining evidence, and the professional staff from the eye of helping the child. Although there is sharing from the participants about it, it is believed that it should be underlined that forensic interview is a form of interview that requires good education and professionalism. Forensic interviews are extremely important for catching the perpetrator in cases of sexual abuse. Because the answer to what happened in abuse cases and who did it is being investigated (Milne & Bull, 2006; Milne & Powell, 2010). The victim's statement is the most important evidence of the investigation (Korkman, Pakkanen & Laajasalo, 2017). The goal of a forensic interview is to present valid and secure information to the court (Andrews & Lamb, 2014).

Participating judges and professionals regarding the taking of the child's statement evaluated the issue within the framework of taking

statements from adolescent children, young children and disabled children. It was particularly striking that nearly half of the judges interviewed stated that they approached the adolescent's expression with suspicion. Judges with regard to adolescent children; they stated that adolescent children used the information they obtained on the internet, that they could express a union of their own accord as if it was forced due to social pressure, and that they could make false statements in families that were in the process of divorce. If the family member is abusing them, children may hesitate to give information to protect them or may deny the abuse (Orbach & Shiolach, 2007). Adolescent children's lying behaviour is linked to the characteristics of adolescence. An adolescent child may lie to cope with a bad event or to avoid punishment (Barsukova, 2012). Children may lie to hide the abuse (Alpaslan, 2014).

The researchers determined that very few of the judges he interviewed had books and articles in his room on the subject of forensic interview with the child. In addition, the fact that less than half (5 out of 18 judges) attended the training organized by the Ministry of Justice for the Forensic Interview Rooms is thought to cause the judges to be deprived of information on how to solve the difficulties they face in communicating with children. The success of a forensic interview with a child depends significantly on a qualified forensic interviewer, a study conducted in London confirms this (London, 2008). Conducting forensic interviews is considered an important skill (Dando & Milne, 2009). Children are reluctant to talk about a traumatic event such as sexual abuse with someone who does not have sufficient knowledge about it (Orbach & Shiolach, 2007). Forensic interviewers must have the necessary skills to connect with the child and ask questions (Stewart, Katz & La Rooy, 2011). This situation shows that one of the most basic skills that forensic interviewer must have is communication with child.

Policy Recommendations

Suggestions for forensic interviewing with children who are victims of sexual abuse are presented below.

i) Preventing children who are victims of sexual abuse from being called for legal interviews more than once

ii) Taking necessary security measures to protect the child from the possible threats and violence of the accused and the relatives of the accused in the courthouse

iii) If the child who is victim of incest give up his/her complaint a social case reported must be prepared as soon as possible and examine the reason for that

iv) Regular training and supervision should be given to forensic interviewers, judges, public prosecutors and lawyers

v) Forensic interview protocol should be prepared and put into practice as soon as possible

vi) It is believed that it would be appropriate to visit the schools of children who are victims of sexual abuse by professional staff (Social worker, psychologists etc.)

It is thought that the scope of future researchers should not be limited to only one province, should cover a much wider number of participants, and that public prosecutors and lawyers should be included in the research. In addition, it is believed that it would be appropriate to evaluate the performance of forensic interviewers by examining the recorded interviews carried out with children victim of sexual abuse

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The Effects of The Vertical Cooperation Strategy Between Airports and Airlines on The Operating Performance of Airlines¹

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Abstract

It is aimed to determine the effects of the strategic cooperation between airport operators and airlines on the operational performance of airlines. In addition, it is also among the other aims of the study to deal with all aspects of airport-airline strategic cooperation, which is rare, to develop the relevant literature and to make suggestions to airlines. In the research, cooperation of Pegasus Airlines, the largest private airline company of Turkey, with Istanbul Sabiha Gökçen Airport, which is the fastest growing airport in Europe, is discussed. In the research, in which the mixed method was used, the dimensions of cooperation were revealed primarily through interviews with middle-level managers. Panel regression analysis was used as a quantitative analysis method in the study. It was tried to determine the effect of vertical cooperation on performance with 3 different models established. The impact of the Covid-19 pandemic and the cooperation dummy variables were added to the models and the effects of the cooperation, and the pandemic were revealed. As a result of the study, even though the Covid-19 pandemic has created a structural break on airline performance, the positive effect of cooperation shows that vertical cooperation is an important strategy that can be preferred by airlines. It has been understood that with the airport-airline vertical cooperation strategy, competitive advantage can be created, costs can be kept under control, the activities of idle airports can be increased, and an advantage can be created in providing passenger guarantees given in projects in which the public-private sector cooperates.

Keywords: Airport-Airline Cooperation, Airline Operating Performance, Vertical Strategic Cooperation

Öz

Havaalanı işletmecileri ile havayolları arasındaki stratejik iş birliğinin havayollarının operasyonel performansı üzerindeki etkilerinin belirlenmesi amaçlanmaktadır. Ayrıca nadir görülen havalimanı-havayolu stratejik işbirliğinin tüm boyutlarıyla ele alınması, ilgili literatürün geliştirilmesi ve havayollarına önerilerde bulunulması da çalışmanın diğer amaçları arasındadır. Araştırmada Türkiye'nin en büyük özel havayolu şirketi Pegasus Hava Yolları'nın Avrupa'nın en hızlı büyüyen havalimanı olan İstanbul Sabiha Gökçen Havalimanı ile yaptığı işbirliği ele alınmıştır. Karma yöntemin kullanıldığı araştırmada işbirliğinin boyutları öncelikle orta düzey yöneticilerle yapılan görüşmelerle ortaya çıkarılmıştır. Araştırmada niceliksel analiz yöntemi olarak panel regresyon analizi kullanılmıştır. Kurulan 3 farklı model ile dikey işbirliğinin performansa etkisi belirlenmeye çalışılmıştır. Modellere Covid-19 salgınının etkisi ve işbirliği kukla değişkenleri de eklenerek işbirliğinin etkileri ortaya çıkarılmıştır. Çalışma sonucunda, her ne kadar Covid-19 salgını havayolu performansı üzerinde yapısal bir kırılma yaratmış olsa da işbirliğinin olumlu etkisi sebebiyle dikey işbirliğinin havayolları tarafından tercih edilebilecek önemli bir strateji olduğu görülmektedir. Havalimanı-havayolu dikey işbirliği stratejisi ile rekabet avantajı yaratılabileceği, maliyetlerin kontrol altında tutulabileceği, atıl havalimanların faaliyetlerinin artırılabilceği, kamu-özel sektörün işbirliği yaptığı projelerde verilen yolcu garantilerinin sağlanmasında avantaj yaratılabileceği anlaşılmıştır.

Anahtar Kelimeler: Havaalanı-Havayolu İşbirliği, Havayolu İşletme Performansı, Dikey Stratejik İşbirliği

¹ This research is derived from the doctoral thesis study conducted by the 1st author under the supervision of the 2nd author.

Introduction

The increasing number of airlines after deregulation and the emergence of different business models have intensified the competition in the aviation sector. Airline operations, which are currently operating with low profit margins, have made strategic moves to reduce their costs in an intensely competitive environment, to ensure their continuity, to increase their revenues, to increase the number of passengers and load factors by opening to new markets. One of these strategic moves is cooperation strategies (Gillen & Hinsch, 2001). Many airlines are trying to open to different markets, gain competitive advantage, expand their transportation network, etc. cooperated with other airlines for this purpose. In fact, airline alliances such as Star Alliance, One world and SkyTeam, in which many airlines are involved, have been established (Kanbur & Karakavuz, 2017). In an environment where competition has increased in recent years, it is seen that airlines focus on the basic building blocks of the aviation system. Airports come to a central and important position in the system for airlines because they create various costs for airlines and provide compulsory services for airlines (Albers et al., 2005). In terms of creating competitive advantage, airlines have turned to the strategy of creating strategic cooperation with airport operators.

Strategic collaborations began to emerge between low-cost carriers and secondary airports, as carriers adopting the low-cost transportation business model preferred secondary airports, which are far from central airports, far from city centers, where transportation is relatively difficult, to reduce their costs (Barbot, 2006). After liberalization, traditional carriers and network carriers have turned to the hub & spoke system, which allows them to collect passengers to the central airports they have determined and distribute them together with the passengers going to other destinations from this airport. This situation has led to the importance of airports that act as pick-and-distribution centers and to establish a relationship with the airport for the airline business (Barbot, 2009).

Vertical collaborations between airports and airlines provide significant advantages to both

businesses (Albers et al., 2005). Vertical collaborations are considered as a long-term assurance for airports and airlines. Airports can plan facility investments in the long term, and the airline can eliminate the uncertainties about airport costs (Goetsch & Albers, 2007).

The aim of this study; The aim of this study is to determine the effect of vertical cooperation between airlines and airport operators on airline business performance indicators. It is aimed to determine to what extent the advantages obtained by airlines because of vertical cooperation established as a strategic practice affect the operational performance of the airline company. In addition, considering the effect of the pandemic on airline performance, it is aimed to reveal this effect. There are limited studies discussing the effects of airport and airline collaborations, especially demonstrating empirical evidence. Presenting empirical outputs in this field to all researchers constitutes the main motivation of the research.

Conceptual Framework and Literature Research

The cooperation of airlines with the airport to create a competitive advantage against their competitors is of strategic importance (Albers, Koch, & Ruff, 2005). The airline company, which cooperates with the airport, gains significant advantages over the flights to be made at that airport against its competitors by obtaining different services at more affordable prices, gaining advantages in terms of terminal capacity utilization, and gaining advantages in slot allocation in terms of flight density. Cooperation between the airport and the airline is a long-term assurance for both parties. While airport operators see the long-term plans of the airline and realize their facility and service investments with this assurance, the airline business eliminates the uncertainty about future passenger revenues and the costs incurred for that airport (Goetsch & Albers, 2007).

It has been stated by Erdoğan (2018) that airport-airline vertical collaborations are formed in eight different ways. These; signatory airline status, commercial revenue sharing agreements, long-term lease agreements, special facility income bonds, airport ownership rights, traffic and line

increase incentives, load factor guarantee, discount applied to aviation fees.

It guarantees break-even costs to the airline that has obtained the status of a signatory airline. While this prevents loss for the airport, it reduces the costs considerably by allowing the signatory airline to pay the airport fees in very small amounts in case the break-even costs are met with the revenue from other airlines. The cooperation established through the acquisition of the shares of the airport operators that offer their shares to the public or the shares of the airport operators that sell their shares and the airline operator's having a say on some terminals and facilities is called airport ownership right. While the airport provides financial resources with the transfer of shares, the airline can optimize the flights. In some airports, it may be possible to offer discounts on airport aviation fees to the airline with which they want to cooperate. The airport-airline relationship is strengthened by the incentives to be made in this way for the airline that organizes intensive flights and can increase the line (Fu, Homsombat, & Oum, 2011).

With the increase in privatization, the importance of non-aviation commercial revenues in airports has increased. The way to increase such revenues is to increase the number of passengers, and the way to increase the number of passengers is through the airline business. For this reason, in the vertical cooperation established, the airport operator receives a share of the commercial income obtained in return for increasing the number of passengers (Zhang, Fu & Yang, 2010). It is seen that some airline operators make long-term leasing transactions to use the terminal capacity with the airport operation, as they want to gain superiority over their competitors and to operate for a long time at the airport they have determined. In such collaborations, the airline company gains a significant advantage over its competitors and stands out at that airport, while the airport operator provides long-term income assurance (Barbot, 2009).

In airport facility investments, special facility income bonds are a cooperation for the airlines, which are the project guarantors, to have rights in the facility or project by selling the bonds issued by the local governments to the airlines to create the

necessary financial resource for the construction of that facility (Oum & Fu, 2008). Although the demand situation related to traffic and lines belongs entirely to the airline, some airport operators try to increase traffic and lines by reducing air traffic and airport fees (Auerbach & Koch, 2007). Some airport operators that want to establish a long-term relationship with the airline operators form cooperation by making an agreement with the airline operator to guarantee the load factor. In this case, in cases where the airline company does not provide the specified load factor, it makes a compensation payment, while in the opposite case, it can receive a share of the profit of the airline company (Hihara, 2012).

When the academic literature is examined; Before 2010, it is seen that there are many studies on cooperation between airlines, which are horizontal applications of strategic cooperation in the field of aviation. Academic studies on the airport-airline relationship in 2010 were limited by restrictions such as government interventions in airports, and the non-contractualization of collaborations. Today, however, the intensification of privatization in airport businesses has led to the formation and strengthening of cooperation by removing the constraints in front of establishing different cooperations against airlines. For this reason, airport-airline vertical cooperation has become an area where current academic studies are directed but still limited.

Tinoco and Sherman (2014) emphasized in their study that airport and airline consortia emerged after deregulation. They said that airlines are looking for private partners to improve terminal facilities and equipment, update services, as well as reduce costs. Yang, Zhang and Fu (2015) concluded in their study that airport-airline vertical cooperation is made when airlines want to have more market power, when they have higher costs, when the fees they pay to airports are higher, or when the social welfare of the airport is more important. they have reached. Zhang, Fu, and Yang (2010) investigated the consequences of privileged revenue sharing between airports and airlines in their study. They concluded that while revenue sharing increases the total profit of airport-airline cooperation, it reduces social welfare.

In their study, Minato and Morimoto (2017) discussed that successful coexistence between an airline and an airport is important for the realization of the target load factor, in short, airports should guarantee target load as a subsidy. They mentioned that such subsidies will guarantee a long-term airline-airport relationship, even if there is a temporary financial loss for the airport. Starkie (2008) stated in his study that the cooperations made differ due to the legal regulations of the countries. It was said that there are cooperation agreements for terminal and gate rentals in Australia and the USA, while the focus is on airport fees in Europe. It has been emphasized that airport-airline cooperation is becoming increasingly common in Europe and that such contracts are a contemporary innovation for the civil aviation industry. In their study, Saraswati, and Hanaoka (2014) focused on the airport-airline cooperation model in which an airport shares a portion of its revenue with the airline company in the face of a fixed income commitment. In the study, which was carried out by considering many airlines and airports with game theory, it was concluded that the airport preferred to share its revenue with the dominant airline to obtain the optimum benefit. Tunčikiene and Katinas (2020) emphasized that partnerships between airports and airlines should be further encouraged to improve the quality of air transport services. They established criteria for determining the factors of an effective partnership between airports and airlines and evaluating the positive effects of airport cooperation activities.

Methodology

The study examines the cooperation between Turkey's largest private airline, Pegasus Airlines, and Europe's fastest growing airport, Istanbul Sabiha Gökçen Airport. Mixed method was preferred in the research. This method, in which qualitative and quantitative research methods are used together, makes it easier to obtain data and information for quantitative interpretation of qualitative research data and vice versa. For many years, it has been proven that using quantitative and qualitative methods together in a single study produces effective results (Creswell et al., 2004). In

the qualitative research dimension of the mixed method, the dimensions of airport and airline cooperation were first revealed through interviews with mid-level managers. By determining the topics on which the collaboration took place, the independent variables to be used in the quantitative analysis were determined.

Following the completion of the qualitative research, the data set reflecting the cooperation between 2012 and 2021 and showing the operational performance of the airline was included in the empirical analysis. In the quantitative research, in order to investigate the effect of cooperation, data from Izmir Adnan Menderes Airport, which Pegasus Airlines uses as its hub airport but does not cooperate with, was also included in the analysis.

Within the scope of quantitative research, panel regression analysis, one of the econometric analysis methods, was carried out. All applications within the scope of the analysis were made using EViews 10 and Stata 14.2 programs. The variables used and their abbreviations are listed in Table 1. The variables mentioned in the table are ready for analysis as they are a monthly compilation of the airline's activities at the specified airports. Relevant data was obtained from the websites of Turkey's airport operators, DHMI and Pegasus Airlines, upon request.

The data selected for this research covers both airport activities and shows the performance of the airline company. Revenue per Seat Kilometer, Cost per Seat Kilometer, etc. Vertical Passenger Number, which shows the ratio of the number of passengers at the airport with which the airline cooperates, to the total number of passengers at the airport and Vertical Traffic variables. The table showing the ratio of the number of flights at the airport with the cooperation of the airline to the total number of flights at the airport was created to give an idea about vertical cooperation, as well as the data used in many studies.

Table 1: Variables

Variable Name	Variable Abbreviation
Revenue Per Seat Kilometers	LOGRASK
Cost Per Seat Kilometers	LOGCASK
Number of Passenger Counters	LOGPADE
Airline Passenger	LOGAPAS
Vertical Number of Passengers	LOGDPAS
Airline Traffic	LOGATRF
Vertical Traffic	LOGDTRF

Cost Per Seat Supplied	LOGPASK
Passengers Per Flight	LOGPPPA
Total Traffic	LOGPTTR
Total Passengers	LOGPTPS
Counter Rate	LOGPDER
Counter Used	LOGPDES
Accommodation Fee	LOGPSTY
Landing Fee	LOGPTOC
Pegasus Number of Passengers	LOGPPAS
Pegasus Traffic Count	LOGPTRF
Load Factor	LOGPLF

In the econometric method part, variance inflation test (VIF) and Spearman correlation analysis were performed to investigate the multicollinearity problem related to independent variables. Dependency between the horizontal sections (airports) that make up the panel, Breusch-Pagan (1980) (Lagrange Multiplier-LM Test) LM test and Pesaran, Ullah, Yagamata (2008) Adjusted LM Test and Pesaran (2004) (Cross-section) Dependence) tested with CD-LM tests.² Panel homogeneity and homogeneity of the series were tested with Pesaran and Yamagata (2008) Slope Homogeneity.³ Then, for the series used in the analysis, the stationarity test was carried out according to the results of cross-section dependence and homogeneity.⁴ For heterogeneous series with cross-section dependence, the CADF test (Cross-Sectionally Augmented Dickey-Fuller) second generation and third group unit root tests developed by Pesaran (2007) were used. For homogeneous series with cross-section dependence, Breitung unit root test and Harris-Tzavalis unit root tests were applied resistant to cross-section dependence. Since the series without cross-section dependence exhibit a heterogeneous structure, the IPS test developed by Im, Pesaran and Shin (2003) and Fisher ADF and Fisher PP tests⁵, which are in the second group of first-generation unit root tests, were applied to these series.⁶ F test, Hausman Test and Breusch-Pagan Lagrange Multiplier Tests were used for selection of suitable models. To test the deviations from the assumption;⁷ For classical models, White's test and Breusch-Pagan/Cook-Weisberg tests were used to test heteroscedasticity (Differing Variance), and Wooldridge's tests were used to test the existence of autocorrelation. After all these

tests, it was revealed that the results obtained with the models established would be reliable, and the model results were found and interpreted.

Findings

It was aimed to reveal the dimensions of cooperation by taking the opinions of middle level managers from both the airport and the airline company. Based on the qualitative research, (İ.S.G.) and Pegasus Airlines are defined by the Managers as businesses that grow together. It has been stated that Pegasus Airlines has used the advantages of Sabiha Gökçen Airport very well and that this has been significantly effective in its growth. It is stated that Pegasus Airlines has a large share in making İ.S.G. the fastest growing airport in Europe in recent years.

According to the evaluation made by airport managers in the qualitative research, the allocation of check-in counters, ticket-sales and lost property offices, staff rooms, etc. between the airline and the airport. It is stated that there are long-term protocols for terminal usage areas. At the same time, the placement of equipment in the terminal such as kiosk check-in and self-luggage, which Pegasus Airlines started to use in the digitalization process, There are also protocols for the infrastructure services to be provided by the company. It was stated that Pegasus Airlines has fixed check-in counters in the most central location at the airport, and it was emphasized that this central counter location contributes to the airline operation in matters such as passenger transportation to the counter, passenger orientation and time management. Due to the large number of flights and routes, Pegasus Airlines carries out many joint operations with the airport management, which strengthens the communication between all managers and personnel. There are plans for Pegasus Airlines in the airport's short and long-term infrastructure investments, and in these plans reason, Pegasus Airlines use Sabiha Gökçen Airport as its central airport, turn the airport into a hub and spoke point,

² For test results, Appendix-1 and Appendix-2

³ For cross-section test results, Appendix -3.

⁴ For homogeneity test results, Appendix -4.

⁵ For the results of unit root tests, Appendix -5.

⁶ For the results of unit root tests, Appendix -5.

⁷ For the test results of the deviations from the assumption in the model results, Appendix -7.

and take a leading position in terms of the number of flights and number of lines. It is stated that it is effective.

According to the evaluation made by airline managers, it is stated that it becomes easier for the airline to be successful in the sector with various airport-based advantages. The fact that it is an airport in Istanbul and that it is suitable for use as a hub and spoke can be given as an example. It has been stated that operating busy flights at the airport 24 hours a day, 7 days a week, positively contributes to communication with airport personnel. It was mentioned that especially the counter areas and kiosk areas at the airport contribute positively to the digitalization of the airline and passenger satisfaction. They stated that the airline's activities at Sabiha Gökçen Airport created a competitive advantage, and at the same time, there was an opinion that it would be difficult for new airlines to operate and hold on to this airport. It was pointed out that more advantageous dimensions of cooperation may emerge in the long term, especially after the capacity constraints of the terminal building are eliminated.

As a result of the qualitative research, independent variables that would reflect the impact of collaboration were determined and quantitative analysis was initiated.

According to the Spearman correlation results, it is seen that some of the variables examined have multicollinearity problems (ATRF with APAS, DPAS with DTRF, PTRF with PPAS). When VIF values are examined, it is seen that most of the VIF values of the independent variables used in the analysis are above the specified standard value of 10. It can be said that there is a multicollinearity problem between these independent variables. To solve the multicollinearity problem, the series can be differentiated, or variables can be removed from the model. Variables with high correlations were removed from the model and the multicollinearity problem was solved by taking the difference of the series. Appropriate models were also determined based on these variables.

Within the scope of the analysis, three basic models were created to measure the operational performance of the airline business and these models were expanded with dummy variables to reveal the unit and time effects.

$$\text{Model 1: LOGPTPSit} = \beta_{0it} + \beta_{1it}\text{DLOGDPAS} + \beta_{2it}\text{DLOGPTOC} + \beta_{3it}\text{DLOGPPAS} + \beta_{4it}\text{DLOGPDES} + \beta_{5it}\text{DLOGPDER} + \beta_{6it}\text{DLOGATRF} + \beta_{7it}\text{DUVT} + \beta_{8it}\text{DUVi} + \epsilon_{it}$$

$$\text{Model 2: LOGRASKit} = \beta_{0it} + \beta_{1it}\text{DLOGDPAS} + \beta_{2it}\text{DLOGPTOC} + \beta_{3it}\text{DLOGPPAS} + \beta_{4it}\text{DLOGPDES} + \beta_{5it}\text{DLOGPDER} + \beta_{6it}\text{DLOGATRF} + \beta_{7it}\text{DUVT} + \beta_{8it}\text{DUVi} + \epsilon_{it}$$

$$\text{Model 3: LOGPLFit} = \beta_{0it} + \beta_{1it}\text{DLOGDPAS} + \beta_{2it}\text{DLOGPTOC} + \beta_{3it}\text{DLOGPPAS} + \beta_{4it}\text{DLOGPDES} + \beta_{5it}\text{DLOGPDER} + \beta_{6it}\text{DLOGATRF} + \beta_{7it}\text{DUVT} + \beta_{8it}\text{DUVi} + \epsilon_{it}$$

DUVT and DUVi dummy variables were included in the models examined in the analysis, and they were tested in both unit effect (cooperation) and time effect (Covid-19 pandemic) models.

According to Pesaran (2004) CD test, H0 hypothesis states that there is no cross-section dependency. Accordingly, according to the results of the cross-section dependence test results based on the series to be included in the analysis; It is revealed that Pegasus passenger number (PPAS), number of touchdowns (PTOC), number of counters used (PDES) and counter ratio (PDER) series do not have cross-section dependence, while there is cross-section dependence in other series. According to these results, stationarity tests for PTOC, PDER and PDES series will be performed with first generation unit root tests and for other series with second generation unit root tests. Within the scope of the analysis, the cross-section dependence was tested both based on models and based on the studied series. If there is no cross-sectional dependence between the series while performing the analysis with panel data, homogeneity tests and unit root tests to be used for stability testing should be determined. As with the testing of cross-sectional dependence, homogeneity testing is examined both based on models, that is, based on panels, and based on series.

According to the basic hypothesis of Pesaran Yamagato (2008) Slope Homogeneity Test, "slope coefficients are homogeneous". Accordingly, H0 is rejected for the first two of the panel models according to the 1% significance level. These models used are heterogeneous. The basic

hypothesis for Model 3 cannot be rejected. This model has a homogeneous structure. According to the test results in the table where homogeneity is tested based on series, the H0 hypothesis (slope coefficients are homogeneous) is rejected for all series except DLOGDPAS (vertical passenger number) and DLOGATRF (air traffic) according to 10% significance level. Since the basic hypothesis cannot be rejected in the DLOGDPAS and DLOGATRF series, they are homogeneous. Other series to be included in the regression analysis have a heterogeneous structure.

According to the unit root test results based on first generation heterogeneity assumption, DLOGPTOC, DLOGPDER, DLOGPPAS and DLOGPDES series are stationary and do not contain unit root (H0, unit root hypothesis is rejected at 1% significance level). Stationarity is tested in the homogeneous DLOGDPAS and DLOGATRF series using the Breitung Test and the Harris-Tzavalis test, which are in the first group of the second-generation unit root tests and based on the homogeneity assumption. Since these series also have cross-section dependence, the unit root tests performed were used in a resistant structure that took this into account. According to Breitung (2000) and Harris-Tzavalis (1999) panel unit root test results for DLOGDPAS and DLOGATRF series, the basic hypothesis (H0, contains unit root) is rejected and the series is stationary in both fixed and trend models.

According to the results of the cross-sectional dependence and homogeneity tests, the CADF (Cross-Sectionally Augmented Dickey-Fuller) test, which is one of the second-generation unit root tests that takes these into account, was applied for the LOGPTPS, LOGRASK, LOGPLF, DLOGPSTY series, which have both cross-section dependence and heterogeneity. Pesaran (2007) In case the CADF test statistic is greater than the absolute critical values, the H0 hypothesis is rejected, and the series is assumed to be stationary. Similar results are obtained when probabilities are examined. It is concluded that the series in the table are stationary.

In Model 1, to determine the factors affecting the operational performance of the airline, the fixed effects model, random effects model and pooled models are used in the F test, Hausman test

and Breuch- Pagan LM (1980) tests were applied. According to the model specification results, it is appropriate to use the classical model for regression estimation for model 1. For Model 1, tests such as the Breusch-Pagan (1979) / Cook-Weisberg (1983) test and the White test can be used to test heteroscedasticity in the classical model. In Model 1, according to both test results, the basic hypothesis is rejected, and it is concluded that there is a varying variance problem. The deviation from another assumption in panel regression analysis is the autocorrelation problem. Wooldridge's test results were used to test the existence of autocorrelation in the models. According to the autocorrelation test performed with Wooldridge's test, the basic hypothesis (H0, no first-order autocorrelation) is rejected for 5% significance levels. There is an autocorrelation problem in the model. Since deviations from the assumption are detected for the model under consideration, robust estimators are needed in the estimation of the classical model. In this context, since there is a need for a more resistant estimator, the model was estimated with Arellano, Froot and Rogers and Newey-West estimators, which are used in the presence of heteroscedasticity and autocorrelation and enable estimation with resistant standard errors. The table shows the resistive estimator results for model 1.

Table 2. Model 1 Prediction Results

Pooled EKK, Arellano, Froot, and Rogers Resistant Standard Errors				
Dependent variable				
LOGPTPS				
Arguments	Coefficient	Standard Error	t-Statistics	Probability Value
DLOGDPAS	-1.384515	0.4971153	-2.79	0.219
DLOGPTOC	0.637184	0.036761	17.33	0.037**
DLOGPDES	-0.3461551	0.4343573	-0.80	0.572
DLOGPDER	-0.3182619	0.0202123	-15.75	0.040**
DLOGATRF	0.6085387	0.1193644	5.10	0.123
DLOGPPAS	0.1208309	0.4922268	0.25	0.847
DUV _i	-19.52638	7.824089	-2.50	0.243
DUV _i	0.0446917	0.0042268	10.57	0.060***
C	14.26872	0.134288	106.25	0.006
R-squared = 0.6901				
Prob > F = 0.0000				
Pooled ICC, Newey-West Resistant Standard Errors				
Dependent variable				
LOGPTPS				
Arguments	Coefficient	Standard Error	t-Statistics	Probability Value
DLOGDPAS	-1.384515	1.913323	-0.72	0.470
DLOGPTOC	0.637184	0.5444888	1.17	0.243
DLOGPDES	-0.3461551	0.2086483	-1.66	0.098***
DLOGPDER	-0.3182619	0.2326336	-1.37	0.173
DLOGATRF	0.6085387	0.8203426	0.74	0.459
DLOGPPAS	0.1208309	1.203991	0.10	0.920

DUV _t	-19.52638	8.062182	-2.42	0.016**
DUV _i	0.0446917	0.2368415	0.19	0.850
C	14.26872	0.1391828	102.52	0.000
DLOGDPAS	-1.384515	1.913323	-0.72	0.470
Prob > F = 0.0000				

*It shows that the significance of coefficients is rejected at the level of 1% significance, ** at the level of 5% significance, and at the level of 10% significance.

When the model results in the table are examined, it is seen that the F statistical value is significant for both estimation results. This means that the model is meaningful. The R2 value, on the other hand, shows the power of explaining the effect of the variables considered in the model on the independent variable. The variables included in the analysis explain the model at the level of approximately 70%.

According to the main results of Model 1; A 1% change in the number of landings (DLOGPTOC) increases the total number of passengers by about 0.6% in the short run. A 1% change in the number of counters used (DLOGPDES) reduces the total number of passengers by approximately 0.3% in the short term. A 1% change in the counter rate (DLOGPDER) reduces the total number of passengers by approximately 0.3% in the short run. The time dummy variable DUV_t added to the model is statistically significant and reveals that the Covid-19 pandemic created a structural break in 2020:03 and 2020:04, resulting in a reduction of approximately 20% on the total number of passengers. In addition, the DUV_i dummy variable added to represent cooperation is also statistically significant and shows that the airline's activities at the airport with which it is in vertical cooperation increase the performance by 4%.

The same problems were tested for Model 2 and Model 3, and the model was estimated with Beck-Katz (PCSEs), which is used in the presence of autocorrelation and cross-sectional dependence and allows estimation with resistant standard errors. Model 2 in Table 3 and model 3 resistant estimator results in Table 4 are given.

Table 3. Model 2 Prediction Results

Pooled ICC, Beck-Katz (PCSEs, Prais-Winsten regression) Resistant Standard Errors				
Dependent variable				
LOGRASK				
Arguments	Coefficient	Standard Error	t-Statistics	Probability Value
DLOGDPAS	-1.208276	0.5566	-2.17	0.030**
DLOGPTOC	0.3158426	0.1247407	2.53	0.011**
DLOGPDES	-0.1074491	1.429882	-0.08	0.940
DLOGPDER	0.0185257	1.557865	0.01	0.991

DLOGATRF	0.4204747	0.2019674	2.08	0.037**
DLOGPPAS	0.1804708	0.3407555	0.53	0.596
DUV _t	-16.75459	1.523573	-11.00	0.000*
DUV _i	-0.0077921	0.1859577	-0.04	0.967
C	11.75108	.1842127	63.79	0.000

R-squared = 0.6143
Prob > chi2 = 0.0000

* Indicates that the significance of coefficients is rejected at the level of 1% significance ** at the level of 5% significance *** at the level of 10% significance.

While the variables included in the analysis in Model 2 explain the model at a level of approximately 62%, the variables included in the analysis in Model 3 explain the model at a level of approximately 25%. This situation can be interpreted as Model 1 and Model 2 results are more valid.

Table 4. Model 3 Prediction Results

Pooled ICC, Beck-Katz (PCSEs, Prais-Winsten regression) Resistant Standard Errors				
Dependent variable				
LOGPLF				
Arguments	Coefficient	Standard Error	t-Statistics	Probability Value
DLOGDPAS	-0.5663516	0.1628278	-3.48	0.001*
DLOGPTOC	-0.099074	0.0309359	-3.20	0.001*
DLOGPDES	-0.4576722	0.390535	-1.17	0.241
DLOGPDER	0.4626976	0.4151063	1.11	0.265
DLOGATRF	-0.1802537	0.0765047	-2.36	0.018**
DLOGPPAS	0.3589938	0.1017776	3.53	0.000*
DUV _t	-1.639899	0.4094044	-4.01	0.000*
DUV _i	-0.0063773	0.0765178	-0.08	0.934
C	3.602613	0.1502777	23.97	0.000

R-squared = 0.2551
Prob > chi2 = 0.0000

* H₀ shows that the hypothesis is rejected at the level of 1% significance, ** at the level of 5% significance, and at the level of 10% significance.

According to the main results of Model 2; A 1% change in the number of landings (DLOGPTOC) increases revenue per seat supplied (LOGRASK) by about 0.3% in the short run. A 1% change in vertical passenger numbers (DLOGDPAS) reduces revenue per seat supplied by approximately 1.2% in the short run. A 1% change in the number of airline traffic (DLOGATRF) increases the revenue per seat served by approximately 0.4% in the short run. The time dummy variable DUV_t added to the model is statistically significant and reveals that the Covid-19 pandemic's structural break in 2020:03 and 2020:04 caused a reduction of approximately 17% on the income per seat supplied. The DUV_i dummy variable, which was added to represent cooperation, was not statistically significant.

According to the main results of Model 3; A 1% change in the number of touchdowns

(DLOGPTOC) reduces the load factor (LOGPLF) by about 0.09% in the short run. A 1% change in vertical passenger numbers (DLOGDPAS) reduces the load factor by 0.5% in the short run. A 1% change in the number of airline traffic (DLOGATRF) reduces the load factor by about 0.1% in the short run. A 1% change in the number of Pegasus passengers increases the load factor by approximately 0.3% in the short term. The time dummy variable DUVt added to the model is statistically significant and reveals that the Covid-19 pandemic caused a structural break in 2020:03 and 2020:04, resulting in a 1.6% reduction in the load factor. The DUVi dummy variable, which was added to represent cooperation, was not statistically significant.

Conclusion and Evaluation

The main objective has been to reveal the effects of vertical strategic cooperation between airport operators and airlines on airline business performance. In this context, a research model in which qualitative and empirical research are used together was chosen. In the qualitative research, three middle managers of Sabiha Gökçen Airport and Pegasus Airlines, which constitute the research sample, were interviewed. With the interview, the answers to the questions of whether there is cooperation, how it is reflected in the performance of the airline if there is cooperation, and in which areas the airline company gains advantage if there is cooperation, were sought.

As a result of the qualitative research, Pegasus Airlines, the airline that organizes the most flights to Sabiha Gökçen Airport, and the Terminal Operator of Sabiha Gökçen Airport, İ.S.G. It has been determined that there is a cooperation based on long-term contracts between These long-term contracts usually include check-in counter, space allocation for digital equipment, office, etc. for terminal area use. Pegasus Airlines is the most active airline at Sabiha Gökçen Airport. This situation causes airport and airline personnel to work in cooperation during the intensive operation process. Although there is no official basis, it has been concluded that there is an impression of communication cooperation between the personnel. It has been concluded that

Pegasus Airlines' cooperation with Sabiha Gökçen Airport will continue to develop.

A model for 3 dependent variables was established to test the relevant variables determined by qualitative research and literature research. The effects of the independent variables in the model on the dependent variables were investigated by regression analysis and the results were obtained. Significance was questioned by adding a dummy variable related to cooperation and pandemic to the models.

It can be said that the cooperation between Pegasus Airlines and Adnan Menderes Airport operator has an impact on the number of passengers and aircraft traffic. Although the high landing fee at Sabiha Gökçen Airport does not provide an advantage in terms of cooperation, it does not adversely affect airline performance. The capacity constraints of the airport may adversely affect the performance. It can be said that the number of counters is insufficient at the cooperating airport and the number of passengers per counter is high, which negatively affects airline performance. It has been clearly demonstrated that the Covid-19 pandemic negatively affects airline performance. Qualitative research results support empirical analysis results. Concerning the number of flights and passengers referred to in the qualitative research findings, the results that cooperation improves airline performance agree with the empirical analysis. In addition, the reflections of capacity constraints were emphasized in both qualitative and empirical analysis. In the qualitative research, it was stated that there was no cooperation regarding landing fees. The fact that the high landing fees do not reduce the number of passengers has resulted in the high landing and accommodation fees for Sabiha Gökçen Airport.

With this study, it has been proven that airport-airline cooperation can have a positive effect on airline performance. The establishment of closer relations between airlines and airports will create advantageous situations for airlines. For this reason, it can be suggested that airline businesses should turn to vertical cooperation agreements as a new strategy at important flight destinations and airports with high flight density. For airlines operating in an intensely competitive

environment, cooperating with airports with high flight densities can provide an important competitive advantage. Airport-airline collaborations can be used as an alternative to cost reduction strategies, especially needed by low-cost carriers.

Many airports in our country and in the world cannot be used for various reasons and remain idle. The fact that airports built with high investment costs remain idle is also considered as a public loss. Vertical collaborations can be suggested as a solution to this situation. Vertical cooperation between idle airports and airlines with growth potential can be a good model to improve the performance of airports and airlines in the long run. Especially at airports operated under public ownership, vertical cooperation of the airline company with the airport can be ensured with incentives that will create an advantage for the airline company. Thus, the airport and airline business can benefit from the cooperation with a win-win result. Within the scope of Public-Private Partnership, a vertical cooperation strategy can be encouraged, especially for the projects carried out by the State with the Build-Operate-Transfer model with a passenger guarantee, in cases where the target number of passengers cannot be reached.

In future studies, the effects of airport-airport vertical cooperation on airline performance can be tested with different variables and larger data sets. In addition, the effects of collaborations between central airports and traditional carriers, and vertical collaborations established by charter airlines on airline operating performance can be analyzed. The effects of vertical collaborations on airport performance, of which there are few examples in the literature, are also very suitable to be investigated.

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Appendix I: Spearman Correlation Analysis Results

	LAPAS	LATRF	LDPAS	LDTRF	LPADE	LPDER	LPDES	LPPAS	LPSTY	LPTOC	LPTRF
LAPAS	1.0000 ---- ----										
LATRF	0.9868* 94.200 0.0000	1.0000 ---- ----									
LDPAS	0.7493 17.459 0.0000	0.7552 17.776 0.0000	1.0000 ---- ----								
LDTRF	0.7646 18.306 0.0000	0.7887 19.795 0.0000	0.9395* 42.340 0.0000	1.0000 ---- ----							
LPADE	-0.2794 -4.4897 0.0000	-0.3329 -5.4477 0.0000	-0.4110 -6.9553 0.0000	-0.4112 -6.9612 0.0000	1.0000 ---- ----						
LPDER	0.7991 20.510 0.0000	0.8237 22.417 0.0000	0.6727 14.026 0.0000	0.7025 15.230 0.0000	-0.3032 -4.9090 0.0000	1.0000 ---- ----					
LPDES	0.6982 15.047 0.0000	0.7158 15.816 0.0000	0.7700 18.623 0.0000	0.7878 19.733 0.0000	-0.5262 -9.5477 0.0000	0.8421 24.088 0.0000	1.0000 ---- ----				

LPPAS	0.6815	0.6670	0.7168	0.7605	-0.0987	0.7391	0.8423	1.0000			
	14.369	13.811	15.860	18.068	-1.5305	16.929	24.110	-----			
	0.0000	0.0000	0.0000	0.0000	0.1272	0.0000	0.0000	-----			
LPSTY	-0.2203	-0.2027	0.0370	0.1093	-0.1342	-0.0267	0.2754	0.2617	1.0000		
	-3.4853	-3.1949	0.5722	1.6968	-2.0907	-0.4132	4.4198	4.1833	-----		
	0.0006	0.0016	0.5677	0.0910	0.0376	0.6798	0.0000	0.0000	-----		
LPTOC	0.6392	0.6546	0.7215	0.7400	-0.4960	0.7343	0.8271	0.7222	0.3025	1.0000	
	12.823	13.360	16.078	16.977	-8.8138	16.692	22.704	16.111	4.8974	-----	
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-----	
LPTRF	0.6950	0.6858	0.7119	0.7687	-0.122	0.7512	0.8525	0.9920*	0.2714	0.7296	1.0000
	14.914	14.537	15.641	18.545	-1.8976	17.558	25.162	121.41	4.3513	16.459	-----
	0.0000	0.0000	0.0000	0.0000	0.0590	0.0000	0.0000	0.0000	0.0000	0.0000	-----

Appendix 2: Variance Inflation Factor (VIF) Values

Variable	VIF Value	Variable	VIF Value
LPPAS	4203.25*	DLDPAS	2.26
LPADE	3027.11*	DLATRF	1.81
LPTRF	1643.81*	DLPTOC	1.68
LPDES	1624.13*	DLPPAS	1.23
LDTRF	1367.16*	DLPDES	1.01
LDPAS	557.04*	DLPDER	1.01
LATRF	542.26*		
LPTOC	403.99*		
LPDER	13.63*		
LPSTY	5.46		
PAGE	2.49		
Average VIF 1217.30		Average VIF 1.50	

**Indicates a multiple linear connection problem.*

Appendix 3: Horizontal Section Dependency Test Results

Panel Model Based				
Models	CD _{LM} (Breusch-Pagan, 1980)		LM _{adj} (Pesaran-Ullah-Yagamata, 2008)	
	Statistics	Probability Value	Statistics	Probability Value
	Model 1	1.212	0.2709	0.6137
Model 2	5.66	0.0174	18.67	0.0000*
Model 3	83.29	0.0000*	333.8	0.0000*
By Variables				
Variables	Pesaran (2004)		Breusch-Pagan (1980)	
	CD Test	Probability Value	CD _{LM}	Probability Value
LOGTPS	10.95385	0.0000*	119.9868	0.0000*
LOGRASK	10.95445	0.0000*	120.0000	0.0000*
LOGPLF	10.90897	0.0000*	119.0057	0.0000*
DLOGDPAS	-2.74929	0.0060*	7.558646	0.0060*
DLOGPTOC	0.020827	0.9834	0.000434	0.9834
DLOGPSTY	10.90871	0.0000*	119.0000	0.0000*
DLOGPDES	-0.07921	0.9369	0.0062	0.9369
DLOGPDER	0.128902	0.8974	0.0166	0.8974
DLOGPPAS	1.611991	0.1070	2.598516	0.1070
DLOGATRF	10.59806	0.0000*	112.3188	0.0000*

*Shows that the H_0 hypothesis is rejected at the 1% significance level

**The H_0 hypothesis is rejected at the 5% significance level of the H_0 hypothesis

*** H_0 is rejected at the 10% significance level.

Appendix 4: Homogeneity Test Results

Panel Model Based				
Models	Delta	Probability Value	Corrected Delta	Adjusted Probability Value
Model 1	5.689	0.000*	5.944	0.000*
Model 2	4.375	0.002*	4.571	0.001*
Model 3	-1.370	0.171	-1.431	0.152
By Series				
Series	Delta	Probability Value	Corrected Delta	Adjusted Probability Value
LOGTPS	-1.731	0.083***	-1.769	0.077***
LOGRASK	-1.732	0.083***	-1.770	0.077***

LOGPLF	-1.688	0.091***	-1.725	0.085***
DLOGDPAS	-0.868	0.385	-0.887	0.375
DLOGPTOC	-1.716	0.086***	-1.754	0.079***
DLOGPPAS	-1.731	0.084***	-1.769	0.077***
DLOGPDES	-1.716	0.086***	-1.754	0.079***
DLOGPDER	-1.730	0.084***	-1.769	0.077***
DLOGATRF	-1.533	0.125	-1.567	0.117

*Shows that the H_0 hypothesis is rejected at the 1% significance level

**The H_0 hypothesis is rejected at the 5% significance level of the H_0 hypothesis

*** H_0 is rejected at the 10% significance level.

Appendix 5: First Generation Panel Unit Root Test Results (IPS, ADF, PP)

Series	IPS Lyrics			
	Constant		Constant and Trending	
	Statistics	Probability Value	Statistics	Probability Value
DLOGPTOC	-11.4667	0.0000*	-11.4805	0.0000*
DLOGPDER	-15.4571	0.0000*	-16.0802	0.0000*
DLOGPDES	-15.4133	0.0000*	-16.0604	0.0000*
DLOGPPAS	-7.46384	0.0000*	-7.79442	0.0000*
	Fisher ADF Lyrics			
	Statistics	Probability Value	Statistics	Probability Value
	DLOGPTOC	85.8755	0.0000*	79.1490
DLOGPDER	139.223	0.0000*	129.933	0.0000*
DLOGPDES	138.855	0.0000*	129.790	0.0000*
DLOGPPAS	78.4132	0.0000*	-7.58442	0.0000*
	Fisher PP Lyrics			
	Statistics	Probability Value	Statistics	Probability Value
	DLOGPTOC	134.105	0.0000*	124.816
DLOGPDER	139.226	0.0000*	130.028	0.0000*
DLOGPDES	138.860	0.0000*	129.838	0.0000*
DLOGPPAS	36.8414	0.0000*	36.8414	0.0000*

Note: When calculating the long-term consistent error variance in the specified tests, the Barlett method was used as the "Kernel" estimator and the bandwidth was selected according to the "bandwidth" Newey-West method. The delay length was taken as 4 and the optimal delay length was determined according to the Akaike information criterion.

*Shows that the H_0 hypothesis is rejected at the 1% significance level

**The H_0 hypothesis is rejected at the 5% significance level of the H_0 hypothesis

*** H_0 is rejected at the 10% significance level.

Second Generation Panel Unit Root Test Results (Breitung and HT)

Seri		Statistics	Probability Value	
DLOGDPAS	Breitung	lambda* (Fixed)	-13.2831	0.0000**
		lambda* (Constant and Trend)	-11.7430	0.0000**
	Harris-Tzavalis	rho* (Sabit)	-0.4596	0.0000**
		rho* (Constant and Trend)	-0.4632	0.0000**
DLOGATRF	Breitung	lambda* (Fixed)	-10.9206	0.0000**
		lambda* (Constant and Trend)	-10.6138	0.0000**
	Harris-Tzavalis	rho* (Sabit)	-0.0199	0.0000**
		rho* (Constant and Trend)	-0.019	0.0000**

* Lambda and rho are resistant to cross-sectional correlation.

**Shows that the H_0 hypothesis is rejected at the 1% significance level

*** the H_0 hypothesis is rejected at the 5% significance level

**** H_0 hypothesis is rejected at the 10% significance level.

Second Generation Panel Unit Root Test Results (CADF)

Series		t statistics	Probability Values
LOGPTPS	Constant	-3.927	0.0000*
	Constant and Trending	-4.160	0.0010*
LOGRASK	Constant	-3.136	0.017**
	Constant and Trending	-3.157	0.087***
LOGPLF	Constant	-6.190	0.0000*
	Constant and Trending	-6.420	0.0000*

Note: Critical values are taken from Pesaran (2007), Critical values table. For the fixed model, 1% significance level was -2.92, 5% significance level was -3.24 and 10% significance level was -3.88. In the fixed and trendy model, it is -3.41, -3.72 and -4.35, respectively.

* H_0 is rejected at the level of 1% significance

** at the level of 5% significance

*** at the level of 10% significance.

Appendix 6: Appropriate Model Selection Test Results

Model 1		
Test	Test Result	Decision
F Texts	Prob > F = 0.8507 R ² = 0.6901	H ₀ Irrefutable
Hausman Lyrics	Prob>chi2 = 1.0000	H ₀ Irrefutable
Breuch-Pagan LM Test	Prob > chibar2 = 1.0000	H ₀ Irrefutable
Model 2		
Test	Test Result	Decision
F Texts	Prob > F = 0.9896 R ² = 0.6143	H ₀ Irrefutable
Hausman Lyrics	Prob>chi2 = 1.0000	H ₀ Irrefutable
Breuch-Pagan LM Test	Prob > chibar2 = 1.0000	H ₀ Irrefutable
Model 3		
Test	Test Result	Decision
F Texts	Prob > F = 0.8468 R ² = 0.1733	H ₀ Irrefutable
Hausman Lyrics	Prob>chi2 = 1.0000	H ₀ Irrefutable
Breuch-Pagan LM Test	Prob > chibar2 = 1.0000	H ₀ Irrefutable

Appendix 7: Deviations from Assumption Test Results

Varying Variance Test Results		
Model 1		
	chi2(1)	Prob
Breusch-Pagan/ Cook-Weisberg Testi	101.82	0.0000*
White Testi	125.32	0.0000*
Model 2		
	chi2(1)	Prob
Breusch-Pagan/ Cook-Weisberg Testi	3167.99	0.0000*
White Testi	237.99	0.0000*
Model 3		
	chi2(1)	Prob
Breusch-Pagan/ Cook-Weisberg Testi	101.82	0.0000*
White Testi	168.07	0.0000*

*H₀ is rejected at the level of 1% significance

** at the level of 5% significance

*** at the level of 10% significance.

Autocorrelation Test Results

Autocorrelation Test Results	
Model 1	
F(1, 1)	Prob
204.500	0.0444***
Model 2	
F(1, 1)	Prob
101.756	0.0629***
Model 3	
F(1, 1)	Prob
204.500	0.0444**

* H_0 is rejected at the level of 1% significance

** at the level of 5% significance

*** at the level of 10% significance.

RESEARCH ARTICLE

Content Analysis of Academic Studies on Neuromarketing in Turkey¹

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Abstract

Developments in neuroimaging in recent years have found their way into marketing and many other areas, giving rise to the concept of neuromarketing. Neuromarketing can be briefly defined as the application of neuroimaging techniques to market research. Within the scope of this work, a content analysis study was made of the sources available in the literature in the field of neuromarketing, covering the master's and Ph.D. theses that have been written in Turkey so far. In order to avoid semantic confusion and to focus on the analysis, the detailed examination of the concept of neuromarketing is left to the studies discussed in the study and specified in the appendices. The aim of the study is to provide an overview of the current state of neuromarketing research and the direction it should take in the future. At the same time, this study is the first literature review of its kind in the field of neuromarketing. 76 master's and 21 doctoral theses on the subject were found and included in the study. As a result of the research, joint studies with different disciplines can be carried out due to the focus on different areas within applied studies.

Keywords: Marketing, Neuromarketing, Marketing Communications, Consumer, Content Analysis

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Son yıllarda nörogörüntüleme alanında yaşanan gelişmeler birçok alanda olduğu gibi pazarlama alanında da benimsenmiş ve nöropazarlama kavramı ortaya çıkmıştır. Nöropazarlama kısaca nörogörüntüleme tekniklerinin pazar araştırmalarına uygulanması olarak tanımlanabilir. Çalışma kapsamında; nöropazarlama alanında literatürde ulaşılabilen kaynaklar çerçevesinde şimdiye kadar Türkiye'de yapılan Yüksek Lisans ve Doktora tezlerini kapsayan bir içerik analiz çalışması oluşturulmuştur. Anlam karmaşası oluşturmamak ve analizi ön plana çıkarabilmek adına nöropazarlama kavramının detaylı irdelenmesi çalışmada ele alınan ve ekler kısmında belirtilen çalışmalara bırakılmıştır. Bununla beraber mevcut durumu ortaya koymak, akademik çalışmalarda nöropazarlamaya verilen önemi belirtmek, gelecekteki nöropazarlama araştırmalarına yön tayin etmeye katkı sağlamak amaçlanmıştır. Aynı zamanda bu çalışma, nöropazarlama alanında bu kapsamda yapılan ilk literatür taraması olma özelliğini taşımaktadır. Konu ile ilgili 76 yüksek lisans, 21 doktora tezi bulunmuş ve çalışmaya dâhil edilmiştir. Araştırma sonucunda; uygulamalı çalışmalar içerisinde farklı alanlara yönelerek farklı disiplinlerle ortak çalışmalar yürütülebilir.

Anahtar Kelimeler: Pazarlama, Nöropazarlama, Pazarlama İletişimi, Tüketici, İçerik Analizi

¹ This article is derived from Yunus Yazıcıoğlu's master's thesis entitled "Content Analysis Study on Neuromarketing Concept", supervised by Asst. Prof. Dr. Nihal Toros Ntapiapis

Introduction

Scientific developments are progressing much faster than before. Marketing has also taken its share from this progress. The results obtained in traditional ways do not satisfy the researchers. By focusing on the gaps in research processes with technological developments, different solutions have started to be produced from different perspectives.

It is known that not only rational but also emotional tendencies are effective in consumers' decisions. Based on the knowledge that neurological processes are the most effective way of measuring emotional influence, neurological tools have started to be applied to consumer decision-making processes. However, the possibility of measuring the effect of marketing stimuli with neurological tools is called neuromarketing. Marketing, which has gone through various periods until today, today crowns the efficiency of its meeting with technology with outputs that cannot be doubted.

The problem status of this study, which is carried out as an examination of academic theses in the field of neuromarketing in Turkey, the questions sought for answers, the purpose, importance, assumptions and limitations of the study are mentioned. Then, the research model, population and sample, data collection tools and data analysis, and finally validity and reliability of the study will be stated. Afterwards, the findings emerging from the data obtained will be detailed under headings.

This study was conducted between January 2021 and May 2021, and 72 master's and 20 doctoral theses written since 2012 on the subject were found from the Higher Education Institution Database and included in the study.

Neuromarketing and Its Application Fields

In the history of world production, the delivery of the product/goods to the consumer has gone through different phases. At first, all the products produced found buyers, but over time, the production surplus, thus the competition increased and it came to a time when the consumer had the luxury of choice. Thus, the introduction of

marketing into our lives has become inevitable and various activities and strategies have been developed and implemented in order to influence the consumer and make the product / product demanded by the user. Nowadays, the consumer is at the centre of all processes of the business and the end user is tried to be addressed with personalised products when necessary. Nevertheless, what drives the consumer to prefer one product over another in the decision-making process remains the biggest problem that the marketing sector is trying to understand. The search for solutions has shown that the decision-making process takes place at the subconscious level. Our choices and the product/goods etc. we think we want match very little (Boksem & Smidts, 2015).

As a result of the researches in the field of neuroanatomy, the physiological functions of human brain structure and regions might be known by time. In addition, it has been possible to understand and interpret the neural activities that trigger consumer behaviours. With technological developments, neuroimaging competencies have developed and studies on brain imaging and their analysis to understand consumer behaviour have increased considerably. Therefore, interest in studies on imaging and analysing brain activities to understand consumer behaviour has also increased considerably. With these methods that have started to be used in the field of marketing, the concept of neuromarketing has entered the literature (Lee et al., 2007). As a research field, neuromarketing can be defined as trying to understand the reactions to stimuli with neuroscience tools.

In the 1980s, some companies used the EEG (electroencephalography) technique in their marketing research (Olson and Ray, 1983; Rothschild et al., 1986). Although there have been studies that can be shown as examples of neuromarketing studies before this, the term 'neuromarketing' was used for the first time in 2002 by Ale Smidts, a marketing professor (Smidts, 2002). There is a common view that the information obtained through neuroscience research plays a complementary role in understanding consumer behaviour. In addition, neuromarketing should be considered as a

complementary rather than an alternative marketing research tool (Cherubino et al., 2019).

Research Model

In this study, it is aimed to examine the master's and doctoral thesis studies in the field of neuromarketing published in Turkey. In this direction, content analysis, one of the qualitative research methods, was preferred. Content analysis is a research technique that aims to make repeatable and valid inferences about the concepts used in the texts and documents studied (Krippendorff, 2004). In another definition, it is

Universe and Sample

The research population of the study is the master's and doctoral academic thesis studies on neuromarketing in Turkey. The sample of the study consists of a total of 92 thesis studies, 72 master's degree and 20 doctoral degree theses, which can be accessed from the YÖK Database on neuromarketing since 2012.

Table 1. Sample Distribution of the Study

Sample	f	%
Master's Theses	72	78
Doctoral Theses	20	22
Total	92	100

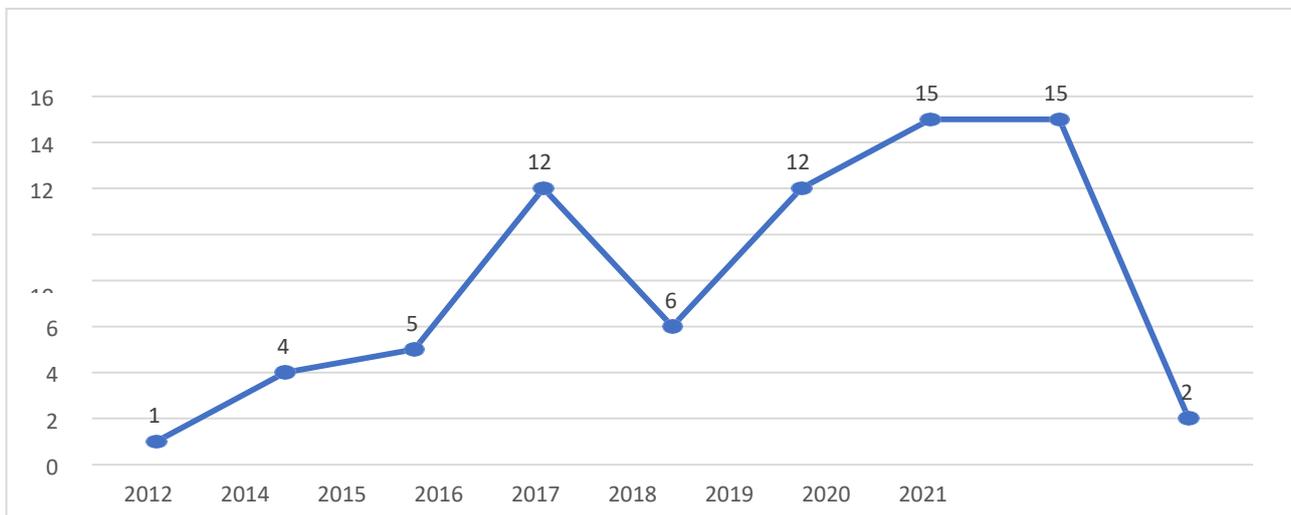


Figure 1. Distribution of Master's Theses by Years

defined as an objective, quantitative examination of the apparent content of communication in a certain order (Berelson, 1952). According to Cohen, Manion and Morrison (2007), content analysis is the process of summarising and specifying the information contained in the available written sources. As a scientific research technique, it is a necessary element that content analysis is reliable and reproducible (Krippendorff, 2004). In the studies conducted with the content analysis method, the content, summary and findings of many studies are included. This allows more information to be obtained about the subject in order to determine the trends and the scope of the studies.

Data Analyses

The data obtained in this study were analysed using content analysis method. Content analysis is a type of research that aims to obtain inferences by digitising the outputs of written material on a specific subject under predetermined headings (Karasar, 2003).

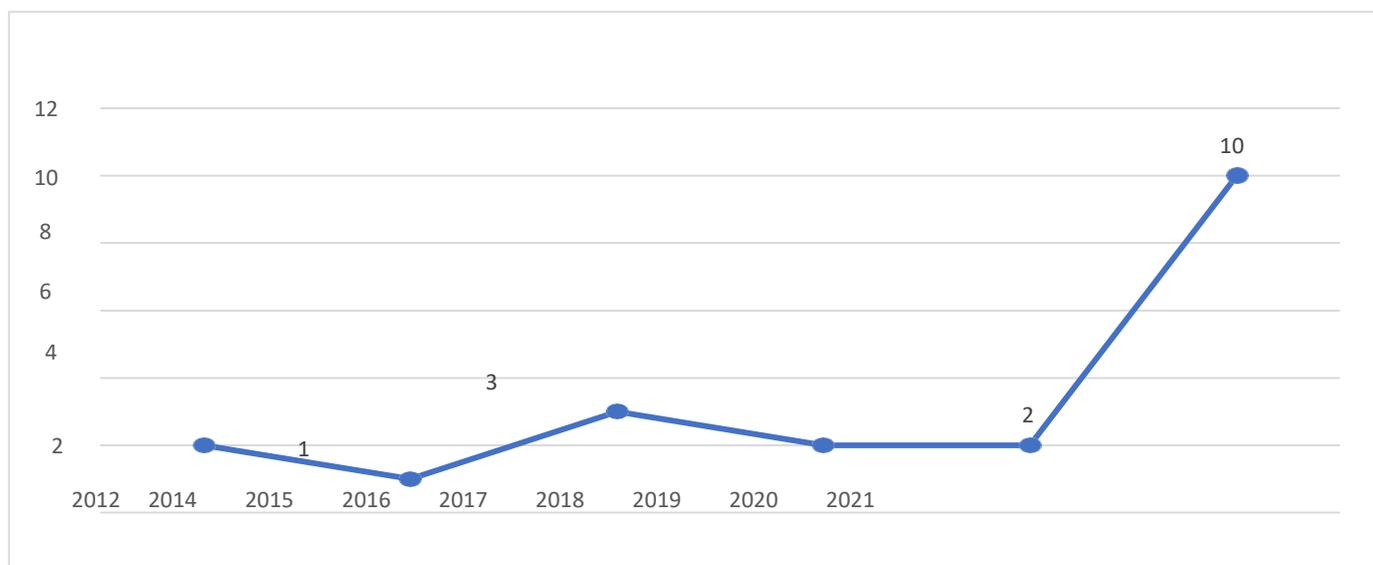


Figure 2. Distribution of PhD Theses by Years

In content analysis, the data collected under predetermined headings are explained and their relationships are revealed. By processing the collected data, it is tried to obtain in-depth information on the subject under consideration and to bring the data to a conclusion (Yıldırım & Şimşek, 2013). In the findings obtained, the ratio of the variable in the whole document was expressed as percentage (%) and the number of times it was used was expressed as frequency of use (f). For this purpose, all documents suitable for predetermined criteria were scanned and the desired data and variables were handled in tables.

Findings

Distribution of Theses by Year

When we break down the grouping of studies in the field of Neuromarketing according to publication types by years, it is seen that the increasing popularity and usage area of

Neuromarketing is reflected in academic publications.

According to the Higher Education Institution Database information; it is seen that the first study was conducted in 2012. After this date, it is seen that the gradually increasing study first peaked in

2016 with 12 studies. Although there was a decrease in 2017, we can see that it increased in the following years without slowing down. In 2019, 15 studies were conducted and this number was maintained in 2020.

According to the data of the Higher Education Institution Database; the first academic thesis study in the field of neuromarketing in our country started in 2012, followed by the first doctoral study in 2019, it has reached a peak with 10 studies.

We see that the Covid-19 outbreak, which started in 2019 and the first case was seen in 2020 in our country, had a negative impact on the studies conducted in this field and the number of studies conducted compared to the previous year, but maintained its place. The negative reflection of the Covid-19 pandemic on academic studies in this field is also shown by the fact that there were only 2 master's theses in the field of neuromarketing as of May 2021, when this thesis was conducted.

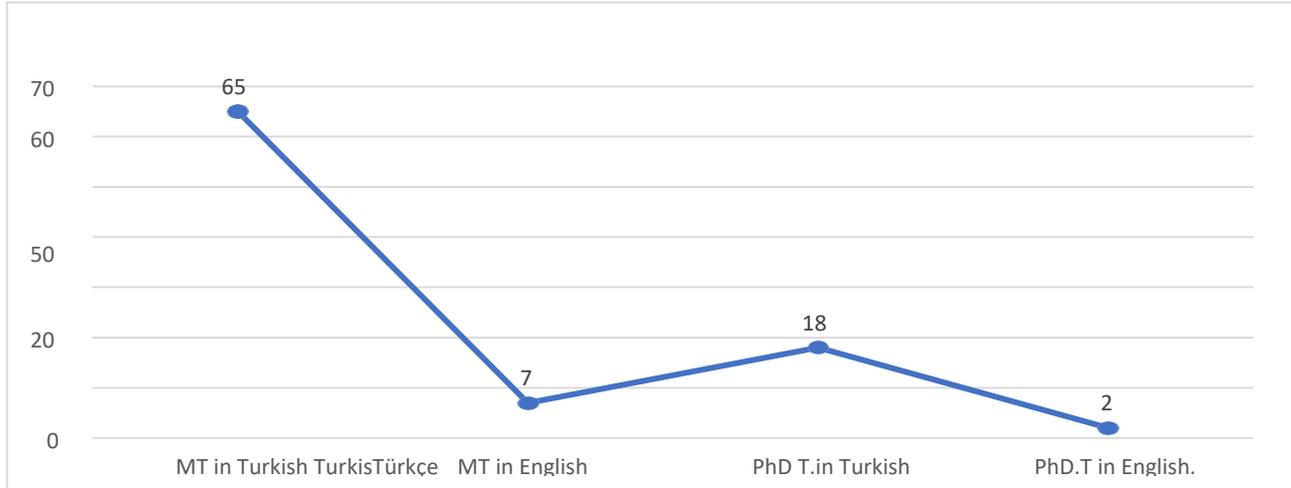


Figure 3. Distribution of the studied theses according to the languages of publication

Distribution by Institution

The number of universities in which master's and doctoral studies are carried out within the scope of this study is 37.

Table 2. Distribution of universities according to the number of publications of master's theses

Üniversite	f
Fırat University	15
Üsküdar University	12
Bahçeşehir University	8
Marmara University	4
Hitit University	3
İstanbul Okan University	3
İstanbul University	3
Anadolu University	2
Selçuk University	2
Balıkesir University si	1
Başkent University i	1
Bilecik Şeyh Edebali University	1
Çağ University	1
Doğuş University	1
Dokuz Eylül University si	1
Gediz University	1
Hacettepe University	1
İstanbul Gelişim University	1
İstanbul Kültür University	1
Kadir Has University	1

Karabük University	1
KTO Karatay University	1
Kütahya Dumlupınar University	1
Muğla Sıtkı Koçman University	1
Necmettin Erbakan University	1
Recep Tayyip Erdoğan University	1
Sakarya University	1
Trakya University	1
Yozgat Bozok University	1
Total	72

According to the data of the Higher Education Institution Database, 3 of the 20 doctoral theses have been published in Selçuk University since 2012 when the first study was conducted. Selçuk University is followed by Süleyman Demirel University with 2 theses.

Table 3. Distribution of the theses according to the research method used

Research Model	f	%
Both	4	4
Quantitative	69	75
Qualitative	19	21
Total	92	100

Table 4. Sub-divisions of research methods used in master's theses

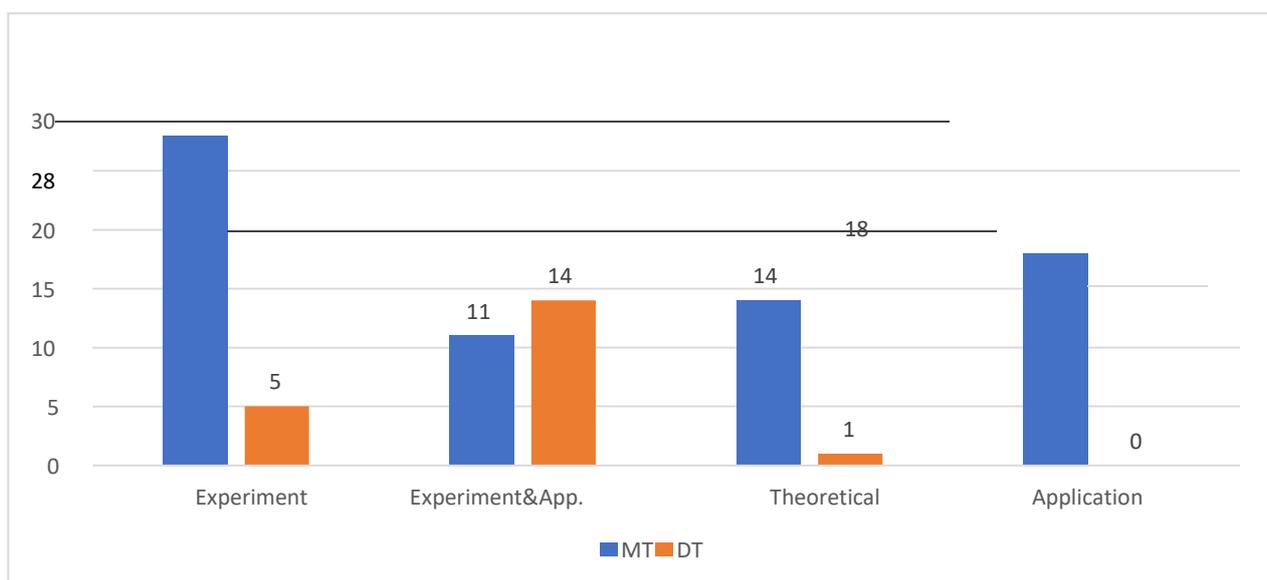
Master's Thesis	f
Experiment	28
Experiment&Application	11
Theoretical	14
Application	18
Total	72

Table 5. Sub-divisions of research methods used in doctoral theses

Doctoral Thesis	f
Experiment	5
Experiment&Application	14
Theoretical	1
Application	0
Total	20

Subdivision of Methods Used in Thesis Studies

The research sub-design of the research methods to which the theses included in the analysis are subjected to are mostly experimental studies with a total of 33 studies (master's 28 and doctorate 5).

**Figure 4.** Distribution of the theses according to research method sub-divisions

Research Methods Used in Theses

Since 2012, quantitative, qualitative and mixed methods have been used in theses published on neuromarketing. It is seen in Table 8.

Quantitative research methods were used in 69 (75 %) of the studies. Subsequently, qualitative studies, in which the subject is theoretically handled, take the second place with 19 (21 %) publications. The frequency of using quantitative research method is a very positive finding for the research-based field of neuromarketing.

Distribution of Data Collection Methods Used in Theses

Table 6. Data collection methods and numbers used in the theses studied

Data Collection Methods	f
Survey	38
EEG	36
Eye Tracking	26
Literature Review	14
In-depth Interview	7
GSR	5
EMG	3
Comparison/Description	2
PPG	1
Focus Group	1
HR	1
fNIRS	1
fMRI	1
Biopac	1

Note: Since more than one tool can be used in a study, the total value is not given.

Findings Related to Keywords Used in Publications

Within the scope of the research, the keywords used in the researches on neuromarketing were analysed. It is aimed to observe the width of the study area by transferring all words.

Table 7. Keywords Used in the Theses and Frequency of Use

Keyword	f	Keyword	f
Neuromarketing	89	Visual Attention	1
Marketing	24	Visual Communication Design	1
Consumer Behavior	18	Eye Movement	1
EEG	16	Graphic Design	1
Eye tracking	16	Hedonic Consumption	1
Neuroscience	13	Covid-19	1
Advertising	12	Content Analysis	1
Consumer	9	Instinctive Buying	1
EEG Analysis	8	Persuasion	1
Brain	6	Communication	1
Perception	5	Relevance	1
Neuroimaging	5	Models	1
Subliminal Advertising	4	Human Behavior	1
Digital e-marketing	4	Internet Advertising	1
Eye Tracking Analysis	4	Impulsive Buying Behavior	1
Brand	4	Quality Perception	1
Brand Awareness	4	Heart Rate Analysis	1
Event Related Potential	4	PSA	1
Subconscious	3	Decision Making	1
Emotion	3	Identity	1
Brand Identity	3	The Effect of Smell on Purchasing	1
Marketing Research	3	Conventional Media	1
Marketing Research Techniques	3	Creative Strategy	1
Tourism	3	Crisis Management	1
Re-purchasing Decision	3	User Experience	1
Perception Management	2	Usability	1
Packaging	2	Store Atmosphere	1
Sensory Branding	2	Brand Perception	1
Sensory Marketing	2	Brand Equity	1

Impulse	2	Brand Image	1
Ethics	2	Branding	1
Conventional Methods	2	Humorous Advertising	1
Guerilla Research Techniques	2	Effects of Models on Purchase Behavior	1
FMCG	2	Qualitative Research	1
Woman	2	Neuroeconomy	1
Decision Making	2	Neuro Imaging	1
Fear	2	Neuroeconomics	1
Fear Appeal	2	Neuromotivational Dynamics	1
Psychobioneuro-chemistry	2	Neuro-stimulus	1
Advertisment Reseaarch	2	Oscillation	1
Advertising Appeal	2	Marketing Communications	1
Decision-making process	2	Pegasus Airways	1
Purchase Intent	2	Psychophysiological Methods	1
Consumer Perception	2	Advertisement Likes	1
Consumer Behavior Models	2	Advertisement	1
Consumer Preference	2	Advertisement Events	1
Banner	1	Advertisement Memory	1
Detection	1	Advertisement Music	1
Packaging Design	1	Retro	1
Animation	1	Purchasing	1
Survey Management	1	Purchasing Behavior	1
B2B	1	Purchasing Decision	1
B2C	1	Sales Techniques	1
Bank Advertisements	1	Voter	1
Banner Events	1	Serotonin	1
Banner Advertisements	1	Anti-smoking Advertisement	1
Memory	1	Political Product	1
Five Factor Personality Features	1	Politics	1
White Collar Employees	1	Social Innovation	1
Informed User	1	Social Psychology	1
Subliminal Message	1	Social Help	1
Individual Preference	1	Subliminal Preperation	1
Large Size Models	1	Company	1
CITTASLOW	1	Holiday Package	1
Gender Factor	1	Tipography	1
Wavelet Phase Coherence	1	Touristic Purchasing Decision	1

Behavioural Economics	1	Tourist Types	1
Skin Conductivity Signal	1	Tourism Marketing	1
Destination Marketing	1	Consumer Decision Making1 Styles	1
Attention	1	Turkish Airlines	1
Sensory Branding	1	UNESCO	1
Sense	1	Turkish Consumers	1
Sensory Branding Fragmentation	1	Product Placement	1
E-Magazine	1	Web Design	1
Emotion	1	Web Site Design Features	1
Male	1	Generation X	1
Awareness	1	Generation Y	1
Price Reduction	1	Typeface	1
fMRI	1	New Media	1
fNIRS	1	F&B Businesses	1
Photoplethysmography Signal	1	Facial Muscle Activity Rate 1 Analysis	1
LLP	1	Facial Muscle Movement 1 Analysis	1
Food Retailing	1	Generation Z	1

Note: Since more than one tool can be used in a study, the total value is not given.

All keywords were reviewed one by one and a meticulous study was carried out and it was determined that a total of 166 singular words and phrases were used in the studies. The breadth of this number is important in terms of shedding light on the scope and spread of studies in the field of neuromarketing. It can be easily seen that consumer purchasing decision and process and purchasing habits constitute the main focus of the researches.

Findings Related to Purpose Sentences of Publications

In this section, the purpose statements of the theses were analysed. The purpose statements of a total of 92 studies in the grouping of master's and doctoral thesis studies were interpreted and categorised under 4 main headings and these 4 headings were divided into a total of 14 sub-headings.

Table 8. Distribution of purpose statements within the main heading 'Neuromarketing Review'

Neuromarketing Review	f
What is neuromarketing?	14

Increasing Awareness in Neuromarketing	13
Ethics	2
Method Comparison	7

In the categorization study conducted under the main title of Neuromarketing Review, the titles that the theoretical studies in this field focus on are listed. Here, in order to contribute to the literature, the concept of neuromarketing and its fields of study were analysed. Comparison of neuromarketing with classical marketing research methods and ethical analyses are also discussed.

Table 9. Distribution of the purpose statements according to the main topic 'Consumer and Purchasing'.

Consumer and Purchasing	f
Consumer Attitudes and Behaviors	18
Purchasing Behavior	22
Repurchasing Decision	3
Scent	2

Under the main topic of Consumer and Purchasing, the experimental studies conducted in the field of neuromarketing were categorised according to the topics examined.



Figure 5. Keyword Cloud

Table 10. Distribution of purpose statements according to 'Content/Message/Advertising Stimulus Effect' a. b.

Content/Message/Advertising Stimulus Effect	f
Marketing Communication Method	1
Content (Awareness) Activity	44

The majority of studies in the field of neuromarketing have aimed to observe the effect of marketing stimulus content on consumer perception. This has naturally led to the main topic of Content/Message/Advertising Stimulus Effect.

Table 11. Distribution of purpose statements according to the sub-heading 'Brand'

Brand	f
Sensory Brand Fragmentation	1
Brand Investment Efficiency	1
Brand Awareness	4
Brand Perception	3

In neuromarketing, where 92 studies have conducted research in a total of 135 topics, one of the main topics that studies focus on is branding studies.

Conclusion and Evaluation

Understanding the consumer and revealing the factors affecting his/her decisions is one of the primary objectives of marketing. It is a well-known fact that not only rational decisions are made in purchasing processes. From this point of view, the contribution of technological progress to the effort to understand the consumer is inevitable. With the developments in the medical world, especially in the field of neuroscience, it has become possible to understand the consumer's purchasing decisions objectively. Neuromarketing provides undoubted benefits to researchers in evaluating the results of marketing strategies and activities by identifying consumer behaviour and purchasing decisions by using the possibilities of neuroscience.

Consumers do not only act on the basis of rational data when they make a purchase decision, but they also include emotional factors in the decision-making process. The measurement of these emotional factors is the focus of neuromarketing research. Neuromarketing applies the techniques of medicine to the development and measurement of strategies in areas such as product design, advertising effectiveness, pricing, and customer loyalty. Neuromarketing has broken new ground for marketers because the techniques used in neuroscience have been used in marketing to understand consumer behavior. Effective advertising and neuromarketing methods are used to create marketing strategies to stay in the minds of consumers and to determine what consumers

prefer when they are ready to buy (Yücel&Coşkun). So, neuromarketing can be defined as the use of brain imaging techniques to understand the behavior of people in response to changes in the marketplace and in marketing. (Lee&Chamberlain, 2007)

Looking at the distribution of MSc and PhD dissertations in the field of neuromarketing in Turkey, the scope of this study, it becomes clear that the importance and popularity of the subject are growing daily. Since the publication of the first study in 2012, a total of 92 master's and doctoral theses have been written. The field, which was initially approached theoretically, is now the subject of applied and experimental studies. The interest and contribution of Firat University to the field is one of the most striking points under the headings where the results of the dissertations analysed are presented. A total of 15 master's and doctoral theses were carried out at this university alone. Following this, Üsküdar University has made a high contribution to the field with its Master's studies. When we look at the data collection methods, in addition to survey studies, experimental studies, especially those using EEG and eye tracking tools, stand out.

Supporting the opening of research centers in universities with master's and doctoral programs in order to make studies in this field more institutional will contribute significantly to the development of this field.

Incorporate neuromarketing studies into educational activities to expand and enhance their impact, as well as into undergraduate and graduate programs in higher education is very important.

Neuromarketing topics and theoretical knowledge should be reinforced by gaining practical experience in laboratory environments. The publication of academic articles on the results of neuromarketing studies and the provision of resources for the field of neuromarketing in Turkey will have to be organized. (Salman&Perker, 2017)

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Assessing the Surge in COVID-19-Related Cyberbullying on Twitter: A Generalized Additive Model Approach

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Abstract

The COVID-19 pandemic's onset and the subsequent lockdowns drastically amplified digital interactions worldwide. These unparalleled shifts in online behavior birthed concerns about potential surges in cybersecurity threats, particularly cyberbullying. Our research aimed to explore these proposed trends on Twitter. Utilizing a dataset of 126,348 tweets from January 1st to September 12th, 2020, we honed in on 27 cyberbullying-related keywords, like 'online bullying' and 'cyberbullying'. Recognizing the limitations of traditional change-point models, we opted for a Generalized Additive Model (GAM) with spline-based smoothers. The results were revealing. A significant uptick in cyberbullying instances emerged starting mid-March, correlating with the global lockdown mandates. This consistent trend was evident across all our targeted keywords. To bolster our findings, we conducted lag-based assessments and compared the GAM against other modeling approaches. Our conclusions robustly indicate a strong association between the enforcement of pandemic lockdowns and a heightened prevalence of cyberbullying on Twitter. The implications are clear: global crises necessitate intensified cyber vigilance, and the digital realm's safety becomes even more paramount during such challenging times.

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Keywords: Covid19, Cyberbullying, Twitter, GAM

Öz

COVID-19 salgınının küresel başlangıcı, evde kalma talimatlarına yol açarak dijital etkileşimlerde artışa yol açmıştır. Bu artan dijital katılımın, başta siber zorbalık olmak üzere siber güvenlik tehditlerini artırdığı varsayılmaktadır. Bu araştırma, COVID-19 salgınının Twitter'daki siber zorbalık eğilimleri üzerindeki etkisini niceliksel olarak ölçmeyi amaçlamaktadır. Veri çıkarmak için Python kitaplıklarını kullanarak 1 Ocak 2020'den 12 Eylül 2020'ye kadar uzanan, herkese açık 126.348 tweet'ten oluşan bir veri kümesi topladık. 'Çevrimiçi zorbalık', 'siber zorbalık' ve 'Twitter zorbalığı' gibi siber zorbalığa bağlı 18 spesifik anahtar kelimeye odaklanarak, ilgili siber zorbalık örneklerini belirlemeye çalıştık. Analitik çalışmalarımızda, karmaşık dalgalanmaları yakalamada yetersiz kalabilecek geleneksel bir değişim noktası modelini benimsemek yerine, spline tabanlı yumuşatıcılara sahip bir Genelleştirilmiş Toplama Modeli (GAM) kullandık. Bu yaklaşım, Mart ortasından itibaren siber zorbalık faaliyetlerinde belirgin bir artışı ustaca ortaya çıkarmıştır ve evde kalma protokollerinin küresel uygulamasıyla uyumlu hale geldiği tespi edilmiştir. Gözlemlenen bu eğilim, odak noktasının toplu anahtar kelime sayısı mı yoksa tek tek anahtar kelime örnekleri mi olduğuna bakılmaksızın doğrulanmıştır. Analizimizi daha da zenginleştirerek gecikmeye dayalı değerlendirmeleri dikkate aldık ve seçtiğimiz GAM metodolojisini alternatif modelleme stratejileriyle karşılaştırdık. Toplu olarak, içgörülerimiz, pandemiyle ilgili kısıtlamaların uygulanması ile Twitter'daki siber zorbalıktaki artış arasındaki güçlü bağlantının altını çizmektedir ve küresel krizlerin ortasında siber uyanıklığı artırılmasına yönelik acil ihtiyacı vurgulamaktadır.

Anahtar Kelimeler: Covid19, Siber Zorbalık, Twitter, GAM

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Introduction

In our modern world, technology seamlessly integrates into almost every facet of our daily routines. A prime illustration of this integration is the meteoric rise of social media platforms. These platforms have profoundly altered many traditional human engagements, from forming relationships to professional networking and information dissemination. While these changes have brought numerous advantages, they have also ushered in a set of challenges.

Digital advancement has not only revolutionized communication but has also led to the emergence of various cybersecurity threats, most notably cyberbullying (Balakrishnan et al., 2020; Cheng et al., 2020; Giménez Gualdo et al., 2015). The mechanics of traditional, face-to-face bullying have evolved and found a new arena online, affecting individuals regardless of their geographical location (Islam et al., 2020).

Social media sites, particularly Twitter, are hotspots for cyberbullying. A staggering 66% of cyberbullying incidents trace their origin to these platforms (M. C. McHugh et al., 2019). While Twitter allows users to connect with a diverse range of individuals, including celebrities, it simultaneously opens the door to risks such as identity theft and impersonation (Sterner & Felmlee, 2017). Though Twitter offers profile verification, this feature predominantly benefits celebrities or established professionals (Chelmiss et al., 2017). Complicating matters further, the proliferation of bots that mimic genuine users to engage in malicious acts, like follower fraud, poses another challenge (Cuadrado-Gordillo & Fernández-Antelo, 2016). The anonymity and ease of impersonation on these platforms make it arduous to pinpoint and combat cyberbullies (McLoughlin et al., 2020).

The recent surge in social media usage, propelled by the global response to the COVID-19 pandemic and the need for social distancing, has further intensified these concerns (Kee et al., 2022). This increased engagement has, unfortunately, also been accompanied by a rise in online discord and incivility (Achuthan et al., 2023).

Research Question: In what ways does a global crisis, such as the COVID-19 pandemic, influence the trends of cyberbullying?

In the vast landscape of research aimed at mitigating online harassment, there's a conspicuous gap: the voice and experiences of the users at the receiving end. It is pivotal to grasp how users perceive and experience the potential amplification of cyberbullying in the wake of significant global events, like the COVID-19 pandemic. To shed light on this, we analyzed a dataset comprising 126,348 publicly accessible tweets pertinent to cyberbullying. Our aim was to provide a clearer picture of online interactions during these turbulent times.

Our findings underscore a notable surge in cyberbullying incidents since the onset of the pandemic. This trend echoes the broader implications of how global crises can reshape digital communication dynamics. Through our comprehensive exploration, we delve into users' experiences and perceptions during such pivotal moments. Our study not only illuminates the challenges faced by everyday online users but also proffers actionable recommendations to counteract and alleviate these threats.

The traditional change-point model identifies points (change points) in a dataset where the statistical properties of the data change. This model assumes that a dataset has an initial stable statistical pattern that changes at some point(s) and then might stabilize again into a new pattern. In time series data, such as our analysis of cyberbullying over time, change-point models try to identify points in time where the series shifts in some predefined manner.

Limitations of the Traditional Change-point Model:

Sensitivity: Traditional change-point models might be too sensitive to minor fluctuations (Zamba, 2006), identifying many false positives in large datasets or missing subtle yet significant trends.

Assumption of Stability: These models assume a stable pattern before and after the change (Verdier et al., 2008). In the dynamic realm of social media, where interactions are continuously evolving, this assumption might not hold.

Flexibility: The traditional model is less flexible in accommodating intricate fluctuations in data (Wainwright et al., 2007), especially when data exhibits non-linear patterns or when the underlying process is influenced by multiple factors.

Traditional models, while robust, often make stringent assumptions about the nature and distribution of data, which might not always be tenable, especially in the context of social media dynamics. The Generalized Additive Model (GAM), on the other hand:

Flexibility: Offers flexibility in capturing non-linear trends without the need to explicitly define the form of the relationship between predictors and response (Ravindra et al., 2019). This is especially pertinent to our study where cyberbullying trends can be influenced by myriad factors, and the relationship might not be strictly linear.

Modeling Smooth Functions: GAMs can model smooth functions of predictors (Dominici et al., 2002), which is particularly beneficial for time series data like ours where capturing smooth temporal trends is crucial.

Addressing the Study's Significance; while the intuitive expectation is that cyberbullying would increase with more social media usage, our study provides a quantitative verification of this assumption. The act of empirically establishing this link helps solidify what might otherwise remain in the realm of speculation. The application of the Generalized Additive Model (GAM) with spline-based smoothers in the context of analyzing cyberbullying trends is a novel contribution. This methodology can be extended to other social phenomena, making our study a potential reference point for future research in this domain. While increased social media usage could have led to multiple online behaviors, our study specifically shines a light on cyberbullying, which has severe psychological and emotional ramifications. By quantifying this increase, we hope to inform platforms, policymakers, and communities about the urgency of interventions. The COVID-19 pandemic's global scope and the resultant universal experience of lockdowns and social distancing set it apart from other events. Understanding its impact on behaviors like

cyberbullying is crucial for future preparedness and for informing online community guidelines and digital literacy campaigns.

While numerous studies have explored cyberbullying trends, our research stands out in its methodological approach and the specificity of its context:

Contextual Specificity: We specifically study the impact of a global pandemic on cyberbullying, a context that hasn't been explored in-depth previously.

Empirical Verification: While the intuitive connection between increased social media usage and cyberbullying is acknowledged, empirical verification using a sophisticated model is sparse. Our research fills this void.

In this study, we emphasize the period from January 1st, 2020 to September 12th, 2020, with the objective of determining whether the later months exhibited a heightened frequency of cyberbullying-related keywords on Twitter compared to the initial two months. Our data collection targeted specific keywords, which were subsequently organized into daily counts. An initial visual analysis of the data proved inconclusive, revealing minimal insight into the impact of the pandemic on cyberbullying trends.

Recognizing the necessity for a more nuanced analysis that accommodates the intricacies of time-series data and the challenges posed by our limited sample size, we opted for a Bayesian autoregressive Poisson model. The Bayesian Autoregressive Poisson model is a statistical model tailored for count data, which is data where the outcome variable represents counts (e.g., number of tweets). The Bayesian framework lets us incorporate prior knowledge or beliefs (in the form of prior distributions) about the parameters (Brandt and Sandler, 2012). As data comes in, these priors are updated to give posterior distributions. This is particularly useful in our context as it offers a systematic way to account for uncertainty in our estimates. The autoregressive component allows the model to consider the dependency of a current observation on its previous observations (Taddy, 2010). In time-series data like ours, this is crucial as the count of cyberbullying incidents on a particular day could be influenced by counts on preceding days. The Poisson distribution is a natural choice

for modeling count data (Munira et al., 2020). It assumes that counts are independent and occur at a constant rate over time. However, when combined with the Bayesian and autoregressive components, it becomes more flexible and can account for varying rates. The Bayesian Autoregressive Poisson model is a statistical model tailored for count data, which is data where the outcome variable represents counts (e.g., number of tweets).

Bayesian Aspect: The Bayesian framework lets us incorporate prior knowledge or beliefs (in the form of prior distributions) about the parameters (Brandt and Sandler, 2012). As data comes in, these priors are updated to give posterior distributions. This is particularly useful in our context as it offers a systematic way to account for uncertainty in our estimates.

Autoregressive Aspect: The autoregressive component allows the model to consider the dependency of a current observation on its previous observations (Taddy, 2010). In time-series data like ours, this is crucial as the count of cyberbullying incidents on a particular day could be influenced by counts on preceding days.

Poisson Aspect: The Poisson distribution is a natural choice for modeling count data (Munira et al., 2020). It assumes that counts are independent and occur at a constant rate over time. However, when combined with the Bayesian and autoregressive components, it becomes more flexible and can account for varying rates.

While there are multiple statistical models available for time-series count data, our choice was driven by the specific nature and requirements of our dataset. Models like the traditional Poisson regression might not capture the temporal correlations effectively. Meanwhile, while other time-series models like ARIMA or Exponential Smoothing might be suitable for forecasting, they might not handle the count nature of our data or allow for the incorporation of prior beliefs as effectively as the Bayesian Autoregressive Poisson model.

This approach elucidated a discernible uptick in cyberbullying instances starting from mid-March 2020. This Bayesian methodology allowed us to view the parameters as dynamic across time, assigning them appropriate priors. Consequently,

we could generate posterior samples for these parameters as functions of time. The capacity to construct such flexible posteriors is paramount in statistical inference literature, as it offers a quantification of uncertainty.

Furthermore, we conducted analogous analyses on subcategories by amalgamating subsets of keywords. To our understanding, this study stands as a pioneering quantitative trend analysis on such data, shedding light on the profound and adverse influence of the COVID-19 pandemic on cyberbullying dynamics.

Related Work

Cyberbullying poses a significant threat to the digital realm, with its far-reaching psychological impacts leading to potentially severe repercussions for victims. The emergence and ubiquity of social media platforms, which sees billions of users interacting daily, has been a catalyst for the escalation of cyberbullying incidents (Hosseinmardi et al., 2015). In times of crisis, the uptick in online activity can further exacerbate this issue. Thus, understanding and integrating human factors becomes paramount to safeguard users in these challenging times, particularly in the backdrop of the ongoing pandemic (Yang, 2021).

Consequences of Cyberbullying on Adolescents

Historical research has delved deep into the ramifications of cyberbullying, especially among teenagers. Intriguingly, both the aggressors and the victims in cyberbullying scenarios can bear the brunt of the emotional aftermath. Bonanno and Hymel observed that individuals involved in cyberbullying, be it as perpetrators or victims, exhibited higher propensities for depression and suicidal ideation compared to those entangled in other forms of bullying (Bonanno & Hymel, 2013). Dredge et al., highlighted the profound impact of cyberbullying on victims' social and emotional well-being. The severity of these effects can be influenced by various factors, such as the anonymity of the bully and the presence (or absence) of bystanders (Dredge et al., 2014).

Echoing these sentiments, Wisniewski et al., emphasized that reducing online risks can be instrumental during the formative years of adolescents. It aids in nurturing essential interpersonal competencies like boundary establishment, conflict management, and empathy (Wisniewski et al., 2015). Beyond the psychological toll, Cerna observed tangible behavioral shifts among victims, marked by increased internet caution and the adoption of online avoidance tactics (Cerna, 2015). McHugh et al., acknowledged the profound emotional distress caused by cyberbullying. However, they posited that the aftereffects might be more transient than conventionally believed, underscoring the role of resilience in recovery (M. McHugh, 1997).

Digital Harassment on Social Platforms

The landscape of cyberbullying extends across a myriad of digital spaces, encompassing social media sites, chat rooms, and instant messaging apps. The scope and duration of such harassment can fluctuate, ranging from short-lived instances spanning a week to prolonged campaigns (Ogolla et al., 2023). The inherent nature of social platforms, often fostering comparisons amongst peers, can inadvertently precipitate self-esteem challenges for users (Wright, 2019).

In recent times, dominant social media outlets like Twitter and Facebook have unfortunately become epicenters for notable cyberbullying incidents. A poignant instance from May 2020 recounts the tragic suicide of a Japanese reality TV personality, a consequence of relentless online harassment. Similar heart-wrenching events globally have galvanized legislators to advocate for laws criminalizing cyberbullying (Xu & Trzaskawka, 2021).

In the quest to attenuate the repercussions of cyberbullying, prior research has shed light on the enhancement of social platform policies, aiming to shield victims from perpetrators. Milosevic delved into the ethical obligations of social media corporations, especially concerning child-targeted cyberbullying (Feldman et al., 2017). Their insights underscored the pressing need for greater transparency and accountability from these platforms. Hence, it becomes imperative to discern

and implement holistic defense strategies against cyberbullying, encompassing technical, organizational, and end-user dimensions.

The broader literature on cyberbullying trends, especially during global crises (Lopez-Meneses et al., 2020), we observe that our findings largely align with the consensus that online harassment incidents tend to escalate during periods of heightened global stress. Several studies have similarly reported spikes in cyberbullying during past global events (Wang et al., 2020; Saravanaraj et al., 2016; Huang et al., 2018), albeit on different platforms or regions. While our study primarily focused on Twitter data within a specific timeframe, other research might consider a wider range of platforms or longer periods (Das et al., 2020). Any discrepancies in trends could arise from such methodological differences. Moreover, the unique nature of the COVID-19 pandemic, with its unprecedented global impact, might present distinct trends compared to other crises. Our utilization of the Generalized Additive Model (GAM) with spline-based smoothers offers a novel approach to cyberbullying trend analysis. Few, if any, studies have harnessed this method in the context of cyberbullying during a global crisis, making our research distinctive in its methodology.

Methodology: Data Acquisition and Overview

Twitter provides a platform for users to articulate their thoughts in concise 280-character messages. Historically, such tweets have been scrutinized to detect instances of cyberbullying (Dewani et al., 2021). For example, Cortis and Handschuh evaluated tweets related to two significant events—the Ebola outbreak and the Michael Brown shooting in Ferguson, Missouri—to discern prevalent hashtags and entities linked to bullying (Everbach et al., 2018).

With the heightened online activity during the COVID-19 pandemic, there's a prevailing hypothesis suggesting an upsurge in cyberbullying incidents. Twitter, boasting over 300 million daily active users, emerges as a prime data source for our study. To ascertain the pandemic's influence on cyberbullying, we gathered a dataset

of 126,348 publicly available tweets containing cyberbullying-associated keywords.

To access historical tweets, we employed the "Get Old Tweets" API. This tool offers a more extensive reach compared to other APIs like Tweepy or twitteR, which either confine the collection to 200 tweets per keyword or impose temporal restrictions. For data storage and subsequent analysis, we leveraged MongoDB. Our data encompasses tweets from January 1st, 2020 to September 12th, 2020, allowing us to gauge the pandemic's imprint on cyberbullying trends.

Our study embarked on a step-by-step methodology:

Data Collection: We amassed a dataset of 126,348 publicly accessible tweets spanning from January 1st, 2020, to September 12th, 2020, utilizing Python libraries and the Get Old Tweets API. Our data extraction was completed by the end of September 2020, before the known issues with the API arose.

Keyword Filtering: The tweets were filtered based on 27 specific cyberbullying-related keywords to ensure the dataset's relevance.

Model Application: We then employed the GAM with spline-based smoothers to analyze the time series data. The choice of splines allowed us to capture intricate fluctuations in cyberbullying occurrences over the observation period without overfitting.

Trend Analysis: Post model fitting, we analyzed the results to discern clear patterns and correlations, especially in the context of the COVID-19 pandemic's timeline.

Our study aimed to capture a broad spectrum of tweets related to cyberbullying. To ensure a wide coverage, we targeted a series of keywords, each of which has been associated with cyberbullying in previous literature or denotes online harassment. Here's an explicit list of some of the primary keywords we used:

1. Cyberbullying
2. Online bullying
3. Twitter bullying
4. Cyber harassment
5. Online troll
6. Cyberthreat
7. Twitter hate
8. Online abuse
9. Digital harassment

10. Cyberstalk
11. Online hate speech
12. Cyberbullies
13. Twitter threats
14. Digital bully
15. Social media harassment
16. Cyber menace
17. Online intimidations
18. Twitter troll
19. Cyber aggression
20. Digital threats
21. Social media bullying
22. Cyberattacks (in the context of personal attacks)
23. Internet bully
24. Twitter abuse
25. Online torment
26. Digital hate
27. Cyber victimization

Additionally, the reason for our combination of specific keyword subsets and the advantages this approach provides for our research is a point of interest. In addition to the above keywords, we also considered variations of these terms, both with and without spaces (e.g., "cyber bullying" vs. "cyberbullying"), to ensure we captured as many relevant tweets as possible.

Rationale for Combining a Subset of Keywords:

Thematic Grouping: Some keywords, by their very nature, are closely related in terms of the underlying theme or aspect of cyberbullying they represent. By combining such keywords, we aimed to capture broader themes or patterns, ensuring that we don't miss out on overarching trends in the data.

Data Sparsity: Some individual keywords might have yielded sparse data, which could lead to erratic trends or insufficient statistical power in the analysis. By combining them with related keywords, we ensured a more stable and robust dataset, thereby reducing the influence of daily fluctuations and ensuring smoother trend lines.

Enhanced Signal-to-Noise Ratio: By amalgamating related keywords, we aimed to amplify the underlying "signal" (genuine trend) while minimizing the "noise" (random fluctuations). This was especially pertinent given the volatile nature of social media interactions.

Benefits in Research:

Comprehensive Analysis: By looking at both individual keywords and their combined subsets, our analysis offers a dual perspective. While individual keywords provide granularity, the combined subsets give a broader overview, ensuring that our analysis is both detailed and holistic.

Statistical Robustness: The amalgamation of related keywords ensured that our statistical models had a solid foundation, minimizing the risks of overfitting or being unduly influenced by outliers.

Greater Generalizability: Thematic groupings, represented by combined keyword subsets, allow for findings that are more generalizable across various nuances of cyberbullying, making our insights more universally applicable.

Data Analysis Overview

Data Evaluation Process within the GAM Framework; before diving into modeling, our dataset underwent rigorous preprocessing. This included handling missing values, outlier detection, and normalization to ensure that the data fed into the GAM was of the highest quality. We used spline-based smoothers in our GAM due to their ability to effectively capture non-linear relationships. By letting the data dictate the nature of these relationships rather than imposing a pre-defined structure, we ensured a more accurate representation of the underlying trends. To validate our model, we employed a combination of residual analysis and cross-validation techniques. This helped in gauging the model's performance and its ability to generalize on unseen data. One of the strengths of GAMs is their interpretability. After fitting the model, we extracted the smooth functions to visualize the effect of our predictors (i.e., time and keywords) on the response variable (i.e., cyberbullying occurrences).

In our study, the GAM framework was employed primarily due to its flexibility in accommodating non-linear relationships and its ability to model complex patterns through smoothing functions. We specifically used two types of smoothing functions: cubic spline and thin plate spline. The choice of these smoothers was driven by our aim to capture potential underlying

patterns in the data, especially any cyclical or weekly trends that might be present.

For our analysis:

Software Used: We conducted our analysis using the statistical software R, which provides a comprehensive suite of tools for modeling and data analysis.

R Packages:

mgcv: This package in R offers robust support for Generalized Additive Models. We employed functions within mgcv to fit our GAMs using the chosen smoothers. The choice of smoothers and their basis dimensions were determined based on the Akaike Information Criterion (AIC) to ensure the best model fit.

ggplot2: For data visualization needs, we utilized the ggplot2 package. This ensured our graphical representations were both informative and visually coherent.

Model Fitting Process: After loading our dataset into R, we fitted a GAM using the gam() function from the mgcv package. This function allows us to specify our response variable (the daily tweet counts) and our predictors (time, in this case) along with the type of smoother we wished to apply.

To ascertain the goodness of fit and to visually assess the model, we also plotted the smoothed curve against the actual data points using ggplot2.

Tools and Software Employed; as previously mentioned, we utilized the "Get Old Tweets" API for sourcing our Twitter data. Our primary tool for data analysis and modeling was the statistical software R. The mgcv package in R provides extensive support for Generalized Additive Models and was instrumental in our analysis. We employed the ggplot2 package in R for our data visualization needs, ensuring that our findings were presented in an informative and aesthetically pleasing manner.

Upon completing our data collection, we embarked on an in-depth trend analysis to discern the potential ramifications of a global crisis, like the COVID-19 pandemic, on cyberbullying. By harnessing the timestamp of each post, we amassed daily tweet counts that contained at least one of our targeted keywords. Figure 1 visually

represents this data, spanning a total of 255 days from January 1st, 2020 to September 12th, 2020. We examined a total of 27 distinct keywords related to cyberbullying, such as "cyberbullying", "online harassment", and others as previously

However, an unmistakable upward trajectory can be observed from mid-March across all categories, including the cumulative count. Notably, the latter half of May registered a significant surge in cyberbullying-related tweets. To delve deeper into

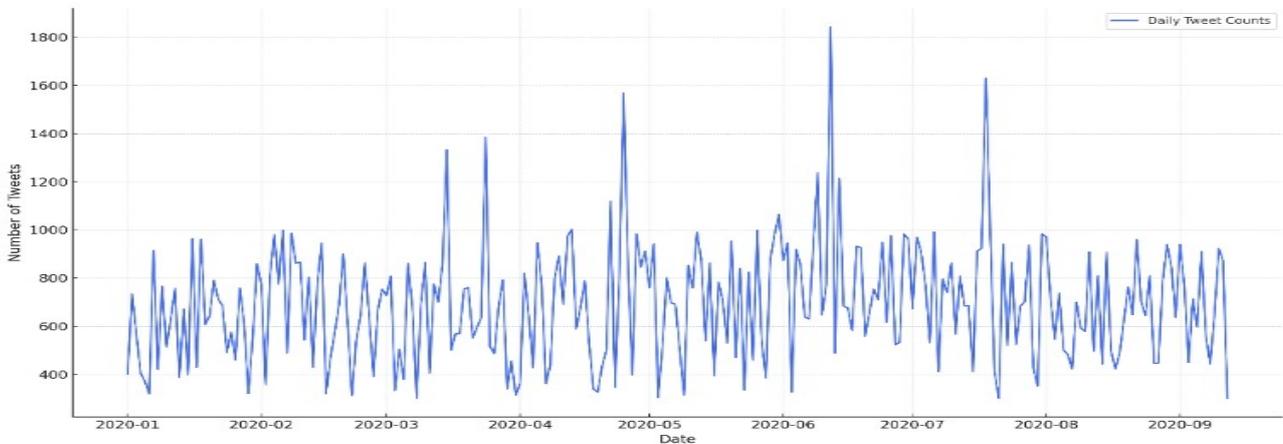


Figure 1. Daily Count of Total Tweets Related to Bullying

mentioned. To ensure comprehensiveness, our keyword list incorporated variations both with and without spaces, resulting in patterns like "cyber bullies" and "cyberbullies". Despite the diversity in our keyword set, several terms yielded a minimal number of tweets, rendering their impact on the analysis negligible. Consequently,

this May spike, we scrutinized the content of these tweets. Our analysis revealed that a predominant portion of the discourse revolved around the tragic passing of a Japanese TV personality, a victim of relentless cyberbullying.

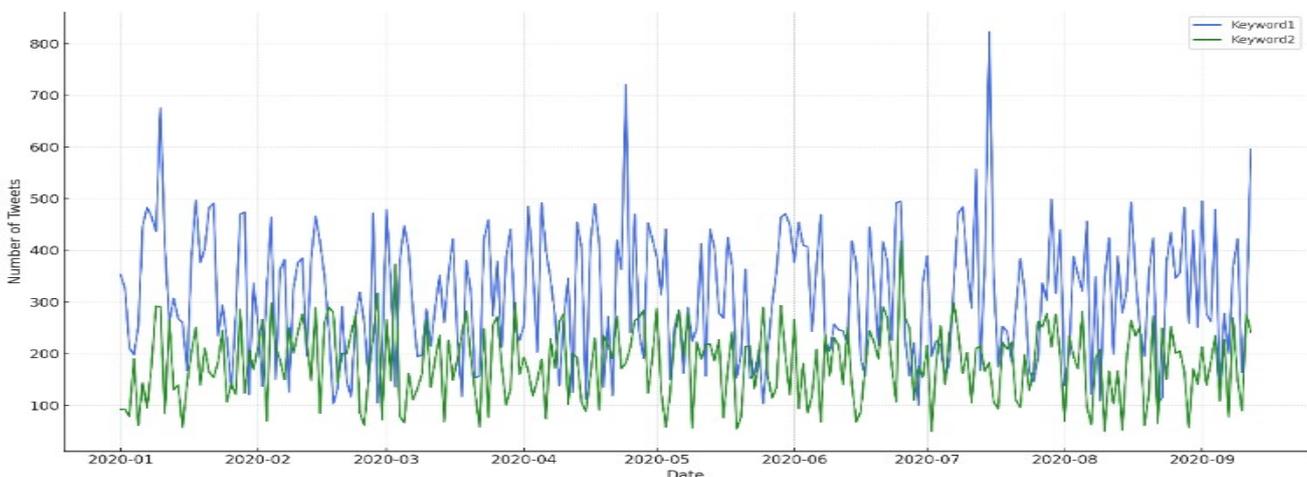


Figure 2. Daily count of total tweets for the two sub-class

for analytical clarity, we categorized these keywords into two primary sub-classes. The distribution of daily counts across these sub-classes is presented in Figure 2.

Upon examining Figures 1 and 2, a discernible pattern emerges across the various counts and sub-classes delineated. Predominantly, with the exception of the sub-class labeled as 'ON', there isn't a substantial shift in the mean values.

Generalized Additive Models (GAMs)

Generalized Additive Models (GAMs) are a class of statistical models that build on the strengths of both generalized linear models (GLM) and additive models. They offer a flexible framework for modeling relationships in data, particularly when the relationships may be nonlinear or involve complex interactions.

Significance of Using Generalized Additive Model (GAM); GAMs provide a flexible framework that allows for nonlinear relationships between the dependent and independent variables. This flexibility enables the model to capture intricate patterns in the data without imposing rigid structural assumptions, a feature that is particularly beneficial given the complex and evolving nature of cyberbullying trends on platforms like Twitter. Our choice of spline-based smoothers in the GAM framework further enhances its ability to detect both abrupt and subtle changes in the data. This feature is crucial in a platform like Twitter, where interactions can vary dramatically over short time frames. Despite their flexibility, GAMs remain interpretable. They allow for the visualization of the relationship between predictors and the response variable, offering insights that can be more intuitive than those from traditional regression models.

Theoretical Foundation:

At its core, a GAM is represented as:

$$g(E(Y)) = \sigma + f_1(x_1) + \dots + f_p(x_p) \quad (1)$$

Where:

- ⊙ g is the link function.
- ⊙ $E(Y)$ is the expected value of the response variable.
- ⊙ α is the intercept.
- ⊙ f_i are smooth, non-linear functions of the predictor variables x_i .

Unlike GLMs, which impose a specific functional form on the predictors (e.g., linear, quadratic), GAMs allow the data to dictate the shape of the relationship between predictors and the response variable.

Capabilities of GAMs:

Non-linearity: GAMs can model nonlinear relationships without requiring the specification of the functional form a priori.

Interactions: They can capture interactions between variables by including interaction terms in the model.

Flexibility: GAMs can accommodate different types of data (e.g., continuous, count, binary) by using appropriate link functions and error distributions.

Interpretability: Despite their flexibility, GAMs provide interpretable results, which can be visualized effectively using plots of the smooth functions.

GAMs have been widely applied in various fields, from ecology to finance, and have proven valuable in situations where relationships between variables are complex or non-linear. Hastie and Tibshirani (1990) introduced GAMs as an extension of GLMs, emphasizing their ability to model non-linear relationships without overfitting. Wood (2006) further refined the methodology, introducing efficient algorithms for fitting GAMs and offering tools for model selection and validation.

Several studies have demonstrated the efficacy of GAMs in understanding complex datasets. For instance, in environmental science, GAMs have been pivotal in teasing out non-linear relationships between climatic variables and biological responses (Zuur et al., 2009). In the realm of social media analytics, GAMs have been employed to model the temporal dynamics of user behaviors, capturing the non-linear effects of time and user interactions (Wang et al., 2015).

While there are other studies in the field that analyze cyberbullying trends (Das et al., 2020; Lopez-Meneses et al., 2020; Johannis et al., 2020), the use of GAMs with spline-based smoothers differentiates our research in the following ways:

Comprehensive Trend Analysis: Our model doesn't just capture abrupt changes (like traditional change-point models might) but also identifies gradual shifts in cyberbullying trends, offering a more holistic understanding of the data.

Adaptability: The GAM framework's adaptability means that our model can be readily fine-tuned and recalibrated for real-time data or different datasets, making it a versatile tool for cyberbullying analysis in dynamic online environments.

Nuanced Insights: By leveraging the GAM's capabilities, we've been able to derive more nuanced insights about the relationship between global crises (like the COVID-19 pandemic) and cyberbullying trends, setting our study apart in its depth and analytical rigor.

Analyzing Total Counts Using Generalized Additive Models (GAMs)

We initiate our examination by evaluating the overall count trends using two specific smoothing functions within our GAM framework: a cubic spline and a thin plate spline. In our study, the GAM framework was employed primarily due to its flexibility in accommodating non-linear relationships and its ability to model complex patterns through smoothing functions. We specifically used two types of smoothing functions: cubic spline and thin plate spline. The choice of these smoothers was driven by our aim to capture potential underlying patterns in the data, especially any cyclical or weekly trends that might be present. For our analysis: We conducted our analysis using the statistical software R, which

in this case) along with the type of smoother we wished to apply.

To ascertain the goodness of fit and to visually assess the model, we also plotted the smoothed curve against the actual data points using ggplot2. Given the nature of our data, which spans over days, there's a possibility of observing weekly patterns. These patterns could imply a strong correlation at a lag of 7 days (representing a week) or even at a lag of 8 days, if the initial day was significant. To investigate the potential existence of such weekly patterns, we employed a smoothing function that extends slightly beyond a 7-day period.

Figures 3, 4, and 5 depict the estimated smooth functions along with their corresponding credible intervals. These trends and intervals are based on the posterior distributions derived from our GAM,

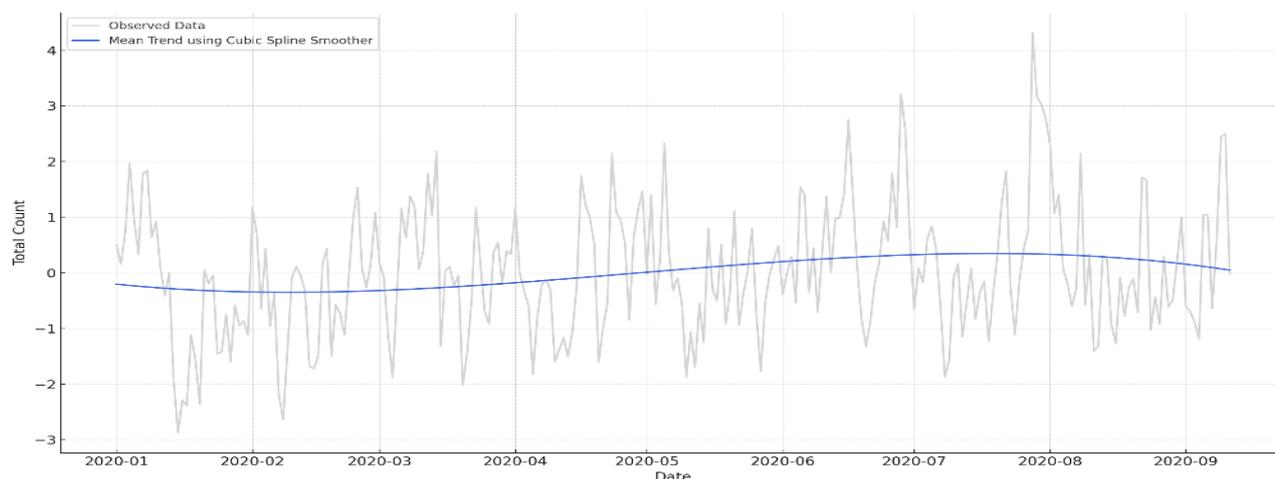


Figure 3. Overall Cyberbullying Tweet Trends: A Cubic Spline Analysis from January to September 2020.

provides a comprehensive suite of tools for modeling and data analysis. MgcV: This package in R offers robust support for Generalized Additive Models. We employed functions within mgcv to fit our GAMs using the chosen smoothers. The choice of smoothers and their basis dimensions were determined based on the Akaike Information Criterion (AIC) to ensure the best model fit. Ggplot2: For data visualization needs, we utilized the ggplot2 package. This ensured our graphical representations were both informative and visually coherent. Model Fitting Process: After loading our dataset into R, we fitted a GAM using the gam() function from the mgcv package. This function allows us to specify our response variable (the daily tweet counts) and our predictors (time,

with the credible intervals providing a measure of uncertainty around our estimates.

In Figure 3, the total count of tweets related to cyberbullying is visualized over the observation period. The raw daily counts are depicted in light grey, illustrating the inherent variability of the data. The superimposed blue curve, derived from a cubic spline smoother within our Generalized Additive Model (GAM), captures the underlying patterns, providing a clearer representation of the overall trend. This smoother effectively showcases periods of heightened cyberbullying activity and offers an insight into potential triggers or influential events.

Conclusion: The trend in Figure 3 highlights the cyclical nature of cyberbullying occurrences, with notable peaks potentially corresponding to specific

trends observed in this figure correspond to specific intervals and should be interpreted in conjunction with other factors discussed in the

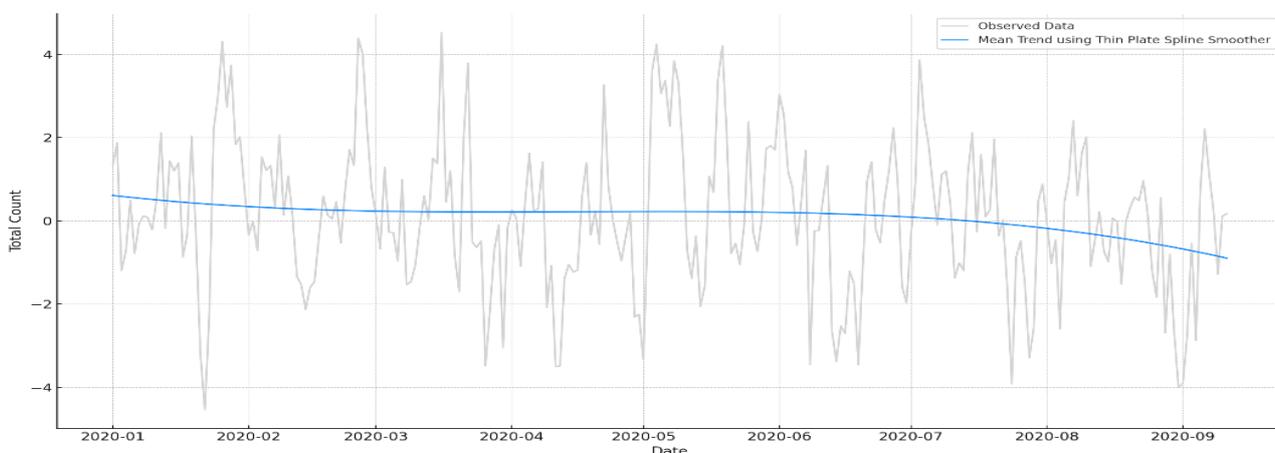


Figure 4. Cyberbullying Tweet Dynamics: Analysis via Thin Plate Spline from January to September 2020.

external events or shifts in online discourse. The increasing trend towards the latter part of the observation period, juxtaposed with the global dynamics of the COVID-19 pandemic, underscores the importance of monitoring and addressing cyberbullying during times of crisis.

Figure 4 presents a distinct representation of the total count of tweets, employing a thin plate spline smoother to delineate the underlying trends in the data. The observed tweet counts, portrayed in light grey, exhibit pronounced variability throughout the observation window. The dodger blue curve, representing the mean trend derived from the thin plate spline, unveils nuanced patterns that might be obscured in raw daily counts. The utilization of this spline variation elucidates subtler shifts in cyberbullying occurrences, offering a comprehensive insight into the ebb and flow of online harassment over time. The decreasing

manuscript.

To conclude, Figure 4's detailed analysis, aided by the thin plate spline smoother, accentuates specific intervals of decreased cyberbullying occurrences. These intervals, while brief, indicate moments where online harassment dipped, possibly due to external factors or platform interventions. This underscores the importance of continuous monitoring and the potential effectiveness of targeted interventions.

In Figure 5, we illustrate the total tweet count of a subsequent dataset, using the thin plate spline method for smoothing. The raw daily counts, depicted in light grey, highlight the sporadic spikes in cyberbullying activity. The overlaid dark cyan curve provides an aggregate view of these fluctuations, revealing broader patterns while filtering out short-term noise. This dataset's distinctiveness, compared to our previous ones,



Figure 5. Delineation of Cyberbullying Tweet Counts: Insights from Thin Plate Spline Smoothing.

underscores the dynamic nature of cyberbullying trends. It's imperative to interpret these patterns within the broader context, considering external factors such as changes in public sentiment, shifts in keyword usage, or significant events. Ultimately, while the trend for specific subclasses might exhibit a decline, it's crucial to recognize that other subclasses might be on the rise, continually reshaping the cyberbullying landscape.

Discussion, Implication, Limitation and Future Work

In this study, we embarked on an extensive quantitative exploration of cyberbullying trends on Twitter, harnessing the strengths of Generalized Additive Models (GAMs) with spline-based smoothers. Our model aptly unveils a discernible escalation in the general mean trend for the majority of the keywords under scrutiny, spanning the 27 keywords and their respective subclasses. Our findings provide a multifaceted response. The GAMs, particularly with the spline-based smoothers, highlighted an increase in cyberbullying activities from mid-March onward, corresponding with the onset of global pandemic restrictions. This indicates that global crises, like the COVID-19 pandemic, can intensify online harassment and cyberbullying, possibly as a consequence of increased online activity and heightened societal tensions.

Limitations associated with our study; our analysis relies solely on Twitter data, which, while extensive, does not encompass the entirety of online interactions or platforms where cyberbullying may occur. Other platforms like Facebook, Instagram, and Reddit might present different trends. While we aimed to be comprehensive in our choice of keywords related to cyberbullying, there's always the potential that some relevant terms or evolving slang were overlooked. Twitter's user base, although global, might have a demographic or geographic bias. Our study did not delve deeply into demographic-specific or region-specific trends, which could offer nuanced insights. The mere presence of a keyword doesn't necessarily imply a cyberbullying instance. A more in-depth sentiment analysis or context-based assessment would provide a more accurate

picture, albeit at the cost of increased complexity. Our study spanned from January 1st, 2020, to September 12th, 2020. Cyberbullying trends before or after this period weren't considered, which might affect the comprehensiveness of our insights, especially given the evolving nature of the pandemic. While the Generalized Additive Model (GAM) offers flexibility and can capture intricate patterns, like all models, it makes certain assumptions about data distribution and relationships. There's always a trade-off between model complexity and interpretability.

The flexibility of the smoothers, especially in the face of data with notable variability, is commendable. Our results corroborate the proposition that the onset of the COVID-19 pandemic, and subsequent worldwide stay-at-home mandates, had a palpable impact on cyberbullying occurrences on Twitter. This study's implications are manifold. First, our data-driven insights underscore the pressing need for cyber vigilance, especially during global crises that drastically reshape online interactions. As digital interactions burgeon, so does the potential for nefarious activities such as cyberbullying. Early detection of upward spikes in such activities can pave the way for preemptive interventions, be they technological or policy-driven. Looking ahead, several intriguing avenues beckon. While our analysis provided a comprehensive retrospective look at cyberbullying trends, it is imperative to develop models that can forecast short-term cyberbullying activity. Such predictive capabilities can arm platforms like Twitter with the foresight needed to proactively counteract surges in online harassment. Moreover, our focus on aggregate keyword counts could be expanded to delve deeper into individual keyword dynamics. A multivariate approach, considering each keyword in tandem, might unravel subtle interdependencies between them. Given the protracted nature of the COVID-19 pandemic and its oscillating global impacts, it remains to be seen how cyberbullying trends will evolve. As we forge ahead, our objective is to refine our methodologies, incorporate real-time data, and continually recalibrate our models to ensure they remain attuned to the ever-shifting landscape of online interactions.

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The Role of Networks in The Early Internationalization of Emerging Market Firms: Evidence From Turkish Textile-Born Globals with Social-Business Networks Perspective¹

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Abstract

This study examines the role of networks in the early internationalization of born-global firms operating in the textile sector in Turkey, which is seen as a developing country market, from the perspective of social and business networks, using a dual focus and case-based approach. This study, organized based on the research gap on the early internationalization behaviors of SMEs in developing countries and low-tech sectors, contributes to the internationalization literature by addressing the subject from a developing country market and a traditional industry. Research shows that networks are essential for the early internationalization of born global firms. What companies obtain from network relationships in internationalization; emerges under seven headings: defining foreign market opportunities and creating market information, choosing a foreign market and entry methods, overcoming resource constraints and reducing risk, operational support, access to critical actors, moral support, and trust. Although it has been found that both social and business networks are effective in early and rapid internationalization, this effect cannot be easily categorized in terms of importance.

Keywords: Networks, Relationships, Business Networks, Social Networks, The Role of Networks, Early Internationalization, Born Global Firms

Öz

Bu çalışma, gelişmekte olan ülke pazarlarından biri olarak görülen Türkiye’de, tekstil sektöründe faaliyet gösteren küresel doğan işletmelerin erken uluslararasılaşmasında ağ ilişkilerinin rolünü, sosyal ve iş ağı perspektifleri bakış açısıyla çift odaklı olarak, vaka temelli bir yaklaşım altında incelemektedir. Gelişmekte olan ülkeler ve düşük teknoloji sektörlerindeki KOBİ’lerin erken uluslararasılaşma davranışları ile ilgili araştırma boşluğundan yola çıkılarak organize edilen çalışmanın, gelişmekte olan bir ülke piyasası ve geleneksel bir sektörden konuyu ele alarak uluslararasılaşma literatürüne katkı sağlayacağı düşünülmektedir. Araştırma sonuçları, ağ ilişkilerinin küresel doğan işletmelerin erken uluslararasılaşmasında önemli rol oynadığını göstermektedir. Uluslararasılaşmada ağ ilişkilerinden işletmelerce elde edilenler; yabancı pazar fırsatlarının tanımlanması ve pazar bilgisi oluşturulması, yabancı pazar ve giriş yöntemi seçimi, kaynak kısıtlarının aşılması ve riskin azaltılması, operasyonel destek, önemli aktörlere erişim, manevi destek ile güven olmak üzere 7 başlık altında bulgulanmıştır. Hem sosyal hem de iş ağlarının erken ve hızlı uluslararasılaşmada etkili olduğu, bu etkinin daha önemlilik doğrultusunda kolayca kategorize edilemeyeceği bulunmuştur.

Anahtar Kelimeler: Ağ İlişkileri, İş Ağları, Sosyal Ağlar, Ağ İlişkilerinin Rolü, Erken Uluslararasılaşma, Küresel Doğan İşletmeler

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Introduction

In the literature, it is accepted that network theory and analysis constitute the basis for international entrepreneurship research, and network relationships are an essential resource that facilitates the internationalization of businesses (Oviatt & McDougall, 1994; Coviello & Munro, 1995; Coviello & Munro, 1997; McDougall & Oviatt, 2003; Coviello, 2006; Cavusgil & Knight, 2009; Slotte-Kock & Coviello, 2010; Kontinen & Ojala, 2011). However, despite the importance of the subject, relatively few studies in the literature focus on comprehensively evaluating the networks of early internationalizing firms, and it is pointed out that there is a need for network studies specific to born global enterprises in this direction (Andersson & Wictor, 2003; Sharma & Blomstermo, 2003; Autio, 2005; Cavusgil & Knight, 2009; Sepulveda & Gabrielsson, 2013). Furthermore, because networks still represent a black box in the internationalization process, it is emphasized that the role of networks in early internationalization should be clarified (Cavusgil & Knight, 2009; Smith et al., 2012; Bembom & Schwens, 2018), the importance of researching which types of networks are more beneficial in this process (Cavusgil & Knight, 2009) and conducting research that distinguishes between personal and business level relationships (Andersson & Wictor, 2003).

However, current-born global firm studies are generally concentrated in developed countries (Kiss et al., 2012; Cavusgil & Knight, 2015; Mostafiz et al., 2019), whereas studies conducted in developing countries, which are seen as the rising values of the global economy, are limited in the literature (Cavusgil et al., 2012; Kiss et al., 2012; Felzensztein et al., 2015; Gonzalez-Perez et al., 2016). In addition, it is stated that more studies are needed in other sectors, such as education, agriculture, textile, mining, and health, as current research mainly focuses on technology-based industries such as technology, software, and ICT (Mostafiz et al., 2019). In addition, when studies dealing with networks in the literature are examined, there needs to be more emphasis on the role of networks in empirical research on the internationalization of SMEs from emerging

economies (Manev & Manolova, 2010). These studies mainly evaluated network effects in high-tech and knowledge-intensive industries, while low-tech and non-knowledge-intensive industries received less attention (Stoian et al., 2017). Nevertheless, the dynamics experienced by non-high-tech SMEs in internationalization may differ significantly from those of high-tech SMEs (Booltink & Saka-Helmhout, 2018). This study, organized in line with this gap defined in the literature, aims to identify the role of networks in the early internationalization of born global firms from a developing country and a non-high-tech industry. When studies examining internationalization from a network perspective are concerned, it is seen that most of them explore the effects of business networks between firms. Undoubtedly, business networks influence internationalization decisions. However, the analysis of entrepreneurs' social networks offers some conceptual advantages over the study of inter-organizational networks: First, entrepreneurship theorists generally accept that individuals recognize opportunities rather than companies. (Aldrich & Ellen, 1986; Singh et al., 2000; Ozgen & Baron, 2007), and the exchange of information that precedes opportunity recognition is inter-personal rather than inter-organizational (Ellis, 2011). Moreover, since any business-level decision or action originates from the people who make up the organization, to understand the internationalization behavior of the business, we also need to understand the individual driving the business (Coviello, 2015). Therefore, it seems overly restrictive to limit the analysis of network effects to business-to-business relationships without including a subset of all the ties held by entrepreneurs and their teams (Ellis, 2011).

In studies examining entrepreneurship from a network perspective, the social network perspective has generally drawn attention. Slotte-Kock and Coviello (2010), in their review of the literature focusing on networks in entrepreneurship research, criticize that research is mainly conducted from a social network perspective, and they recommend integrating social and business network approaches to explore the macro level of network structure and the micro level of bidirectional interactions. According to

researchers, only by considering these approaches holistically can a useful "bifocal" lens be presented. This mixed view in entrepreneurship research can address the complexity of the process (Slotte-Kock & Coviello, 2010). However, only a few studies in the literature have simultaneously investigated the effects of business and social networks on internationalization.

There is undoubtedly a need for refinement and elaboration because of the extraordinarily complex nature of the network phenomenon (Anderson et al., 1994). To achieve this, the study adopts a dual perspective from both work and social network perspectives, using a research design that combines the complementary strengths of the two methodological approaches, taking into account the suggestion of Slotte-Kock and Coviello (2010). In light of this, the early and rapid internationalization of born global firms under social and business network approaches in internationalization has been examined from a traditional sector (textile) perspective from Turkey, a developing country category. In detail, using data from four meticulously identified cases and multiple sources, two research questions have been put forward to explore the roles of social and business networks in the internationalization process of Turkish-born global textile businesses:

RQ1. How do networks affect the early internationalization of born global textile companies in Turkey (one of the countries considered an emerging market)?

RQ2. Do social or business networks play an important role in early internationalization?

The research contributes to the literature with a bi-focused perspective by shedding light on the existing research gap in developing countries and traditional sectors and reaching findings that will contribute to the internationalization literature by determining the roles of network relationships in early internationalization.

The rest of the study is structured as follows. The second section reviews the literature on network relationships and their role in the early internationalization of born global firms. The third section consists of the methodology used in the research, and the fourth is the analysis of the data obtained from the firms and the discussion of the findings. Then the study ends with conclusions,

managerial implications, limitations, and suggestions for future researchers.

Literature Review

Network Relationships and Born Global Firms

Born global firms are businesses that internationalize their activities within three years of their establishment and realize 25% of their total sales abroad (Knight & Cavusgil, 2004). Networks, therefore, represent a critical point of inquiry in understanding the internationalization of these young and resource-constrained SMEs (Chetty & Wilson, 2003).

The networks of born global firms consist of common relationships between the business and external parties that exchange resources, such as customers, suppliers, commercial intermediaries, and social connections (Hite & Hesterly, 2001). In addition, social relationships and relationships with other organizations often support early and rapid internationalization. However, despite this importance, entrepreneurship studies with a rich network research background mainly discuss how networks develop while creating a local enterprise. As a result, research on born-global firms still needs to be expanded (Sepulveda & Gabrielsson, 2013). Furthermore, since the internationalization behaviors of these firms, which generally start with establish, differ significantly from other companies, researchers need to pay more attention to the particular context of these businesses (Oviatt & McDougall, 1994).

The "Network Approach to Internationalization" (Johanson & Mattsson, 1988) emphasizes that the internationalization of businesses takes place thanks to the networks they are in. According to this approach, the degree of internationalization of a firm depends on both the networks it develops and the position of the firm in these networks (Johanson & Mattsson, 1988). Moreover, these relationships play a vital role in the concerns of the enterprises with the other actors in the network they are in and the internationalization they reach (Atlı & Kartal, 2014). While networks are essential for businesses of all sizes in internationalization, evidence suggests that they are necessary for born global

companies, which are considered a particular type of SME, given the resource constraints (Coviello & Munro, 1995; Coviello & Munro, 1997; Andersson & Wictor, 2003; Chetty & Wilson, 2003; Sharma & Blomstermo, 2003; Coviello, 2006).

The main constraints SMEs face in internationalization are difficulties accessing economies of scale, lack of financial resources, lack of market information, and hesitancy to take risks (Freeman et al., 2006). Born global firms, on the other hand, have a unique profile compared to other exporter groups (Madsen et al., 2000): They target a narrow customer group in different geographies, often use foreign distributors as their primary distribution channels, invest less in sales and production subsidiaries abroad compared to other internationalizing firms, and often establish sales and marketing networks with external partners as they cannot invest in market knowledge and infrastructure development due to their limited resources. In addition, born global firms need more reputation and legitimacy in the international arena, which is an effective means of gaining legitimacy and reducing the perceived risk of third parties in the new market (Roberts & Dowling, 2002). This constraint can be overcome by cooperating with a prestigious business or a few small businesses (Hoang & Antoncic, 2003). For this reason, born global companies often seek partners that complement their competencies in leading markets and develop effective networks (Coviello & Munro, 1997; Madsen & Servais, 1997). These networks enable obtaining resources that would otherwise take years to build (Baum et al., 2000). On the other hand, social relations in new ventures are essential for internationalization as the entrepreneur lacks established business relations yet (Aldrich & Zimmer, 1986). Strong interpersonal ties are valued because they contain foreign market and industry-specific information and can provide the "commitment and response" required for business in international markets (Harris & Wheeler, 2005).

Social-Business Networks and Internationalization

There are generally two network approaches in entrepreneurship (Brüderl & Preisendörfer, 1998):

Social (personal) networks, where business founders are the focus and include the individual relationships of entrepreneurs. And business networks (inter-organizational networks), where the business is the focus.

In a social relationship, the actor is the individual, and the relationship cannot exist without the individual's participation (Agndal & Chetty, 2007). Social relationships are personally created by and related to entrepreneurs (Melen & Nordman, 2007). Typically, these are people with whom the entrepreneur meets face-to-face and receives service, advice, and support (Dubini & Aldrich, 1991). Within the scope of this study, in line with social network relationships (Birley, 1985; Chetty & Wilson, 2003), the focal actor is considered to be the individual's relationships with family, friends, and colleagues, and the "entrepreneur" is adopted as the focal actor.

Internationalization is initiated based on the idea that interpersonal (social) relationships are at the center of business interaction (Cunningham & Turnbull, 1982). When various studies investigating the internationalization of businesses have been examined, although social network relations are expressed in different terms (personal networks (Qiu, 2005), informal networks (Coviello & Munro, 1997; Zain & Ng, 2006), social networks (Komulainen et al., 2006), interpersonal relationships (Harris & Wheeler, 2005), personal contacts (Andersen, 2006) and social ties (Ellis, 2000)), positive effects on internationalization have been examined in various dimensions.

In addition, several studies have proven that entrepreneurs' social networks are critical assets for initiating and developing born global firms. These studies found that the existing networks of born global firms in the early stages of internationalization consisted of relationships previously developed by their owners and managers (Andersson & Wictor, 2003; Crick & Spence, 2005), which were found to have the most significant impact on the discovery and exploitation of internationalization opportunities in the early stages (Vasilchenko & Morrish, 2011). Furthermore, firms' early internationalization behaviors are mainly activated by this set of interpersonal ties formed before the establishment of the firm (Manolova et al., 2010; Masango &

Marinova, 2014), and these relationships also form the basis for the establishment of inter-organizational ties (Masango & Marinova, 2014).

Business networks are formally linked relationships between actors who exchange information and make a joint effort to achieve a common goal through cooperation (O' et al., 2001). In other words, business networks are institutionalized relationships in which the actor is an organization. Therefore, they are not tied to specific individuals. They are created by their firms, not individuals, are associated with the company, and can be transferred to others (Melen & Nordman, 2007). In searching for an appropriate framework for business networks, some researchers (Gadde & Mattsson, 1987; Håkansson & Johanson, 1993) have transferred the social change perspective of social networks (Emerson, 1976; Cook & Emerson, 1978) to business networks (Anderson et al., 1994). In this study, social exchange theory is used to describe business networks. In this context, business networks, by adopting Emerson's (1981) definition, are defined as "two or more connected sets of business relationships where each exchange relationship takes place between businesses conceptualized as collective actors" (Anderson et al., 1994, p. 2). These actors include customers, distributors, competitors, suppliers, and government agencies (Sharma & Johanson, 1987; Johanson & Mattsson, 1988; Axelsson & Johanson, 1992).

Various studies have been carried out that reveal the importance of business networks from different perspectives on internationalization (Johanson & Mattsson, 1988; Styles & Ambler, 1994; Coviello & Munro, 1995; Chetty & Blankenburg Holm, 2000a; Chetty & Blankenburg Holm, 2000b; Sharma & Blomstermo, 2003; Moen et al., 2004; Chetty & Campbell-Hunt, 2004; Coviello, 2006; Johanson & Vahlne, 2009; Sandberg, 2014; Jeong, 2016; Chandra & Wilkinson, 2017). According to these studies, the internationalization of firms is affected by the internationalization of actors in business networks (Chetty & Blankenburg Holm, 2000a); the existence of strong ties with other firms in the network to facilitate access to different sources of information, enabling entrepreneurs to use the experiences of others that encourage them to make

internationalization decisions (Johanson & Vahlne, 2009). For this reason, it has been determined that business networks are critical in the early stages of the internationalization process (Coviello & Munro, 1995). In addition, economic relations have proven to be the most effective tool for determining firms' international growth in the early stages of their life cycles and the following steps (Coviello, 2006). Furthermore, business networks have been shown to be the most important source of information for firms during internationalization (Sandberg, 2014), enabling rapid internationalization by providing new opportunities, technology, market information, and information (Chetty & Campbell-Hunt, 2004).

In line with the findings mentioned earlier, although the literature generally accepts that networks facilitate internationalization, networks that are more critical in providing this effect are debatable. A third view emphasizes the equal importance of social-business networks in internationalization. For example, Rialp, Rialp, and Knight (2005) conclude that both social and business networks facilitate the early internationalization of born global firms. Melen and Nordman (2007) argue that none of these networks is more important than the other. Instead, they state that the most critical issue is to have the ability to learn from existing networks in which types of knowledge and networks are needed at different stages of internationalization.

The Role of Networks on Early Internationalization

International entrepreneurship involves identifying and exploiting opportunities for international exchange (Ellis, 2011). International opportunity identification is accepted as the beginning, in other words, the trigger of the internationalization process (Chandra et al., 2009). Networks are essential sources for identifying opportunities and providing new types of knowledge that can lead to the identification of different ways of internationalization (Chandra et al., 2012). Firms gain market knowledge through network relationships, which enable them to discover, create, realize, and develop international market opportunities (Chandra & Wilkinson,

2017). At the beginning of a business's internationalization, networks facilitate the acquisition of experiential knowledge about foreign markets (Prashantham & Dhanaraj, 2010), representing invaluable sources of information (Ellis, 2000; Sharma & Blomstermo, 2003). Thus it plays a vital role in deciding many managerial and strategic choices, such as foreign market and entry mode (Coviello & Munro, 1995; Coviello & Munro, 1997; Moen et al., 2004). Furthermore, it accelerates and shapes internationalization efforts by providing new market opportunities to firms and establishing potential partners (Coviello & Munro, 1995). Several studies (Chetty & Blankenburg Holm, 2000a; Chetty & Blankenburg Holm, 2000b; Coviello & Munro, 1995) prove that networks are effective in the success of born global firms by helping them identify new market opportunities and create market knowledge.

The prevailing view in the international start-up literature is that contacts on social networks trigger a firm's foreign market and market entry method choices. For example, Chetty and Campbell-Hunt (2004) found that born global firms tend to rely on the characteristically rich networks of their entrepreneurs to reach their targeted international niche markets. Johanson and Vahlne (1990) and Komulainen, Mainela, and Tähtinen (2006) suggest that personal relationships are essential for the first stages abroad. Andersson and Wictor (2003) state that personal (social) networks are the leading networks in born global firms. However, after the first entry into foreign markets, the importance of existing ties in identifying opportunities decreases, indicating that firms must identify and implement new opportunities by creating new network ties (Crick & Spence, 2005). In addition, social networks, which are effective in the foreign market and entry method choices of born global firms, can also become business networks over time (Vasilchenko & Morrish, 2011).

Another view in internationalization literature is that business networks are more effective in guiding businesses' foreign market and entry method choices. For example, Coviello (2006) found that effective networks for born global firms in the first foreign market entry are more economical than social. Moen, Gavlen, and

Endresen's (2004) research on five small Norwegian software companies also shows that business networks are decisive in which market they decide to enter and which market entry method they choose. Bell (1995) found that in small computer software businesses in Finland, Ireland, and Norway, business network relationships (with customers, suppliers, etc.) influence the way companies to choose their market and enter the market; Coviello and Munro (1995), on the other hand, found that business contacts are more helpful to firms in their first foreign market and market entry method choices.

Given resource constraints, access to resources in born global firms is positively associated with rapid internationalization success (Tang, 2011). Their resource constraints push these firms to find the needed resources through network relationships (Tolstoy & Agndal, 2010). Therefore, it is advantageous for small and resource-constrained firms, such as born-globals, to develop a collaborative rather than competitive and aggressive view of international markets (Chandra et al., 2009). As young and entrepreneurial businesses, those born globals are innovative in combining their resources with those of others through joint ventures and partnerships because they already have no previous success and fixed routines in entering foreign markets (Sharma & Blomstermo, 2003). On the other hand, decision-makers are social actors who must decide to enter a new market based on limited information. Therefore, the decision of any business, especially an SME, to start exporting is fraught with risk and uncertainty. Decision-makers, faced with this uncertainty, tend to choose the option with which they are most familiar, so they need to create, develop and manage their social resources when deciding to enter a foreign market (Ellis & Pecotich, 2001). In addition, born globals face novelty constraints as start-ups. Therefore, resources from networks can be attributed to networking capabilities rather than location (Monferrer et al., 2015). Their dynamic networking capabilities enable them to reduce the risks associated with their decision to enter global markets (Mort & Weerawardena, 2006).

Methodology

Although networks are seen as one of the primary dynamics that ensure the early and significant internationalization of firms, in the literature, more research findings on the axis of developing countries are needed to explore the subject in depth and illuminate different samples.

As a developing country, Turkey is a peninsula connecting the Mediterranean and the Black Sea and acts as a bridge between the Balkans, the Caucasus, and the Middle East (Coban & Kavuk, 2022). Thus, it has had prosperous trade and investment links with these regions for centuries (Bugra, 2016). With the acceleration of globalization movements in the 1980s, while countries were looking for ways to increase their export volumes by developing their export-based production structures, Turkey, as one of these economies, adopted the export-led growth model (Ayvaz Guven, 2021). With increasing company investments in research and development (R&D), Turkey has become a rapidly industrializing economy in recent years. Moreover, the participation of Turkish companies in international trade has accelerated as the implemented government policies encourage the diversification of export product/market portfolios and expand the geographical reach of Turkish companies (Yaprak, Yosun, & Cetindamar, 2018). In this direction, Turkey's economic growth was led by exports; in 2020, it grew by 1.8%, while the global economy shrank by %3.1. It grew by 11% in 2021, making it the fastest-growing economy among the G-20 and OECD countries (TIM, 2022). Turkey's export, which was 254.2 billion dollars in 2022 by the Turkish Exporters' Assembly-TIM (2022), is predicted to increase to 300 billion dollars in 2026, 364.6 billion dollars in 2030, and 453.5 billion dollars in 2035. Today, Turkish companies exporting to more than 160 countries have foreign direct investments in many countries in North America, Africa, South America, and Asia (Yaprak, Yosun, & Cetindamar, 2018).

With the policies of opening up and promoting exports based on the free market economy implemented after 1980, exports of textile products have increased significantly in Turkey, especially since the second half of the 1980s. Consequently, it

has become an essential export item (UIB, 2018). The sector's attainment of its current level of development has been achieved through export-oriented production, especially in the US and EU markets. Today, the Turkish Textile Industry has a unique position in the world with its product quality, fashion, and designs that have the power to determine trends (Turkish Ministry of Commerce, 2022; UIB, 2018). With its 4.2% share in world textile and raw material exports, Turkey is the fourth largest exporter by country (Turkish Ministry of Commerce Easy Export Platform, 2023). In 2022, the Turkish textile and raw materials sector was exported to 197 countries and regions (TIM, 2022). The industry, which ranks first in the country in parameters such as its share in GDP and domestic input use, also forms the basis of the country's existence in global markets (UIB, 2018).

For the reasons listed, Turkey offers a convenient environment to examine the internationalization behavior of companies from developing countries. At the same time, the textile sector stands out as a traditional sector, having been among the locomotive sectors in Turkey's exports. In this direction, the present study was organized to explore the roles of networks in the early internationalization of Turkish-born global textile firms, believing that it will constitute an essential piece of evidence in understanding the early internationalization of firms from developing countries.

In the research, the qualitative research method was used, which provides the opportunity to investigate a particular phenomenon in depth and to reveal the variables under the influence of the phenomenon in detail. As qualitative data are rich and holistic, they also have the potential to clarify complexity (Evers & Knight, 2008). In the research, the use of a multiple case study design, which is a qualitative research method, was preferred because it can provide a dynamic and holistic view of the investigated event and is valid in research involving the real-life environment where a specific action (such as early internationalization) takes place (Eisenhardt, 1989; Yin, 1994; Yin, 2014).

In the research, in line with the suggestion of Yin (1994; 2003) to increase reliability, the case study protocol in Appendix I was prepared and

followed. The case study protocol, which is an indispensable tool, especially for multiple case studies, includes the procedure and general rules to be followed during the research. The protocol is an important way to increase the reliability of research and aims to guide the researcher in the conduct of data collection (Yin, 2003, 67).

Sample Selection

The sample of the research consists of companies operating in the Marmara Region, one of the seven geographical regions of Turkey, among the finalists in the "Born Global Entrepreneur" category in the "SME and Entrepreneurship Awards Competition" organized by the Small and Medium Enterprises Development Organization of Turkey (SMEDO). By applying SMEDO, information on these firms was obtained, and it was determined that 13 of the twenty-five finalists in the relevant category operate in the Marmara Region. The final sample consisted of four firms that responded positively to our interview request and continued their activities in the textile sector in Bursa province. The sample size was within the range of 3-12, described as appropriate in the case studies by Eisenhardt (1989) and Yin (2003).

In addition to meeting the requirement of obtaining at least 25 percent of their total sales from other country markets within the first three years following their establishment, which is generally accepted in the literature (Knight & Cavusgil, 1996; Knight & Cavusgil, 2004), they also meet the application conditions for SMEDO's SME and Entrepreneurship Awards Competition. When the conditions of SMEDO's award are evaluated, in addition to the generally accepted criteria in the literature, firms are required to be "established in the last three financial years, developed growth strategies for the future, and set a role model for entrepreneurs by providing an increased performance in the amount of employment and net sales revenue."

Data Collection and Analysis

In our research, semi-structured interviews were used as the basis for data collection. Interview questions were prepared within the framework of

the relevant literature, shaped as a result of expert opinions, and finalized after the pilot interview. Subsequently, questions were applied to the entrepreneurs/top managers with the most profound knowledge about the internationalization of their firms. The interview form, which was used in all interviews, is given in Appendix II.

Audio recordings of all face-to-face interviews were obtained, and after the interviews, these recordings were transcribed and converted into text. During the conversion of the interview records into text, additional questions were asked by interviewing all the participants regarding hesitant issues to clarify dubious matters. The texts created for each business were then sent to the participants, and their approval was obtained.

Field notes taken by the researcher and interviews and promotions of businesses on their websites and social media tools were used as secondary sources in obtaining the data. In this way, data diversification was achieved through multiple data sources (Patton, 1990; Yin, 2003), which is seen as a strategy that increases data reliability in case studies. All data from multiple sources were combined in the analysis process. Nvivo 12, a qualitative data analysis program, was used in data analysis.

In the conduct of the analysis process, in line with the recommendations of Eisenhardt (1989) and Miles and Huberman (1994), each case study was first handled independently. Then comparisons were made between the case studies. Thus, the comparative analysis determined the themes shared among the case studies (Eriksson & Kovalainen, 2008). As the data analysis technique, the research findings were obtained using descriptive and content analysis techniques, as suggested by Strauss and Corbin (1990).

Analysis And Discussion of Findings

Study Firms' Profiles and the Internationalization of the Case Firms

General information about the firms in the research sample is given in Table 1 below. Accordingly, the average export rate of firms is 95 percent. All firms started international activities

simultaneously with their organizations. While all firms operate in the textile sector, one firm (A) continues its activities in the furniture and textile sectors. The number of full-time employees in firms varies between 5 and 110. Case firms are represented by the letters A, B, C, and D to protect their anonymity.

free machine to the company at that time. On the other hand, the entrepreneur also used the social relationships of his other relatives, especially his uncle, who lived there in the German market. In this way, new customers were gained by contacting the identified firms. The activities that

Table 1. Profile of the case study firms

Company	Sector	Foundation Year	First Exporting Year	Number of Employees	The Ratio of Exports to All Sales	Interviewed Person	Duration
A	Textile& Furniture	2012	2012	110	100%	Entrepreneur	1 hour 32 seconds
B	Textile	2013	2013	5	100%	Entrepreneur	1 hour 26 seconds
C	Textle	2012	2012	30	80%	Entrepreneur	1 hour 13 seconds
D	Textile	2012	2012	55	100%	Coordinator	1 hour 17 seconds

Company A

Company A was established in 2012. It produces bed covers, mattresses, bases, headboards, and sets. The young entrepreneur, an industrial engineer, has internationalized his firm, which he established in the light of his network relationships and his family's past sector experiences, as of its establishment. With this success, the firm received the Bursa Chamber Of Commerce and Industry-Adding Value to the Economy-The Most Successful SMEs Award; 4. SMEDO SME and Entrepreneurship Awards- Certificate of Achievement and Uludag Apparel and Clothing Exporters' Association- 2015 Ready-to-Wear and Apparel Industry Export Stars- Bronze Achievement Award in 2015.

Looking at the basics of company A, it goes back to the fact that the grandfather of the entrepreneur went to Germany to work at Mercedes, and thus he acquired a circle there. The family's industry experience is based on two separate firms operating in Turkey between 1989-1994 and 1999-2006. Having completed his education, the entrepreneur established his company in 2012 in light of these experiences, set out to export directly without targeting the domestic market, and his first market was Germany. He started activities with the only customer in Germany originating from the old family businesses he had contacted through his father. The German firm owner sent a

started in Germany continued with the Netherlands, Belgium, Poland, and Hungary. In these markets, the entrepreneur's father played a significant role in the beginning, and through his father, he revived the business relationships originating from old family businesses. Re-established contacts with two companies from the past that were given products in the Netherlands enabled the company to enter this market. In addition, his close friend in the Netherlands also supported the entrepreneur on technical matters and matters related to customers. A former client, contacted by the entrepreneur's father, was instrumental in the firm's entry into the Belgian market and the development the Dutch market. Then, two old customers from Poland and Hungary found the company and added it to the customer portfolio. The referrals provided by developing relationships with existing customers over time and the connections obtained from the fairs also contributed to the company's increasing customer portfolio.

In 2015, a partnership was established with a company with a business relationship to obtain additional resources that will enable the firm to make the necessary investments to increase its market share. However, this partnership failed to reach the desired goal and ended in 2018. Company A has also developed strategic cooperation with two agencies in Germany and Belgium. With this cooperation, it was aimed to

provide better service to customers and to acquire new customers. The agency in Belgium assists customers in France, Belgium, and the Netherlands, and the agency in Germany helps customers in Germany, Poland, Hungary, and Austria in the execution of the business and responding to the problems encountered quickly. In addition, the company cooperated with a huge company in Europe for two products (trolley beds); all of the product designs were made in Turkey and sold to this Germany-based company. Furthermore, firms pay commissions to each other during sales. The development of this cooperation, which continues successfully, has been realized thanks to the German company's contact with various companies in the sector in Germany while searching for a manufacturer when company A asked an existing mattress customer, "whom we can trust in Turkey" and reached them with his guidance.

Currently, the company sells products to the markets of Germany, the Netherlands, Poland, Belgium, Israel, and the USA. The share of sales to Germany, the firm's largest market, in all deals is 70%. The Dutch market follows this rate with 15%, Poland 5%, Belgium 5%, and other markets (Israel, USA, etc.) 5%.

Company B

Company B was founded in 2013 by a young Iranian entrepreneur and childhood friend. In the textile sector, it serves in the home textile field. The company, which has made all its sales to foreign markets since its establishment, was evaluated as a finalist in the 5th SME and Entrepreneurship Awards by SMEDO in 2018 in the category of born global entrepreneurs. In addition, in 2016, the Bursa Chamber Of Commerce and Industry- Adding Value to the Economy- The Most Successful SMEs award was received.

The firm's development is based on the entrepreneur's industry background in Iran. Thanks to his industry experience dating back to his childhood, the entrepreneur had the opportunity to develop various network relations and specialize in his job. One of these relations was with the owner of a textile firm in Turkey, whom he met in Iran in 2005. The entrepreneur, who came

to Turkey for the first time through this person, started to come and frequently go afterward. Thus, he had the chance to develop various relations in the Turkish market. Then, between 2009-2013, he worked as a foreign trade manager in a textile company in Turkey. Subsequently, the idea of establishing a business of his own appeared in the entrepreneur's mind, both with his relations in Iran and with the advice and encouragement of some of his customers, whom he currently describes as a friendship relationship. He mentioned this idea to his close friend, who was living in Iran and had known him since childhood, and the business was founded in 2013 by two Iranian friends. Thanks to the connections of the entrepreneurs in Iran, it started exporting to the Iranian market with its establishment. However, the partnership ended in a short period, and the entrepreneur successfully continued his path.

After the Iranian market, an Azeri minister's palace was arranged entirely with a project-based study via a close friend of the entrepreneur. After that, expansion was achieved in this market. Next, the entrepreneur met a Turkish citizen living in Russia and working in the same sector through a close friend, and the relations that developed after this meeting resulted in the entrepreneur opening an office there and incorporating this person, whom he saw as dominating the market, in line with the strategy of focusing on the Russian market. Then, the firm's entry into the Chinese market was realized through a close Turkish friend of the entrepreneur, whose wife was Chinese and who lived in China. First, ready-made set products were sent to this family several times, and then other orders were sent. Similarly, sales began in France through an entrepreneur's friend.

Currently, Iran, where 68% of the sales are realized, ranks first among the markets. Russia follows Iran with 20% and Azerbaijan with 10%. In addition, 1% of the sales are made to France in the European market and another 1% to China in the Far East market.

Company C

Company C is a family firm established in 2012 by a father and three brothers to produce upholstery fabrics. The export activity, which started with two

foreign connections obtained unexpectedly from the fair, and was attended simultaneously with the establishment of the enterprise, increased gradually. The export rate, 65% in the first year, continued in the band of 60-65-70% in the following years and reached 80%. With this success, the firm was awarded the SMEDO 3rd SME and Entrepreneurship Awards Born Global Entrepreneur Category finalist in 2014.

The family's adventure in the textile sector, which forms the basis of the firm, started in 1974 with the retail sale of home textile products in a 9m² store. Then, in 1992, the family opened a larger wholesale store and began selling draperies, upholstery, sheets, duvet covers, curtains, and home textiles. Then, in 1996, they established a factory in Bursa with their uncle and started to produce curtains and upholstery fabrics. Finally, in 2012, they decided to continue their activities as a nuclear family and established company C to produce upholstery fabrics. Although they did not set out with the goal of exporting immediately, they participated in the home textile fair held in Istanbul in May 2012, four days after the establishment of the firm. As they never expected, they started exporting immediately with the first foreign connections they obtained from this fair. The first customer obtained through the fair link was from Israel, and the second was from Libya. Afterward, their business expanded through recent customers and people who knew them from previous business activities. Especially the new connections mediated by the relationships established in the past allowed the firm to expand its customer portfolio gradually in the early days. One of these relationships is their 30 year old customers who took them to the Iraqi market. This person accompanied them on their first trip to Iraq and three subsequent expeditions and introduced their customers. In this way, Company C started to work with five companies in the Iraqi market at that time. The owner of the textile business in Bursa, whom they know from the industry, also introduced themselves to a company owner from Venezuela who was looking for a manufacturer during the new establishment of the business. Thus the firm made its first Venezuelan market export.

In addition to past business relationships, the strong relationships established with current customers also significantly impacted the increasing course of the company's exports. The trust established with customers enabled entrepreneurs to acquire new foreign customers without any promotional activities or customer visits in the first few years. With the help of such a network relationship, the business began to export to the US market. A person in Yemen visited the company with reference to the firm's existing customers. After this visit, a year later, he sent his American friends, and the firm started exporting to the US market. However, the mediation effect provided by kinship relationships is also crucial. Thanks to their uncle's Israeli customers, ten new customers have been gained in the Israeli market.

Currently, the firm sells 80% of its production abroad with an annual production capacity of 1 million 250 thousand meters and exports to 50 countries. 45% of all exports are carried out to the Middle East, the largest market. The Balkans, with 35%, and the American market, with 20%, follows the Middle East market.

Company D

Company D, which makes ready-made clothing designs for world brands in the textile sector and produces these designs, was established in 2012 with three partners. The firm has succeeded in realizing all of its sales to foreign markets every year, including the year of its establishment. In this way, it became a finalist in the 4th SMEDO SME and Entrepreneurship Awards, Born Global Entrepreneur Category. It was also deemed worthy of the "Golden Exporter" awards in 2015, 2016, 2017, and 2018 at the Silkworm Export Awards given by Uludag Exporters' Association (UIB).

During the establishment of Company D and the internationalization process that took place simultaneously, the business relationships stemming from the previous commercial activities of the entrepreneurs related to fabric production played an important role. The world-famous fabric customers encouraged the establishment of the

business. France was the first market of the enterprise, which started its activities with direct exports with its establishment. In 2012, the first orders for three brands (Promod, Cache Cache, Tally Weijl) in the French market were received through the French agency, which the entrepreneurs are familiar with from previous sector activities. In 2013, while exporting to France, the company entered the Spanish market and started working with Inditex Group and Mango. In 2014, operations began in the UK market, with orders from British brands Sainsbury's and Topshop, in addition to French and Spanish markets. Again, the reference effect provided by past business experience has been an important factor in receiving these orders.

As of 2017, the firm was become 65% of its sales to Spain, 20% to the UK, and 15% to France. Until 2018, operations continued with the markets of France, Spain, and England, and as of 2018, the dominance of the Spanish market increased. Therefore, it was decided to continue with the single market—currently, the firm exports all of its production to Spain. To ensure the coordination of the activities, the need to establish a team arose in the Spanish cities of Barcelona and La Corona, and a branch was opened in each of these cities.

The following section includes evaluations based on a cross-case analysis of data collected from four born global Turkish textile firms to answer the research questions.

The Role of Social and Business Networks on the Internationalization of Turkish Textile-Born Global Firms

Findings from four firms suggest that social and business networks play essential roles in early internationalization. Our conclusions are structured and discussed as shown in Table 2.

Social-Business Networks and the Beginning of Internationalization

It has been observed that networks effectively initiate internationalization in the born global firms in the research. As seen in Table 2, while the social ties of entrepreneurs played an important role in triggering the onset of internationalization

in two firms (A and B), business networks played an essential role in the other two firms (C and D).

Take firm A. In the interview, the entrepreneur explains the significant role of his father at the beginning of the firm's internationalization like this; "*My father's share was 50 percent in us. Fifty percent we are ourselves*". The first export activity was conducted by a company with former customers in Germany, with the connection provided by the entrepreneur's father. Like A, in company B the entrepreneur's social networks in Iran were influential in establishing and simultaneously initiating internationalization activities. Relying on these relationships, the entrepreneur established his business with his childhood friend and started exporting directly to his hometown, Iran. In company D, establishment and simultaneous internationalization were enabled with the encouragement and direction of previous business networks. The firm was established upon the call of fabric customers to "produce apparel and sell us." French orders, as the first export, were received through the French agency, which had been contacted thanks to previous business activities. Strong ties with other firms facilitate entrepreneurs' access to different sources of information. It provided the opportunity to use the experiences of others to encourage the decision to internationalize (Johanson & Vahlne, 2009). Similar to D, in Company C, business networks initiated internationalization.

However, internationalization in C started as reactive and unplanned. Two unexpected connections from the fair triggered this.

"Export was in our hearts, but initially, our target was the domestic market. However, the export took place quickly, which we did not expect. We were saying in 2 years. It happened in just two months." (C's entrepreneur)

In general, the above analysis has shown that networks are an essential factor that triggers the beginning of internationalization in Turkish-born global textile companies. Moreover, this networks types could have both social and business characteristics.

Table 2. The Role of Social-Business Networks on the Internationalization of the Case Firms

	At the beginning of the internationalization	In identifying foreign market opportunities and providing market information	In the foreign market and entry mode selection	In reducing perceived risk	In overcoming resource constraints	Other roles
A	Social networks The first export was made by contacting an old customer from Germany through the entrepreneur's father.	Firstly social, then both social and business networks In the first place, the connections, information, and research provided by the father of the entrepreneur and his relatives living in Germany regarding the German market were critical sources of information for identifying the companies to be contacted and preliminary assessments. It was also the entrepreneur's father in the first place who provided market information and identification of opportunities for the Polish, Hungarian, Belgian, and Dutch markets through his old customers. However, business network relationships (contacts with existing customers from the fair) were also influential in the later stages.	Both social and business networks Although the social network relations initially guided the new market entries through exports, the business networks were also effective in the later stages. Cooperation was developed with one agency each in Germany and Belgium. In addition, the business has strategically collaborated with a German company through an existing customer under a production contract.	Most social networks His father and relatives living there were influential in reducing the perceived risk of the entrepreneur, especially in entering Germany, the first and the most significant market.	Business networks were effective in accessing financial resources. Social networks were effective in accessing physical resources and complementary resources and capabilities.	Both business and social networks were effective in providing operational support. Although social networks are most effective in accessing important actors, business networks have also been found to have an effect. Strong social ties were effective in providing moral support. Fairs (business networks) with confidence restoration functions played a role in customer relations.
B	Business networks With the connections provided from the first fair attended, the company started exporting first to Israel and then to Libya.	To a large extent, business networks The company started exporting with its first fair contacts within a reactive rather than a proactive process. Afterward, it entered new markets by seizing new market opportunities with connections driven primarily by past business network relationships and obtaining market information from these sources.	To a large extent, business networks There were official business contacts originating from the fair, which provided the initial internationalization of the firm with the export method. In the next period, new markets were entered with the export method, mainly through business networks from past commercial activities.	Business networks The reference effect of past business relationships in reducing the perceived risk for entry into new markets in international expansion has been significant.		Business networks were mainly influential in gaining access to critical actors. Strong social networks were effective in providing moral support. In building trust, business networks played an important role.
C	Social networks The entrepreneur's social networks in Iran guided the establishment of the business and its exports to its primary market, Iran.	Social networks Social networks initially directed international activities in the Iranian market and later became effective in identifying opportunities and providing market information for Azerbaijan, Russia, China, and France markets.	Social networks The entrepreneur's social networks in Iran ensured the firm's entry into its first market through export. Then, entry to new markets by the export method was triggered by social networks again. Finally, the entrepreneur's friend provided a connection that enabled foreign direct investment, and an office in Russia opened.	Social networks In establishing the enterprise, simultaneously at the beginning of internationalization and subsequent expansion, social networks effectively reduced the perceived risk of the entrepreneur.	Social networks played an important role in accessing financial resources.	Although social networks were primarily effective in accessing important actors, business networks also had an effect. In addition, social networks effectively provide moral support to the entrepreneur.
D	Business networks The business networks originating from the past commercial activities of the entrepreneurs enabled both the establishment of the enterprise and the first export to France.	Business networks Business networks originating from past sectoral activities effectively played the role of defining opportunities for internationalization. Through these connections, the firm identified opportunities and obtained market information, first for the French, then for Spain and England markets.	Business networks Exports to France were the first. Afterward, the Spanish and British markets followed the French market. All market entries were driven by past business relationships of entrepreneurs and entered these markets by export method. Finally, direct capital investment was made to manage the intense exports to Spain, and a branch was established in two cities.	Business networks At the start of the establishment and simultaneously at its international activities, encouragement by business networks stemming from the entrepreneurs' previous actions reduced the perceived risk. The firm was founded with this encouragement and started its operations for a ready market.	Business networks played a role in accessing complementary resources and capabilities.	Business networks were influential in gaining access to critical actors.

Social-Business Networks and Identifying Foreign Market Opportunities- Providing Market Information

In sample firms, networks have been observed to play an essential role in identifying opportunities for foreign markets and providing market information. For example, consider firm A; initially, social networks and later, both social and

business networks played a role in identifying opportunities and acquiring market information. Initially, the entrepreneur's father was an essential source of information and guided the entrepreneur to his connections from his past sectoral activities. In addition, his relatives living in Germany also played a crucial role for the entrepreneur in identifying opportunities related to that market and gaining market knowledge.

"In the German market, My uncle and my relatives are there. I ask them who are the big companies here. They say that there is such a company. You are writing to them; you have an appointment request. You reach people. They look at these three, price-quality-term. Once you start working, they do not let you go unless you make a mistake in one of these three." (A's Entrepreneur)

For Company A, while the entrepreneur's father defined the first opportunities in Poland, Hungary, Belgium, and Netherlands markets, business networks (existing customers' referrals and fair contacts) also played an important role afterward. For example, in developing strategic cooperation with a German company, an existing customer in the market created this opportunity for the firm. For entrepreneur B, purely social networks were instrumental in identifying opportunities and providing market information, first in the Iranian market, then in Azerbaijan, Russia, China, and France. Accordingly, our findings in the early stages of firm B and firm A are in line with previous research results that conclude that social networks are significant in the opportunity identification process (Ellis & Pecotich, 2001; Crick & Spence, 2005; Harris & Wheeler, 2005; Komulainen et al., 2006; Zain & Ng, 2006). In previous research, Ellis and Pecotich (2001) found that, just like firms A and B, decision-makers often discover international opportunities through their previous personal connections, and these relationships strongly influence the initiation of exports; Crick and Spence (2005), on the other hand, showed that in the early stages of internationalization, the networks of born global firms consist of previously developed relationships by their owners and managers. In addition, in line with our findings in A and B firms, Riddle and Gillespie (2003) found that informal social ties, especially friends and family ties, are essential sources of information for entrepreneurs of Turkish-born global businesses. In their research on transition economy SMEs, Musteen, Datta, and Butts (2014) found that social networks are effective for improving performance in the early stages of internationalization by providing market information. Looking at firm D, the firm was driven towards international opportunities

entirely by business connections stemming from the past activities of its entrepreneurs.

"Business relations played an important role in our internationalization, in short. We knew the market. Previous communication networks before the establishment of the business had an impact. Customer relations were effective in this process, not relatives or friends." (Interviewed coordinator in firm D)

The internationalization of firm D reflects the finding of Ozgen and Baron (2007) that information from informal industrial network relationships helps identify opportunities for new ventures. In company C, opportunity identification for internationalization was not planned. However, it was driven by business networks such as company D. First exports were realized thanks to the first fair attended. It continued to increase with references provided by business networks from the past.

"Our first customer was from Israel. We are still working with him. We had a connection from Libya again at this fair. Afterward, our business expanded through them and people who knew us in the market." (C's Entrepreneur)

This picture in Company C reflects the finding of Kontinen and Ojala (2011) in their research with eight Finnish family SMEs that lack network connections at foreign market entry and recognize opportunities through the relationships they create at international fairs. In addition, our findings from businesses C and D support previous research findings that business networks are critical in the early stages of internationalization. Business networks have allowed these businesses to recognize new opportunities and rapidly internationalize by providing market information and knowledge (Chetty & Campbell-Hunt, 2004). On the other hand, when evaluated in general, the results are fragmented, as can be understood from the above analysis. While social network relationships in company B played a role in identifying opportunities related to foreign markets and obtaining market information, in Company A, initially social ties such as B and later stages social and business ties played this role; as for companies C and D, this role mostly was played by business ties.

Social-Business Networks and Foreign Market-Entry Method Selection

It has been determined that in all firms within the scope of the research, the foreign market and entry method choices are guided by networks rather than the decisions taken as a result of strategic evaluations (Coviello & Munro, 1995; Coviello & Munro, 1997). In other words, firms' choices do not result from a cost-benefit analysis or detailed market research (Ellis, 2011). Instead, it evaluated the opportunities that emerged with the guidance of the networks. Network relationships, as invaluable sources of information about foreign markets (Ellis, 2000; Sharma & Blomstermo, 2003), play an essential role in the strategic decisions of firms such as market selection and entry (Coviello & Munro, 1995; Coviello & Munro, 1997; Moen et al., 2004). For example, take firm A; it was to enter the German market through export, using family-based social ties that guided the establishment of the business. In addition to social networks, business networks (existing customers and fair contacts) also contributed to expanding this market and entering new markets with the export method. Over time, the firm developed strategic cooperation with two agencies, one in Germany and the other in Belgium. In addition, with the guidance of a business network, a strategic collaboration was made with a massive company in Germany within the scope of a production contract. As can be seen, all market entries and method choices of the firm were driven by network relationships.

All the relationships that guided company B's foreign market entry decisions were social. The entrepreneur's previous relationships in Iran influenced the start of exports to Iran, the first market. After the Iranian market, an Azeri minister's palace was organized through a close friend of the entrepreneur, and that market expanded over time. The Russian market was first entered using the export method. Afterward, the entrepreneur met a Turkish citizen living there and working in the same sector through a close friend and decided to open an office in Russia by including this person in the business. The social networks also guided the enterprise's entry into the Chinese and French markets with the export

method. When we consider company C, the company's export started with two companies from Israel and Libya, which the enterprise contacted at the fair, continued to increase in various markets, and began exporting to fifty countries. Direction by business networks, many of which date back to the pre-establishment of the firm, based on the trust stemming from the family's past textile industry experience, played an essential role in this expansion. In addition, good relations with existing customers contribute significantly to acquiring new customers through reference. In company D, as in C, the business network relations of the entrepreneurs from their past activities guided the foreign markets and market entry method in which they operate.

"The biggest factor in company D's internationalization with its establishment is that we were a fabric manufacturer before. We were already selling much fabric to all the brands D works with, either through other suppliers or directly. The biggest reason for D's success so fast, reaching such high numbers; I think that the quality of the fabric is very well known and the experience in the business." (Interviewed coordinator in Company D)

Company D's first orders from France, the first market, were received through the French agency, which is known from the previous business activities of the entrepreneurs. Afterward, the French market was followed by the Spanish and British markets. The collaborations that the company developed with representative companies through its past references were effective for new market entries. In addition, the company made a direct capital investment by establishing branches in Barcelona and La Corona to manage its intensive exports to Spain.

While some researchers stated that networks that guide market and entry method choices in the early stages of born global firms are primarily social (Andersson & Victor, 2003; Chetty & Campbell-Hunt, 2004; Komulainen et al., 2006; Ibeh & Kasem, 2011; Vasilchenko & Morrish, 2011), there are also researchers (Bell, 1995; Moen et al., 2004; Coviello, 2006) who argue that business networks are more beneficial in this process in general.

When the case firms' foreign market and entry method choices were evaluated in general, it was seen that business networks played an essential role in the two firms (C and D) in this process. While social networks gained more importance in company (B), the other company (A) social and business networks influenced these decisions. Overall, our findings support the findings of Coviello and Munro (1995; 1997) that the contacts providing this referral can be work-related or social.

Social-Business Networks and Reducing Perceived Risk

In all case studies, network relationships were found to play a role in reducing perceived risk to foreign markets. Let us first consider what entrepreneur A provides through social networking relationships in Germany, the business's first and most significant market.

"I have friends and a social circle there. Those people are not in my industry. They are not in the sector, but they analyze the environment very well, they know. For example, they say there is a company here. I say let us go there. Or we go to fairs; we give each other cards. I am asking this place my acquaintances, and I get information. There are companies whose feasibility I have even taken out in this way. This is how I do preliminary research." (A's entrepreneur)

The experiences of entrepreneur A in Germany show that decision-makers faced with uncertainty need to create, develop and manage their social resources when deciding to enter the foreign market (Ellis & Pecotich, 2001). Like A's entrepreneur, B minimized his perceived risk based on his relationships in Iran and decided to start his firm with his childhood friend, despite all the financial resource constraints. For firms C and D, business network relationships reduce the risk of internationalization. Although firm C started exporting as of its establishment with unexpected developments, the contacts provided mainly through the connections based on past business relationships effectively increased exports. Additionally, the referential effect of these relationships reduces the perceived risk of internationalization. Company D, on the other hand, was founded with the encouragement of

customers, which stemmed from past commercial activities of its entrepreneurs to "enter the apparel production." As a result, it minimized the perceived risk of internationalization thanks to the support provided by its customers in its worldwide growth. Our findings in D are consistent with those of Gabrielsson and Manek Kirpalani (2004) and Parida, Pemartin, and Frishammar (2009). Gabrielsson and Manek Kirpalani (2004) find that the worldwide growth of a born global firm is due to its ability to establish and leverage relationships with the primary customer in its network; Parida, Pemartin, and Frishammar (2009) presented the finding that networking with customers is more important than networking with other partners in the network, as it triggers innovation.

When all the findings are evaluated together, it is seen that the born global firms in the research reduce their perceived risks towards internationalization thanks to their network relations, reflecting the previous research findings (Ellis & Pecotich, 2001; Sharma & Blomstermo, 2003; Mort & Weerawardena, 2006); When we look at the type of network relationships that provide this effect, it is understood that it can have both social (in A and B) and business network relationships (in C and D).

Social-Business Networks and Overcoming Resource Constraints

In the study, networks were found to play a role also in overcoming resource constraints in the born global firms. In this direction, attains from networks emerged under three themes: financial resources, physical resources, complementary resources, and access to talents.

Findings from two firms (A and B) suggest that partnerships play a role in "access to financial resources" in born global firms, showing that they are effective in compensating for resource disadvantages (Sharma & Blomstermo, 2003). In A, business networks; in B, social networks provide this effect. In 2015, in firm A, the need for additional financial resources to expand international activities was met through a partnership with a business network relationship. In establishing B, the entrepreneur set out with his

childhood friend, whom he knew from the Iranian job market and described as "we grew up together" due to the capital constraint. In the founding of A, the entrepreneur provided a free machine from a former customer in Germany through his father, which he referred to as "felt like medicine at the time"; In addition, social networks facilitated the "access to physical resources" of the firm (Gulati & Gargiulo, 1999; Nummela, 2002; Hoang, Antoncic, 2003; Chetty & Wilson, 2003; Tang, 2011) by providing various supports such as programs, designs, and the installation and preparation of molds through colleagues from the engineering circle of the entrepreneur.

In addition, findings from companies A and D showed that social and business network relationships could also play a role in businesses "accessing complementary resources and capabilities." The internationalization skill in the fabric opened the way to internationalization for D. The company achieved early and rapid internationalization thanks to this complementary capability.

"Internationalization is not something that starts with D. Internationalization started with the fabric. The success of the fabric gave birth to D." (Interviewed coordinator at D)

A's entrepreneur, on the other hand, expressed the complementary resources and talents he gained from his social ties with the following words:

"I benefited greatly from my friends in purchasing machines, programs, designs, and installation. I did not pay any money. Or I will buy a machine, I say right away, son, how will we do this? What someone else would do for 50,000-60,000 Euros, I did for 30,000-35,000 Euros. For example, the design of the rally car over there is entirely my own. I had the molds made by a close friend of mine from university. They wanted 60.000-70.000 TL abroad to have his mold made; I had him do it for 10.000 TL. It works very well in production; for example, I cannot make a design, or it comes from abroad. I can make it and send it after 1 hour. It takes 2-3 days for another company." (A's Entrepreneur)

Social-Business Networks and Other Effects on Internationalization

Other themes that emerged as a result of the analysis regarding the role of networks in internationalization in case firms; are "operational support," "moral support," "access to key actors," and "trust."

Agents in A's business network in Germany and Belgium, and the entrepreneur's close friend in the Netherlands, led to the emergence of the "operational support" theme. It was understood that the agencies were influential in the success of foreign market activities by providing crucial operational support to company A, which facilitated its international activities.

"...a phone call and it comes into play. I say get the sample, and it solves the problems at the customs and markets us at the fair. He does things for me that I cannot get done with the money I give him." (A's Entrepreneur)

This finding in A is compatible with Madsen, Rasmussen & Servais's (2000) recommendations that having a manufacturing establishment or many sales subsidiaries abroad is unnecessary to be a full-fledged global business. Instead, companies rely on different collaborative arrangements with partners such as intermediaries, agencies, distributors, and suppliers. In addition, the entrepreneur of A also benefited from social networks in providing operational support and received significant support from his close friend in the Netherlands on technical and customer-related issues.

In addition, it was found that networks played an essential role in providing access to "important people and institutions" in all case firms. In A and B, this effect was mainly supplied by social relationships; while in C and D, business relationships were more effective. Suppose we consider A, social networks, especially the entrepreneur's father, provided access of firm to influential people and institutions on the way to internationalization. In identifying target customers in the German market, the social environment of the entrepreneur there was also of great benefit:

"We used our social relations there. We used the social relations of our relatives. We talked together and determined the companies we would like to work, met from the fairs." (A's entrepreneur)

Like firm A, social relationships became the source for accessing important actors in firm B. During the establishment, simultaneous internationalization, and subsequent business development stages, the entrepreneur's social networks had driven access to critical actors. For example, the contact provided by a social bond triggered the entrepreneur's decision to open his Russia office. Accordingly, our findings in firms A and B showed that direct ties, powerful ones, are crucial not only for the entrepreneur's access to people with whom he is directly connected but also for indirect access to people beyond his close contacts (Aldrich, Reese & Dubini, 1989; Dubini & Aldrich, 1991). In addition, the fact that the person who was the head of the office in Russia in firm B was an indirect bond, but became a direct bond by joining the enterprise, supported the findings of Sharma and Blomstermo (2003) that the indirect ties of the born global firms could turn into a direct link in the process of expanding abroad. Besides, it has been found that partial business network relations benefit A and B firms in accessing essential actors. For example, while the birth of business A's cooperation with a German company was based on the mediation of an existing customer, the fairs had the following impact on entrepreneur B's access to critical actors:

"I go to fairs; I appear there and meet people. After all, even a card exchange is critical for people. I see Ahmet. Ahmet knows a foreign American, and cards are exchanged. Then you say I am doing this job. You see, the man calls me when he needs something." (B's entrepreneur)

In D, purely business networks (entrepreneurs' ties with world-famous customers, which are essential actors from other business activities); in C, mostly business networks were instrumental in gaining access to critical actors. For example, the first fair attended by the enterprise enabled it to connect with its first foreign customers and simultaneously brought the firm to the success of internationalization with its establishment. Later, thanks to these relationships and with reference to the influence of previous business relationships, company C; gained many customers by reaching important actors in many markets such as Iraq, Venezuela, Palestine, Lebanon, Kuwait, USA, and Israel.

"We worked with Libya. You will say, how did the Palestinian, Lebanese, Kuwaiti man come? The people you work with, after all, are merchants. They somehow coincide in a country, somewhere, at a fair. They ask, whom do you work with? Where do you buy goods from? What goods are you buying? They tell each other. Which prices are affordable, what are the prices, who do you buy from in Turkey, is it reliable, is there any problem? He says I am going to Turkey too. He is coming to Istanbul. He says, "I will be in Istanbul at 9 am". We go and receive our guests." (C's entrepreneur)

Another theme that emerged in the content analysis of the research data was the "spiritual support" provided by social network relations. In general, in the establishment and early stages of case firms, it was determined that the strong social ties of entrepreneurs with their family members played an essential role in providing moral support. For example, consider the entrepreneur of A, who expressed the moral support he received from his social relations in Germany with the following words.

"...Some relatives in Germany could not give me much about the industry, but I know the culture there. At least I have a door there. I can ask in Turkish what is that here? What can we do there? They provide me with social and emotional support." (A's entrepreneur)

While the entrepreneur of B expressed the emotional support he received from his mother in his entrepreneurial adventure with the words, "my mother is my biggest moral support," the entrepreneur of C saw the prayers and moral support he received from his parents as critical to the success of the firm with the words, "I received the greatest support from my parents with their prayers."

Another theme that emerged from the analysis is "trust." This theme was especially prominent in firm C. Thanks to the trust it gives to its customers, the company acquired new foreign customers in different markets in its first years without any promotional activities or even customer visits:

"The interesting thing is that while we were exporting, we did not even travel abroad for the first two years - 3 years. However, we worked on 60%-70% export. How is it? For example, a customer in Libya buys goods from you. You sent it on time. Prices seem reasonable to the man, and colors and details are okay. The man is satisfied. When his friend asks, "where can I buy goods," he says, "from here, I will give you their

card." We did not travel abroad for the first 2-3 years due to trust. Then, you are giving goods; we visited them to say hello. Trust is important." (C's Entrepreneur)

Entrepreneur of A, on the other hand, highlighted the role of fairs with its renew confidence functions:

"Fairs are significant. Our customers are delighted when they see us there. We talk about new products; we take our new designs. Or we renew our old connections; we renew confidence." (A's Entrepreneur)

As can be seen, although common interests encourage actors to develop and maintain network relations with each other (Johanson & Mattsson, 1988; Johanson & Vahlne, 2003), such relationships usually require time and effort to establish and develop mutual trust and shared knowledge. On the other hand, it provides a high degree of loyalty to the market with increased mutual trust and the amount of shared information in the long run (Madsen & Servais, 1997).

Conclusion and Implications

This study aimed to investigate the role of networks in the early and rapid internationalization of Turkish-born global textile firms using a case-based approach with a bifocal perspective provided by social and business network lenses. The theoretical contribution of the study is that the findings obtained from Turkey, a developing country, and the textile industry, which is a low-tech industry, enrich the internationalization literature, which studies carried out mainly in developed countries and high-tech industries. Furthermore, it aimed to contribute to the literature by listening to the research calls made to fill the gap in the field with the dual-focus perspective provided by the distinction of social-business network relationships.

The study results show that networks, in line with previous research, are critical in facilitating the internationalization of born global firms. The analysis results in the examined Turkish-born global textile enterprises; revealed that network relationships play an indispensable role at the beginning of internationalization in identifying foreign market opportunities and obtaining

market information, choosing the market and entry method, reducing the perceived risk of internationalization, and overcoming resource constraints. In addition, the research revealed that networks provide operational support, access to critical actors, moral support, and trust to businesses. It has been determined that both social and business networks play an essential role in early and rapid internationalization, and the two types of networks provide benefits that cannot be easily categorized in their importance. Finally, it was concluded that a combination of social and business networks is beneficial in early internationalization, as noted by some researchers (Rialp et al., 2005; Melen & Nordman, 2007; Eberhard & Craig, 2013). However, in the early stages, the relationships that entrepreneurs developed before the business establishment seemed influential (Crick & Spence, 2005; Evers & O'Gorman, 2011). Afterward, established relationships with new actors have gained importance. In addition, in all firms, it was determined that the opportunity identification that triggers internationalization stems from opportunities created through network communication rather than the businesses' own proactive identification processes (Coviello & Munro, 1995; Coviello & Munro, 1997), both social and business networks provide this orientation.

Managerial Implications

Our study offers practical implications for entrepreneurs and SME managers in developing countries who want to internationalize their operations with or shortly after establishment.

The main managerial implication of the study is to show how personal and business networks assist early internationalization in becoming a born global firm. These findings reinforce previous research findings that highlight the critical importance of networks in promoting firm internationalization and enabling international expansion. Therefore besides Turkish SMEs, SME entrepreneurs and managers from other developing countries need to activate and strengthen existing networks and create new connections in a planned manner toward internationalization goals.

The finding that the early and rapid internationalization of research firms is primarily due to networks before the establishment of the firm reveals the importance of previous relationships in internationalization. In this direction, entrepreneurs should seriously consider which actors they know in the targeted markets and how they can support their international expansion plans. In other words, entrepreneurs are advised to maximize the benefits they can derive from these relations with their proactive behavior by being aware of the importance of networks in internationalization.

In addition, while the particular importance of social and business networks in the initial phase and subsequent expansion of internationalization in research firms seems to be consistent with previous research evidence, the critical role that social networking plays in the internationalization of Turkish-born global enterprises may be due to the collectivist trend in Turkish culture (Hofstede, www.geerthofstede.com). On the other hand, firms in emerging economies often have fewer resources than those in developed countries. As a result, they likely rely on informal governance mechanisms and relational networks to achieve their strategic goals (Khanna & Palepu, 2010). This situation highlights the need to consciously raise resources such as knowledge and mutual trust embedded in interpersonal relationships within the organization (Masiello & Izzo, 2019).

On the other hand, in the case firms, as stated by some researchers (Björkman & Kock (1995); Mainela (2002); Smith-Doerr & Powell (2005); Vasilchenko & Morrish (2011), it has been observed that a relationship that started as a business relationship can turn into a social relationship over time. In the words of Smith-Doerr and Powell (2005), because social ties and economic exchange are deeply intertwined, the intended activity may be mixed with friendship, reputation, and trust. Considering that people like to do business with people they love, it is natural that business relationships can turn into personal relationships after a while (Masiello & Izzo, 2019). In this direction, it is necessary to advise the managers that these relationships should be carried out in a way that will not harm professional business life

and that strategic decisions should be as objective as possible.

The export of one of the research firms, which started with the contacts obtained from the fair and reached 50 countries in a short time, reveals the critical role of the fairs in establishing networks with international actors in the eyes of SMEs. Apart from this, the finding that although the other two of the case firms do not have fair connections that initiated internationalization, the results show that they benefit from developing their existing relationships as well as gaining new contacts from the fairs in the subsequent expansion process, accordingly is suggested that SME entrepreneurs and managers should seriously evaluate the functions of renewing existing relationships, as well as the functions of developing new network ties of international sectoral fairs. As the previous research results indicate, well-planned participation in sectoral international fairs can be essential for meeting potential beneficial actors. Considering the government support for their participation in the fair, SMEs are advised to take advantage of such opportunities.

Limitations and Future Research

This research, like any other research, has some limitations. First, the fact that it is not possible to include a sufficient number of samples, which has the power to represent the relevant universe in qualitative research, prevents the generalization of the findings. Therefore, it is impossible to generalize the research results to all born global firms in Turkey. In this direction, it is recommended that future research design a quantitative research to complement the case-based approach of the current study or a mixed research design that combines qualitative and quantitative research methods.

The number of born global firms will inevitably increase in the world economies that are becoming increasingly integrated. For this reason, more research is needed in Turkey and other developing countries from the perspective of network relations, which is seen as the critical view in explaining these firms' early internationalization. In future research, integrating social and business

networking approaches will allow us to compare our results across different samples.

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APPENDIX-I. CASE STUDY PROTOCOL

I. PURPOSE OF THE RESEARCH
Determining the roles of network relationships in the early internationalization of born global Turkish businesses
II. DATA COLLECTION PROCEDURES
- Determining the sample of the case study,
- Introducing the research to the entrepreneurs/managers of the businesses that make up the sample and inviting them to participate in the research,
- Determining the interview schedule with entrepreneurs/managers who agree to participate in the research,
- Conducting a pilot study,
- Conducting Meetings,
o Introducing the interviewer herself
o Informing participants about the details of the research
o Obtaining participants' consent for audio recording
o Providing information to participants about the operation of the meeting
- Keeping field notes,
- Examining the websites of businesses,
- Examining videos, promotions, and press news on businesses' social media tools.
III. DATA ANALYSIS PROCEDURES
- Conducting single case study analyses
- Performing comparative case study analysis
IV. CREATION OF CASE STUDY REPORTS

APPENDIX-II: INTERVIEW FORM

I. Questions Regarding the General Characteristics of Business and Entrepreneur
1. General Features of the Business
Founding year:
Industry:
Size (Number of employees):
Products:
Exported product ranking:
Year of first export start:
First export market:
Other export markets (since establishment until today):
Annual export rates since establishment (international sales/all sales):
Branches and representatives abroad:
2. General Characteristics of the Entrepreneur
Nationality:
Age:
Education:
Knowledge of foreign languages:
Previous professional work experiences:
Previous entrepreneurial experience:

Industry experience and technical knowledge:
3. Current Geographic Diversity
Foreign markets in which the business currently operates
The company's current export rates in foreign markets:
II. Questions About Network Relationships
1. Can you tell the founding story of your business? How did your business idea come about and how did your business come to life? Which people or institutions played an important role in this process?
2. How have the people and institutions you mentioned affected your work? What kind of support did you get from them?
3. How did your internationalization begin? What was the number of people you were in contact with in your network during this period? Who were these people and how did you meet/how did they become involved in your contacts?
4. Did the previous communication networks you or your partners had before establishing the business impact this process? How?
5. What was the role of your family and close friends in this process?
6. What external relationships would you consider critical for the internationalization of your business? What did you gain from these relationships?
7. Were there other people who played an important role in the development of your business? How would you describe your relationship with them? When and how did you meet with them? What role did these people play in the internationalization of your business?
8. How did you choose your first market, how well did you know it? Was there anyone in your business, in your family, or around you who had first-hand experience in that market? Did your business have indirect or direct connections in that market?
What role (if any) did this person(s) play in the beginning of your internationalization?
(if not available) How did you obtain market information?
9. What were the major problems you encountered at the beginning of internationalization? How did you overcome these problems?
10. Have there been any government supports that facilitate the internationalization of your business? If so, which institutions did you benefit from support? What did these provide you?
11. Which methods of entry into international markets has your business used and does it use? Why was this method chosen? What are the advantages it provides you?
12. Does your business use strategic alliances/collaborations or partnerships in foreign markets?
<u>If used;</u>
How were these partnerships or alliances formed?
What were the most important criteria when choosing partners?
Did your relationships play any role in creating these alliances?
What benefits does having these alliances and partnerships provide to your business?

RESEARCH ARTICLE

An Examination Of The Role Of Vocational Training Centers In Ensuring School-Industry Cooperation From Employer's Perspective: The Ostim Case

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Abstract

This study examines the role of Vocational Training Centers in school-industry cooperation from the perspective of employers. Within the scope of the research, face-to-face interviews were conducted with 12 business owners operating in Ankara Organised Industrial Zone who have cooperated with Vocational Training Centers. The research reveals that vocational education centers in Turkey are of great importance in terms of training graduates in line with the needs of the business world. However, employers have serious difficulties in recruiting staff and mostly meet their labour force needs by employing foreign workers. Furthermore, school-industry cooperation is essential so that the education curriculum can better meet the needs of the business world and provide students with workplace experience. Employers value the "certificate of mastery" obtained at the end of training to increase employability. The study also underlines the need for effective school-industry co-operation mechanisms. A strong partnership between business and educational institutions can improve the vocational education system in Turkey and prepare the future workforce.

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Keywords: Education, School-Industry co-operation, Social Policy, Employment

Öz

Bu çalışma, işverenlerin perspektifinden Mesleki Eğitim Merkezleri'nin okul-sanayi işbirliği içindeki rolünü incelemektedir. Araştırma kapsamında, Mesleki Eğitim Merkezleri ile işbirliği yapmış ve Ankara Organize Sanayi Bölgesi'nde faaliyet gösteren 12 işletme sahibi ile yüz yüze görüşmeler gerçekleştirilmiştir. Araştırma, Türkiye'deki mesleki eğitim merkezlerinin, iş dünyasının ihtiyaçlarına uygun mezunlar yetiştirme açısından büyük önem taşıdığını ortaya koyuyor. Ancak işverenler eleman temini konusunda ciddi anlamda zorluk yaşamakta ve işgücü ihtiyacını çoğunlukla yabancı işçi istihdamı ile karşılamaktadır. Ayrıca eğitim müfredatın iş dünyasının ihtiyaçlarını daha iyi karşılamasını sağlamak ve öğrencilere işyeri deneyimi sağlamak için okul-sanayi işbirliği esastır. İşverenler istihdam edilebilirliği artırmak için eğitim sonunda elde edilen "ustalık sertifikasına" değer veriyor. Çalışma aynı zamanda etkili okul-sanayi işbirliği mekanizmalarına olan ihtiyacın altını çiziyor. İş dünyası ile eğitim kurumları arasındaki güçlü bir ortaklık, Türkiye'deki mesleki eğitim sistemini geliştirebilir ve geleceğin işgücünü hazırlayabilir.

Anahtar Kelimeler: Mesleki Eğitim, Okul- Sanayi İş Birliği, Sosyal Politika, İstihdam

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Introduction

The lack of skills valued in local and global labour markets has been the root cause of high youth unemployment and has, therefore, become a constraint to economic growth, employment and income. By 2030, 77.0 per cent of the world's labour force will be young people aged 15-24. In contrast, 70.9 million young people are estimated to be unemployed (Berg et al., 2021). However, the global skills and job mismatch continues to widen, with more young people withdrawing from the labour market each year. As a solution to this problem, many countries are adopting vocational education. The main objective of vocational education is to prepare graduates for the world of work in terms of skills, knowledge and competence while also to qualify them to work independently or be hired for existing vacancies. In terms of industry and employers, it is to ensure the supply of employees who can increase the national income and productivity of the country and make it competitive in the global economy. However, many vocational school graduates have not been fully absorbed by industries or the business world. The main reason is the lack of coordination between the labour market and the education system. Vocational Training Centers (VTCs) are structures established precisely for this purpose. Therefore, vocational education systems undertake the mission of successfully closing this gap by creating a skilled and job-ready labour supply for the labour market. Today, emerging and developing economies are trying to reform their vocational education systems with various tools (Gianchandani, 2018).

Vocational education plays a crucial role in bridging the gap between educational institutions and industries, fostering an environment conducive to the development of students into skilled professionals (Byrne, 2005, p.1). In this way, it is aimed to provide students with practical experience and practical training as well as to increase their theoretical knowledge. In increasing school-industry cooperation, it is essential that both students, industrialists and educational institutions benefit. Thanks to this symbiotic relationship, students gain sector-specific skills, sectors gain skilled employees, and educational

institutions can increase their demandability (Guthrie, 2010).

Ensuring school-industry cooperation comes to the fore at this point. Co-operation between schools and enterprises in vocational education and training (VET) remains a major challenge, including in many developed countries. Extensive research highlights a general lack of cooperation between schools and workplaces in VET (Gessler, 2017; Louw, 2017). The absence or underdevelopment of such cooperation tends to result in a weak link between school-based learning and workplace learning (Billett, 2008).

The aim of this study is to examine the role of vocational training centers in school-industry cooperation from the perspective of employers. As can be seen in the literature review, which is the next section, research on the related field in Turkey is quite limited. Therefore, another aim of the study is to contribute to this gap in the literature. In this context, (1) What are employers' views on the role of vocational education centers in school-industry cooperation? (2) What are the problems of employers regarding school-industry cooperation? (3) What are the expectations of employers for vocational training centers to improve school-industry cooperation?

The study consists of three parts. In the first part, the theoretical framework of school-industry cooperation is drawn and a comprehensive literature review on the role of vocational education centers in school-industry cooperation is given. In the second part, the methodology of the research is given. In the third section, the research findings are analysed and in the last section, policy recommendations for developing school-industry cooperation through VTCs are given.

Literature Review

School-industry cooperation is rooted in key theories. The Human Capital Theory (Becker, 1964) underscores the value of education and training in enhancing individuals' productivity and economic worth, positioning education as an investment in human capital that industries aim to harness. The Stakeholder Theory (Freeman & Medoff, 1984) highlights the interconnected interests of stakeholders, including schools, industries,

students, and the community, emphasizing the need for a collaborative relationship where all parties contribute to a common goal. Applying these theories to school-industry collaboration presents a mutually beneficial opportunity for students, educational institutions, and industries. Schools can partner with industries through internships and projects, offering students practical learning experiences. Industries, in turn, can leverage students' innovative potential and cultivate a skilled workforce, fostering economic growth and labour force development. Nonetheless, there is no one-size-fits-all approach to vocational education-industry collaborations, with their success contingent on each country's socio-economic context and labour market demands.

Despite its recognized importance, school-industry cooperation remains incomplete, as Karabulut noted (2022). While all stakeholders acknowledge the strategic significance of Turkey's vocational education and training system for its economic and social development, they have yet to take unified action to address its challenges. Vocational training centers are pivotal in equipping individuals with practical skills tailored to industry needs, using a competency-based approach that combines hands-on experience with specific professional standards (Lund & Karlsen, 2019). This approach not only enhances students' practical skills but also fosters professionalism and work ethic. Vocational education and training (VET) programs excel by integrating workplace learning, and exposing students to real-world working conditions, thereby bridging theory-practice gaps. Success in vocational training depends on the center's ability to adapt training programs to evolving industry needs, which necessitates active communication with industry players (Braun et al., 2011). Toz (2019) evaluated issues and solutions in Turkish vocational education centers based on input from administrators, teachers, employers, and students. Findings indicate that employers face challenges in adapting to changing student profiles and are hindered by workshop and equipment deficiencies.

Vocational education, training, and industry collaborations are recognized globally as

economic growth and development catalysts. Different countries employ unique models reflecting their socio-economic context and labour market demands. Globally, Vocational Education and Training (VET) plays a crucial role in fostering economic growth by equipping individuals with practical skills, promoting social equity, and adapting to technological and labour market changes. Germany, for instance, relies on the dual vocational education system, combining classroom education with on-the-job training, successfully addressing skills mismatches and promoting youth employment. In the UK, vocational education and training span a wide range of offerings, with the 'Apprenticeship Levy' program encouraging employer investment in apprenticeships to close the skills gap and provide opportunities for young people (Dehmel, 2005).

The study by Lerman et al. (2020) focused on the importance of skills certification in apprenticeship training. Their findings suggest that providing a certificate of mastery upon completing apprenticeship training serves as a motivating factor for young employees. Furthermore, this credential plays a significant role in helping young employees adapt to dynamic labour markets. Competence-based training improves the alignment of career and technical education with employer demands through enhanced documentation and validation of career paths and skills.

Schultheiss and Backes-Gellner (2022) argue that enhancing the educational content of vocational education and training (VET) programs is particularly valuable for disseminating innovative knowledge related to emerging technologies. This is especially relevant because VET curricula cover many occupations, including those essential to the labour force, such as middle-skilled occupations. Modifying curricula has the potential to promote the broader adoption of technology throughout the innovation ecosystem, influencing its uptake by both upstream and downstream organizations.

Vocational training can be crucial in integrating refugees, particularly in countries like Germany, Austria, Switzerland, and Denmark, which have a strong tradition of collective skills formation systems and dual vocational training. These

countries have historically achieved remarkable success in integrating young people into the labour market, boasting some of the lowest youth unemployment rates in the OECD world (Ryan, 2001; Busemeyer & Trampusch, 2012). The involvement of employers in vocational training systems offers significant potential for integration. Dual vocational training is expected to be a promising avenue for labour market integration of refugees, providing them with a formal education and the opportunity to gain practical work experience while assimilating the workplace rules, norms, and expected behaviors of the host country (Aerne & Bonoli, 2023).

Özel (2021) conducted a study focusing on transitioning vocational education and training (VET) from a centralized, school-based, and state-controlled structure to a collaborative system emphasising partnerships between educational institutions and industries. The study argues that the successful implementation of VET reforms can be improved through the collaborative efforts of government and employer organizations advocating for the interests of small and medium-sized firms (SMEs).

In Turkey, research on school-industry cooperation predominantly centers around university-industry collaborations, with fewer studies dedicated to vocational education-based school-industry collaborations. For example, Koşan (2003) found that students believe that enhancing the quality of vocational education can boost workforce productivity. Additionally, a study by Tonbul & Kılıçoğlu (2011) on vocational education centers revealed that apprentices felt there was minimal interaction between workplaces and Vocational Education Centers, and teachers often failed to provide information about students' situations or consider the expectations of the employers.

Another recent study by Erdoğan et al. (2020) examined the perspectives of technical teachers working in vocational and technical education institutions. The study found that these teachers believed that graduates from vocational education institutions lacked professional competence and that students struggled to adapt to work discipline. Technical teachers cited the problems in internship education as stemming from enterprises, with

student internship experiences falling short of expectations. The study recommended general reforms in vocational education institutions, increased vocational course hours, and enhanced collaboration between vocational high schools and the industry.

Furthermore, research examining the views of employers and master instructors regarding vocational training center students indicated that 71.1% of them believed that students from these centers had sufficient education levels to learn a profession. However, they noted that theoretical knowledge was only partially applied by students. The study highlighted the need to promote Vocational Education Centers effectively to address Turkey's demand for qualified personnel and to provide an attractive alternative for individuals who do not wish to pursue further post-primary education. The research called for activities to enhance communication and social sharing between teachers, administrators, and workplaces, as well as efforts to raise professional awareness among vocational training center students. Recommendations were made for programs emphasising the importance of vocational education in the country's development (Şar et al., 2011).

ILO (2020) emphasizes the importance of school-industry collaboration in designing and managing apprenticeship programmes. This collaboration involves a variety of stakeholders, including educational institutions, businesses, governments and professional associations. The report emphasizes the need for theoretical and practical training for apprentices, enabling them to improve their professional skills and succeed in the job market. School-industry collaboration can improve the quality of apprenticeship programs by developing training programs that meet apprentices' vocational skills, providing on-the-job training to help them apply their theoretical knowledge, and encouraging apprentice employment through collaboration between schools and businesses.

Vocational Education Centers in Türkiye

Vocational Training Centers in Türkiye were designed with inspiration from apprenticeship

training, which was a part of the *ahi* community/guild culture in the Ottoman Empire. Namely, in the Ottoman Empire, a journeyman who wanted to become a master had to have worked for three or more years, depending on the type of profession, to have no complaints against him during this period, to fulfil his duties properly, to be meticulous, especially in the training of apprentices, to get along well with customers, neighbours and colleagues, and to obtain the approval of the council of masters in the same profession. In addition, only a master can have the right to open an independent workplace (Şahinkesen, 1991, p.392).

Today, apprenticeship training has been regulated by the Ministry of National Education (MEB) to strengthen vocational education and carried out in Vocational Training Centers (VTCs). Vocational education centers try to provide school-industry coordination based on the mission of school-based learning. In this context, these centers aim to prevent youth unemployment by providing skills to young people, who constitute a significant part of the population, and to eliminate the skills supply-demand imbalance, one of the critical problems of the labour market.

Vocational education in Türkiye is strictly regulated by precedent laws, facilitating a well-structured education system. The Turkish National Education Law No. 1739 provides the legislative backbone for vocational education and apprenticeship training (MEB, 1973). The law regulates the functioning of vocational and technical education institutions and sets out the terms and conditions of apprenticeship training. In addition, Law No. 3308 on Apprenticeship and Vocational Training contains information on the details of vocational training (MEB, 1986). This legislation defines the qualifications required for apprentices, the obligations of vocational training centers and the roles and responsibilities of interested parties. It also helps to structure a beneficial learning environment for learners and ensures that vocational training centers support the educational standards the government sets. The recent Industrial Cooperation Programme (ICP) Policy, launched in 2012, also promotes vocational training and apprenticeships. The policy promotes a well-equipped labour force that

meets the dynamic needs of industry by encouraging cooperation between industries and vocational training institutions (SPO, 2012).

Nowadays, in Vocational Training Centers in Türkiye, where traditional apprenticeship, journeyman and mastership training is provided, students receive education at school one day a week and receive skills training in enterprises on the other days. Vocational Training Center also supports students with a wage of one-third of the minimum wage during the four-year education. Moreover, to benefit from Vocational Education Centers, it is sufficient to be a secondary school graduate and no age limit exists. Therefore, Vocational Training Centers also provide important opportunities for Syrians outside the education-age population to enter the labour market (Özer, 2021).

Vocational Education Center students receive theoretical training at school one day a week and practical training in enterprises four days a week. Apprenticeship training lasts three years, and journeyman training lasts one year. 9th, 10th and 11th-grade students attending the vocational education center receive at least 30% of the minimum wage, and 12th-grade students receive at least half of the minimum wage. Vocational Education Center graduates can open their workplaces by obtaining "Master's Certificate" and "Vocational and Technical Anatolian High School diploma". Those who have a master's certificate have a "Master Teacher" certificate with "Business pedagogy training" for the employment of apprentice students (MEB, 2017). In addition, a series of regulations have been implemented to reduce the costs of a specialised labour force. In the Official Gazette published on 4 January 2022, it was decided to extend the period for the payment of the State contribution from the Unemployment Insurance Fund for five more education and training years, effective from the beginning of the 2021-2022 education and training year. The incentives in question are explained as follows:

1. The period that the payments to be made to candidate apprentices and apprentices and students who receive vocational training, internship or complementary education in

enterprises cannot be less than thirty per cent of the net amount of the minimum wage,

2. The period during which the payments to be made to the 12th-grade students of vocational education centers who gain the journeyman qualification cannot be less than fifty per cent of the minimum wage,

3. The minimum wage that can be paid to students studying in schools and institutions other than vocational education center programmes;

- Two-thirds of enterprises employing less than twenty staff,

- One-third for enterprises employing twenty or more personnel,

- The entire minimum wage that can be paid to students attending the vocational training center programme,

- It was decided to extend the period for the payment of the State contribution from the Unemployment Insurance Fund for five more academic years, effective from the beginning of the 2021-2022 academic year.

Özer and Suna (2022) evaluated the performance of vocational education center programmes in the first three months of 2022 after the amendment to the Vocational Education Law No. 3308. The results of the study show that due to the improvements made, the demand for MEM programmes has increased, approaching the 1 million target and the coverage of the programmes has increased significantly. Kazak et al. (2023) aimed to assess the impact of recent changes in vocational education on employment outcomes, especially from the perspective of employers. The study's findings reveal a need for technological upgrading and renovation of workshops and laboratories in these schools as they play a crucial role in preparing students for the demands of the labour market. It was also pointed out that the workshop equipment and machinery are seriously outdated. Considering the old structure of the existing workshops and laboratories, it is clear that students cannot receive the necessary training to obtain the certificates required by modern standards.

Vocational Training Centers act as a bridge between the business world and educational institutions in Türkiye, training skilled labour to

meet industry needs. This study was completed especially after the new incentives mentioned above came into force. In this way, it aimed to obtain findings on how the new incentive regulations affect employers and their views on school-industry cooperation.

Methodology

The qualitative research method was preferred in the study. Creswell (2016) recommends using qualitative research to explore a problem and/or phenomenon. According to Yıldırım & Şimşek (2016, p.41), qualitative design is research method in which data are collected using qualitative techniques (such as observation, interview, and document analysis) and a realistic and holistic qualitative process is followed in order to reveal perceptions. This design generally provides flexibility for researchers to explore events. Exploratory research, a qualitative research method, is generally preferred to diversify and elaborate the data collected from the field. It can also be used in situations that have not been previously studied or where data collection may be partially difficult (Bengtsson, 2016). In this context, data were collected through in-depth interviews with semi-structured interview questions. The semi-structured interview technique (Magilvy & Thomas, 2009) is used in the data collection because semi-structured interviews often provide significant flexibility to researchers and participants (Miguel, 2011) and guide the topic under investigation.

In the study, in-depth face-to-face interviews were conducted with the participation of 12 employers operating in OSTIM in Ankara province, employing workers who continue their education in Vocational Training Centers and operating in different sectors. Before the face-to-face interviews, a semi-structured interview form was sent to the participants together with the informed consent form. Then, planned interviews were conducted with the participants at their production facilities.

In line with the ethical approval given by the Ethics Committee of Ankara Yıldırım Beyazıt University (No: 13 Date: 06.07.2022) and the

permission given by the Ministry of National Education numbered E-14588481-605.99-55392933 and dated 17.08.2022, the interviews were conducted with the participants who were randomly selected among the employers who are in cooperation with OSTİM Vocational Training Center and who accepted the interview. We selected the participants using maximum variation sampling to ensure representativeness and maximise the diversity of people related to the research problem. However, this sampling technique is not to generalise the findings but to reveal any phenomena shared in different situations and to reflect different aspects of the problem (Yıldırım & Şimşek, 2016).

The research was conducted with 12 employers in total. One of the participants is female, and the other 11 are male. Their age ranges from 30 to 75 years old. Their educational background ranges from primary school to postgraduate level. Participants have been working in the same profession for at least six years and have been working in the same profession for more than 20 years on average (Table 1). The enterprises operate in seven business sectors (Defence, Automotive, Welding, Metal Products, Medical, Plastics, and Exhibition).

Table 1. Participants Characteristics

Code	Gender	Age	Marital Status	Education Level	Sector	Seniority
P1	Male	41	Married	Primary School	Exhibition/Exhibition	6
P2	Male	40	Married	Primary School	Automotive	28
P3	Male	30	Married	Vocational High School	Defence Industry	10
P4	Male	71	Single	Bachelor's degree	Medical	30
P5	Male	75	Married	Primary School	Metal Products	32
P6	Male	43	Married	Middle School	Auto Industry	32
P7	Woman	32	Married	High School	Source	10
P8	Male	33	Married	Master's Degree	Automotive	16
P9	Male	38	Married	Middle School	Defence Industry	22

P10	Male	36	Married	High School	Defence Industry	18
P11	Male	45	Married	Middle School	Defence Industry	33
P12	Male	47	Single	Primary School	Plastic	30

Findings

In the study, three categories were identified in the theme of VTCs for employers. The first of these is the difficulties employers face in working life, the second is their views on the current situation of VTCs, and the third category is the expectations of employers regarding VTCs. A total of 8 codes were analyzed under these headings (Table 2).

Table 2. List of Themes-Codes Determined According to Research Findings

	Theme	Code
Vocational Training Centers from the Employers' Perspective	Problems for Employers	Employee Supply
		12-Years Compulsory Education
	Opinions on the Current Situation of VTCs	Being Aware of VTCs
		Certificate of Mastery
	Employers' Expectations	Working Hours
		Minimum Wage
		Curriculum Work Life Alignment
		A Mechanism Bringing Students and Employers Together

Difficulties / Obstacles in Working Life Staff supply

Employers stated that recruitment is the most significant challenge they face in the industrial sector. The difficulties they face in this regard have been brought together by the fact that asylum seekers in Türkiye, especially Syrians, must find a job to make a living. While this situation contributes to the harmonisation of asylum seekers, the presence of migrants has become indispensable for employers. At this point, the differences between foreign and Turkish employees have pushed employers to employ foreigners in a registered or unregistered manner. It is known that the industrial sector in Türkiye has

been experiencing problems in recruitment for many years. Employers in the industrial sector, who have difficulties, especially in the supply of intermediate staff, state that the people they employ do not have the desired level of skills. While employers state that the reason for the problem they face in recruitment is primarily supply-side deficiencies, they attribute the widespread occurrence of this problem to the fact that the industry and the education system are disconnected from each other (Koca, 2020). One of the essential problems in vocational and technical education is the quality problem. It is thought vocational-technical education students cannot acquire the professional competencies required by their level. This opinion is expressed by both teachers working in vocational education, students and employers. The employers believes that the qualifications of vocational and technical education students do not meet the needs of the labour market (MEB, 2021).

One of the important findings of the research is that employers cannot find Turkish citizens to employ in many areas of the industrial sector. Emphasizing that most foreigners are employed in the industrial sector, employers stated that they had to employ foreign workers because Turkish citizens did not want to work in these areas. This situation has led to the employment of asylum-seeker workers in areas where Turkish citizens do not work/do not want to work. The majority of the participants emphasized that in the scenario where asylum seekers leave Türkiye, there would be no employees to work in OSTİM. It was also stated that asylum seekers are obliged to work, whereas Turks do not have such an obligation.

Everyone says Syrians and Iraqis should leave, but if they leave, we will not be able to find people to work. No one wants to work in the industry, the current generation wants to earn easy money. I don't believe anyone can earn money by sitting at a desk without going to the field. It was not my preference to employ foreign students. I have applied to İŞKUR many times. We are experiencing a serious shortage of staff. (P1)

If the Syrians leave, we cannot find people to work. (P6)

Look at this region now, you will find at most 20 Turkish employees. I employ foreigners because of the conditions. We have to. (P12)

If Syrians and Iraqis leave, the industry will be completely finished. Because we cannot find Turkish citizens to work for us. I employ Syrians out of necessity. If I could find Turkish citizens, I would not employ any of them because they do not take responsibility, so I follow their work. But if they were Turkish citizens, they would take responsibility and follow the work. (P2)

We can't find employees to work. Thank God we have these Syrians, and our industry has revived. They have nothing else to do, they love their jobs so much out of desperation (P7).

Not without Syrians. If these people leave, it is impossible for the costs to be lower, and since they do not provide insurance, the employer found a solution to keep his business going by employing foreigners (P8).

Participant employers listed the reasons for not employing Turkish workers as high wage demands, dislike of work, inefficient work, lack of qualifications and technical knowledge. Employers expressed these views as follows.

I don't prefer them. They want a higher salary and they want to do a comfortable job. When they come, they file a lawsuit for compensation or something like that, they make us work hard. They are incompatible anyway. (P12)

We do not have many employees. We can never find Turkish employees, [Turkish] people don't like work (P5).

You cannot even find a welder. The welder is the biggest shortage, there is no lathe sawing, there is no wood in the market. There are no Turks to train even a small car mechanic. It is difficult to train people after the age of 15-16. The 14-15-16 year olds who will grow up in the industry should be channeled into a job by inclining to this job. Syrians have been very useful and why. The children of our own citizens do not start work as apprentices. They will be 17-18 years old, we cannot find Turkish apprentices, I cannot even employ my own child, if he/she does not study, they somehow find a job after high school, and Syrians have also added to the mobility in the market. The truth is, I don't know if there are Turkish students in VTCs or not. No one applied (P6).

We are in Ostim, we have had these employees there for years. We wanted to train our own staff, but it is

very difficult to find welders among Turks. They do not know both in practice and theory. We have been dealing with this problem for years, the older ones work more slowly in terms of efficiency, and there is a bit of negligence, we could not get the efficiency we wanted. The welder is a problem in general (P7).

As it can be understood from the opinions of employers, employers do not even want employees to claim their rights and therefore resist employing Turkish citizens. In particular, they characterise young people who do not want to work in heavy jobs as 'not liking work' and state that they cannot find Turkish employees. However, other studies (Hidayat, et al., 2016; Wygal, et al., 2021) show that this situation is not only in this sector, but also in many countries, especially in sectors that threaten health. In many heavy labour sectors, employees are moving away from these fields. Therefore, these views of employers do not provide us with accurate information about the approach of young Turkish citizens to work and work.

12 years of compulsory education

In the scope of efforts to improve vocational and technical education in Türkiye, apprenticeship training was also included in 12-year compulsory education. With the amendment made by Law No. 6764, apprenticeship education within the scope of non-formal vocational education was included in the scope of compulsory formal secondary education. An important step was taken to meet the sector's need for qualified labour force by training masters through on-the-job training (MEB, 2017). Employers attribute the start of the 4+4+4 education system, i.e., the extension of compulsory primary education to 12 years, as one of the biggest reasons they have so much difficulty finding employees. They stated that with this system, the way for apprenticeship training was closed and that no one who has completed high school can be employed in this way. Participating employers criticized the inclusion of apprenticeship training within the scope of 12-year compulsory education for various reasons. First, they emphasized that students do not want to work as "apprentices" after 18 due to the increase in education and pointed out that apprenticeship training should be provided

from an early age. Participant employers explained this problem they faced in the following statements:

You cannot be the master and boss of a job you have not apprenticed. We have been experiencing difficulties in recruitment for about 10 years. After 12 years of compulsory education, the age of labour has risen; there is no more education that raises children from childhood. Therefore, if he does not work until the age of 18, you cannot employ him here after the age of 18. (P1)

Türkiye has 12 years of compulsory education. Now, when you bring an apprentice to the industry after the age of 16-17, he cannot learn this job. I came at the age of 12. I came after primary school. When I say something, he reacts negatively. He leaves work and goes somewhere else. You can't become an apprentice at 18 anyway. He says, "I am 18 years old, I cannot do this". They have no desire to learn a job. The school system is completely wrong. You have to start at a young age and you have to do it willingly. I had my goals. I wanted to get a job and become a master (P2)

Something can be done to train more students for the market. There used to be 5-6-7 apprentices in a workplace. Now there is no such thing. After 4+4+4 started, there are no more apprentices in the industry. 12 years of compulsory education makes it very difficult for us to find employees (P3)

When 12 years of compulsory basic education became compulsory, apprentices were no longer trained. He will either pass the university exam. Either a doctor or a teacher. He doesn't want to see the filth of the industry. He doesn't come at 19 and work in the filth. Not everyone has to study. Let them go to the industry and get a profession. We ran out of trained craftsmen after 4+4+4 (P10).

Opinions on Vocational Training Centers (VTCs)

Meeting methods with VTCs

Effective communication between employers and VTCs is crucial to align vocational training with the needs of the industry. Such communication is often facilitated through various channels, including industry advisory boards, workplace training and internships, and frequent dialogue between employers and VTC staff. Participants learned about VTC through their friends, accountants, VTC teachers, workplace neighbours,

and students. Thus, having heard about them in a variety of ways, participants described their experiences in the following way, stating that their greatest motivation was the incentives provided:

I learned about the centers through a friend. I was already thinking of insuring these friends. I learned that the school also pays their insurance (P2)

Our accountant heard it from somewhere and said let's make sure they are not unregistered. We don't want to have people we check in and out occasionally. After one week they may not come to work, they leave. They go to construction. They hear about it from their friends and go to other jobs (P9)

We learned about it through our neighbors at the workplace, I knew that he was giving training about these centers. They work one day at school and four days at the workplace and receive apprenticeship and mastership certificates. I applied to the center and they referred this friend (P3)

Reasons for Preferring VTCs

Vocational training centers emerge as an essential tool in ensuring school-industry cooperation. In this context, it has been observed that employers want to benefit from the incentives provided by the Vocational Education Law No. 3308 in case they employ students from vocational education centers. During the four-year training period, students are supported with a wage equal to one-third of the minimum wage and are insured against occupational diseases. The employment rate of graduates from vocational training centers, where traditional apprenticeship, journeyman and master's training is provided, is 88% in the fields in which they received training. It continues to be a very successful model (Özer, 2021).

For this reason, the incentives provided by the state are the basis for employers to recognize VTCs and employ students from these centers. Among the reasons for employers to employ students from VTCs, the factors encountered were registering employees, wage incentives and mastership certificates. The candidate apprentice is paid while on probation and insurance provisions are applied against illness and work accidents (Küçüköğlü & Kızıldaş, 2012). Most of the employers stated that when they employ students from VTCs, the payment of their insurance by the state

significantly reduces labour costs in this process. This is because the main reason for employers to employ students from VTCs is not to formalize their employees.

The only benefit for me is that their insurance is paid by the state. It is also important for them to learn our profession. (P2)

A Syrian friend started working. We were trying to do it through social security institution (SSI) with classical methods. He was receiving training at OSTİM VTC. We got rid of the sums we had to pay for the work of the SSI (P8)

It was financially beneficial, they go one day a week and the state pays the insurance. Insurance would be an extra burden. Our work is dangerous, so there should be social security. It happened to us once. What would we do without social security? They were told by the teachers at the school. In my time, they didn't have high school graduate diplomas, but when something like this happened afterwards, it was so good that we had just opened, we were having financial difficulties, and the next thing you know, money came into your account (P11).

Although there are widespread views that VTCs provide various benefits for employers, some employers emphasized that VTCs do not provide any benefits for them, but rather that the fact that students receive theoretical education at school one day a week is a disadvantage for them.

It is not a benefit to the employer but a loss. For example, the child does not come to work that day but goes to school. He goes to school to fill the hours of the day. The child thinks that day is a vacation (P1).

He goes to school one day a week. He has been going for three years. He will get a master's certificate. The school did not help us at all, we only lost jobs in the vocational sense (P5).

Another argument that employers mentioned among the benefits provided by VTCs is that they offer mastership certificates to students who graduate from these centers. Most employers stated that acquiring a certificate of mastership is necessary for the industrial sector and gives them an idea of what skills they have or do not have when hiring. They also see the acquisition of a master's certificate as a pioneering factor in the continuation of professions that are disappearing in the industrial sector and are not preferred by students.

I also went to apprenticeship training, but only to get a diploma, not to learn the job (P1).

The diploma is very important. At the end of 4 years, I think it will reach a sufficient standard (P7)

The only benefit for me is that their insurance is paid by the state. It is also important for them to learn our profession. (P2)

Certificate of mastership

Despite the numerous benefits of apprenticeships, numerous studies show that post-apprenticeship master certificates offer additional value for workers (Winkelmann, 1996; Lerman, 2017). These certificates can enhance professional mobility, increase job satisfaction and enhance employability. Post-apprenticeship mastery certificates prove an individual's competence in their job and can significantly increase their competitiveness in the labour market. They also allow for higher wage prospects and increased job security. Furthermore, such certificates can increase employee confidence and job satisfaction (Winkelmann, 1996). In this research, it is understood that the certificate of mastery is an essential indicator for employers. Participants expressed this situation as follows:

I also went to apprenticeship training, but only to get a diploma, not to learn the job (P1).

To be an expert in the job, to have previous experience. The diploma is very important. When I was hired, my father was the first person to do these jobs, master-apprentice, there is no other way. At the end of 4 years, I think it will reach a sufficient standard (P7).

It can be seen that post-apprenticeship master certificates offer a considerable opportunity for workers to strengthen their professional positions and improve their career prospects. Therefore, they are an important factor to be considered in discussions on workforce development and employment policies.

Employer expectations

Night shift

Participating employers expressed various expectations regarding increasing employment in the industrial sector and finding solutions to the

problems they face. The most important of these problems is the inclusion of apprenticeship training in the 12-year basic education system. This is followed by the harmonization of the curriculum in VTCs with business life, night shift regulation, minimum wage regulation, directing students to professions according to their capacity and skills, and establishing an effective mechanism that brings students and employers together. Some of the participating employers stated that the presence of students in VTCs for one day of theoretical training is a loss for them and that night shifts should compensate this lost time. In addition, some employers emphasized that working at night could be more productive and that work in the industrial sector is generally faster at night.

We have a night shift. It would be very good if they could work in our night shift, but we cannot employ everyone in the night shift. In our sector, you learn the job at night. There is no opportunity to teach something during the day to develop the children. For example, we are busy during the day and we cannot concentrate on training due to shipments. As much as possible, you learn this job most easily at night. It is the most productive then (P3).

Apprenticeship students should be allowed to work night shifts. In the industry, we are able to recover mainly by working at night. We could not put an extra increase in labour. I gave a price of 50 liras at the beginning of the year. We are trying to compensate with night work. Now young people worry about how to earn money fast. Motorcyclists earn serious money. There are 300 liras of money left daily. Today's young people are trying to save the day, they do not think about their future (P10).

Minimum wage regulation

Employers believed that the minimum wage regulation should be differentiated in the industrial and service sectors. They expressed the expectation that the increase in wages in favor of employees in the industrial zone and in sectors that need intermediate staff will increase the demand for these jobs as follows:

Right now the minimum wage is the same everywhere. Therefore, they prefer to work with clean clothes instead of dirty clothes for the same money.

Therefore, the minimum wage in the industry should not be the same as the minimum wage in other sectors (P3).

The minimum wage here (industry) will not be the same as the minimum wage of another workplace. We will pay high wages accordingly, but only then they will prefer it (P9).

Another topic among the participants' expectations is the need to improve the minimum wage regulation in the industrial sector. Some of the participating employers stated that the minimum wage in the service and industrial sectors should not be equal, and that the minimum wage in the industrial sector should be higher than in the service sector. The main problem here is that students prefer to work in the service sector instead of the industrial sector. However, employers have no obstacle to paying more than the minimum wage. Therefore, although employers have such an expectation, this expectation has no practical equivalent.

Alignment of Curriculum and Work-Life

Helping to align academic curricula with industry requirements plays a crucial role in clearly communicating learning objectives and skills. There is an urgent need for educational institutions to incorporate vocational training into their curricula, and industries should be encouraged to participate in these programs. Doing so will result in a competent and well-prepared workforce that can meet the needs and demands of the industry (Kelly & Price, 2009). In a system where even one day a week is very precious, employers see their employees going to school as a waste of time and work and stated that the formal education curriculum should be reshaped in line with the needs to benefit both themselves and their employees:

Some participants emphasized that the education in VTCs does not fully overlap with the education given in the workplace and stated that the workplace (industry) is more important for students to learn a profession. Participants expressed these views as follows:

The information you receive in apprenticeship training is not even half of what you learn in industry. In other words, the technical knowledge they get at

school is insufficient in the industry. If he is a regimented person, if he has been trained from the nucleus, I think he is more knowledgeable and equipped than a school student. Apprenticeship training is not enough. They receive cursory training. (P1)

Will it add anything on top of what I have added because they have seen the basic courses? Maybe there should be practice there, but it is like that (P7).

I do not think that the school can be of any benefit in terms of vocational attainment (P8).

A mechanism that brings students and employers together

Effective communication is the key to successful collaboration between school and industry. It ensures that expectations, goals and feedback are shared accurately between all parties involved. It is possible to talk about the need for a mechanism that brings students and employers together to increase the efficiency of VTCs in training personnel, which is one of the most important problems of industrial zone employers. To narrow the gap in the need for intermediate staff in Türkiye and for students to benefit more from VTCs, employers have identified their need for an intermediary where they can explain themselves and the future of their professions and transfer their experiences with the following statements:

İŞKUR has a website that brings workers and employers together. Ministry of National Education (MEB) can also establish such a mechanism. Employers and employees can communicate here (İ1)

In 2022, the Ministry of National Education launched the "Digital Employment Matching Platform" in cooperation with MEB, İTO and İSO in order to carry out the employment mobility generated by the vocational training center programme in a faster and more effective manner and to meet an important need of enterprises regarding the field and qualified employment of apprentices, interns and graduates (MEB, 2022). However, it is seen that employers do not sufficiently understand and are not aware of this platform.

Employer-teacher coordination should be increased. They don't choose the right department. They should be able to change departments, we should be able to go to schools and explain ourselves like career days at

universities, the future of the profession should be well explained to students. Schools should provide this (İ10).

Another suggestion among the expectations of participating employers was the realisation of a mechanism that brings students and employers together. Curricula in all areas of vocational education were updated with the contributions of sector representatives and harmonized with National Occupational Standards (Özer, 2021, p.4-5). When the system of occupational standards, examinations and certificates is considered from the perspective of employers, it will enable employers to know what the skills and knowledge of the employees they will employ are and to make the right decision in the selection, remuneration and progression of the most suitable person for the job. This system will allow job seekers to prove their professional competencies, knowledge and skills without difficulty (Yalçın & Kılıç, 2015). Employer participant İ1 gave İŞKUR's web-based access system as an example of this mechanism, while participant İ10 pointed out the importance of career days at schools. With this mechanism, it will also be possible to direct students to professions according to their capacities and skills.

Conclusion and Discussion

Becker's (1964) Human Capital Theory addresses the relationship between education and employment. Based on this theory, many studies support that vocational training can increase the economic value of individuals and, therefore, the importance of building a skilled workforce for employers. Compared to this theory, this article provides a perspective on the role of employers' vocational training centers in school-industry cooperation and their contribution to the business world.

Researchers such as Belfield and Levin (2002) highlight employers' need for vocational training programmes. These needs provide an essential context on how vocational training programmes can respond to labour demand and how employers can overcome their labour market challenges through this cooperation. The importance of vocational training programmes for employers mentioned in this study is also addressed by Leuven and Oosterbeek (2011). Many studies show

that vocational education programmes provide students with theoretical knowledge and practical skills and better prepare them for the labour market. In this context, vocational education programmes are much more meaningful institutions for the labour market as they provide students with theoretical knowledge and have one-to-one communication with the business world. Because vocational education programmes are complete with practical training. Practical training ensures the transformation of theoretical knowledge into practice and enables students to gain real-world experience (Livingstone, 2015). In addition to providing students with hands-on experience in workplaces, these trainings help students explore their potential careers and adapt to the expectations and demands in the workplace (Billet, 2014). However, the main problem is that school-industry coordination cannot be established at the desired level.

As a result of the data obtained, employers' opinions on Vocational Training Centers point to three main themes. The first of these themes is the difficulties experienced by employers in recruiting labour. Employers' difficulties in recruiting the labour force are attributed predominantly to extending primary education for 12 years. This raises the critical issue of how school-industry cooperation can affect recruitment processes. As noted in this study, employers emphasise the importance of students starting apprenticeships at a younger age. This points to an area where employers should play a more significant role in shaping the future workforce. This conclusion highlights the importance for MEMs to provide students with practical skills at an early age and better adapt to the demands of the labour market.

The second theme obtained from the research data is employers' opinions on Vocational Education and Training Centers. Within the scope of this theme, many employers associate the fact that students trained in Vocational Education and Training Centers have the right to a "master's certificate" in the occupational field they learn with employability. Therefore, for employers, a "master's certificate" is an essential indicator of success regardless of the occupational field. The mastership certificate, which increases students' employability, is necessary for school-industry

cooperation. The fact that employers express how vital the "certificate of mastery" is in terms of labour force participation shows that vocational education is an essential tool in training qualified graduates.

The third theme obtained from the research data includes the expectations of employers. Employers stated that the mechanisms that will bring students and employers together within the scope of school-industry cooperation should be expanded and disseminated. On the other hand, some employers also emphasised that the curricula of Vocational Training Centers should be more suitable for business life. Schultheiss and Backes-Gellner (2022) argue that the potential benefits of improving the educational content of vocational education and training (VET) programmes are significant in facilitating the widespread dissemination of innovative knowledge of emerging technologies. Other expectations of employers are to set the minimum wage specific to the industrial sector and to regulate working hours. In addition, the need to increase the attractiveness of the industrial sector, which is not seen as an attractive field of work by students, through special regulations is also among the crucial opinions emphasised. According to Hamermesh (1996), studies on employers' expectations, working hours regulations and wage policies provide clues on how to make cooperation programmes more effective.

In conclusion, the findings presented in this paper lay the foundation for a meaningful discussion on how school-industry collaboration within the context of vocational training centers can influence employer expectations, certification processes and government policies. This discussion can offer essential opportunities for better cooperation in vocational education and better labour force preparation. Cooperation between MEMs and employers plays a critical role in training skilled labour. Training institutions and employers have specific demands and expectations to ensure this cooperation model works effectively. Making cooperation more effective could be the key to producing graduates that better respond to the labour market's needs and contribute to general economic development. Vocational training centers prioritising school-

industry cooperation play an essential role in producing job-ready graduates that meet the labour market demands. Cooperation between these centers and employers leads to developing relevant curricula, practical experience and customised training. This approach benefits employers by reducing the skills gap and improving the overall quality of vocational training. As the global workforce continues to evolve, it is clear that school-industry solid collaboration will continue to be essential to create a well-prepared and skilled workforce. Therefore, governments should create an enabling environment by designing policies that foster school-industry partnerships. This includes measures such as providing incentives for industries to invest in education and training or providing updated curricula aligned with industry trends.

Practical implications

To improve apprenticeship training in Turkey and strengthen school-industry cooperation, you can consider the following suggestions:

Update VET Programmes: Vocational high schools and vocational colleges should design training programmes more closely aligned with industry requirements. These programmes should be continuously reviewed and updated with the participation of employers and sector representatives.

Establish School-Industry Cooperation Platforms: Establish local, regional or national cooperation platforms to support and facilitate continuous communication between industry and education institutions. These platforms can help coordinate the needs, resources and expectations between the two parties more effectively.

Promote the Apprenticeship System: The apprenticeship system in Turkey should be further promoted and popularised. Campaigns should be organised to make apprenticeships attractive, especially among young people. Vocational schools and employers should co-operate to promote this training and encourage youth participation.

Provide Internships and Job Guarantees: Make apprenticeships more attractive by offering

learners more internships and job guarantees. Employers can commit to hiring successful learners. This can provide more motivation to learners.

Expert Teacher Training: Provide ongoing training for teachers in vocational schools to keep up to date with industry developments. Also, invite industry experts into schools and classrooms to provide real-world experiences for students.

Industry Standardised Hardware and Equipment: Vocational schools and cooperating businesses should have state-of-the-art equipment and facilities. This allows students to learn and experience up-to-date technology.

Improve Apprenticeship Salaries: Make the apprenticeship programme more attractive by offering apprentice students a better salary. This can help students cover living costs and allow them to support their families.

Career Counselling: Schools should provide students with information about job opportunities. Career counsellors should guide students on career choices and help them connect with employers.

Programme Diversity and Standards: There may be gaps in the standards and diversity of apprenticeship training programmes in Turkey. The consistency and currency of programmes in different sectors may need to be questioned.

Reward and Recognition Programmes: Establish reward and recognition programmes for successful apprentices and employers. This can encourage learners' effort and increase employers' participation in the apprenticeship programme.

These recommendations can be a starting point for improving apprenticeship training and strengthening school-industry co-operation in Turkey. Adopting various approaches to suit local needs and sector requirements is also essential.

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Kitchen Staff's Intention to Use Geographical Indication Food Products in the Context of Theory of Planned Behavior¹

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Abstract

The purpose of this study is to determine the intentions of kitchen staff working in hotels to use geographical indication (GI) food products and the factors affecting their intentions within the scope of the Theory of Planned Behavior. Within the research framework, the relationship between staff's familiarity with GI food products and their intention to use these products has been examined. The study was conducted in 4 and 5-star hotels located in Istanbul. Data were collected from a total of 423 participants by questionnaire technique by interviewing the kitchen staff of the food and beverage departments of these enterprises. The data obtained were analyzed using descriptive statistics, regression analysis and difference tests. As a result of the research, it was determined that the most important factor affecting the intention to use these products among the participants was familiarity with the products. It was observed that individuals with knowledge of GI food products and those who have previously worked with these products exhibit a notably positive attitude towards using them. In addition, it has been determined that the reason for the negative attitudes of the decision-making managers in the enterprises where the participants work towards the use of GI food products is the high purchasing costs and seasonality of the products. Finally, it was observed that the positive attitude towards GI food products increased from the lower to the higher positions in the kitchen hierarchy, and this was due to the knowledge of recognizing and using the product correctly gained with professional experience.

Keywords: Theory of Planned Behavior (TPB), Geographical Indication (GI), Food Products, Kitchen Staff, Hotels.

Öz

Bu araştırmanın amacı, Planlı Davranış Kuramı kapsamında otel işletmelerinde görev yapan mutfak çalışanlarının coğrafi işaretli gıda ürünlerini kullanmaya yönelik niyetlerinin ve niyetlerini etkileyen faktörlerin belirlenmesini sağlamaktır. Araştırma kapsamında, çalışanların coğrafi işaretli gıda ürünlerine karşı sahip oldukları aşinalıkları ile bu ürünleri kullanma niyetleri arasındaki ilişki incelenmiştir. Çalışma alanı olarak İstanbul ilinde yer alan 4 ve 5 yıldızlı otel işletmeleri belirlenmiştir. Bu işletmelerin yiyecek ve içecek departmanlarının mutfak bölümünde çalışan aşçıları ile görüşülerek toplam 423 katılımcıdan anket tekniği ile veriler toplanmıştır. Elde edilen veriler, tanımlayıcı istatistikler, regresyon analizi ve farklılık testleri gerçekleştirilerek analiz edilmiştir. Araştırma sonucunda, katılımcılar arasında bu ürünleri kullanma niyetlerini etkileyen en önemli faktörün, ürünlere karşı aşinalık olduğu tespit edilmiştir. Coğrafi işaretli gıda ürünleri konusunda bilgi sahibi olan, daha önce bu ürünler ile çalışmış kişilerin, ürünleri kullanmaya karşı olumlu tutumlarının oldukça yüksek olduğu anlaşılmıştır. Buna ilaveten, katılımcıların görev yaptığı işletmelerde karar verici konumunda yer alan yöneticilerin, coğrafi işaretli gıda ürünlerini kullanmaya yönelik sahip oldukları olumsuz tutumlarının gerekçesinin ürünlerin yüksek satın alma maliyetleri ve mevsimsellik özellikleri olduğu belirlenmiştir. Son olarak, mutfak hiyerarşisi içinde alt pozisyonlarda çalışanlardan, üst pozisyonlara doğru gidildikçe, coğrafi işaretli gıdalara yönelik olumlu tutumunun arttığı bunun nedeninin mesleki tecrübeyle beraber kazanılan ürünü tanıma ve doğru kullanma bilgisinin olduğu görülmüştür.

Anahtar Kelimeler: Planlı Davranış Kuramı (PDK), Coğrafi İşaret (Cİ), Gıda Ürünleri, Mutfak Çalışanı, Otel İşletmeleri.

¹ This study was produced by Deniz KAYA's Master's Thesis titled "Attitudes of Hotel Businesses Kitchen Staff's towards Using Geographical Indication Food Products within the Framework of the Theory of Planned Behavior

Introduction

Consumers' awareness of the foods they buy leads to changes in the culinary cultures of societies over time. Among the main reasons for these changes, the need to access safe food can be shown. People investigate the origin information of foods with the desire to have information about the foods they buy. With the aim of protecting the efforts of producers against counterfeit products and the competitive environment, GI systems have been created and developed in order to protect and standardize local values and quality production (Demir, 2020).

With the introduction and widespread use of geographical indication systems, it has become possible for local cuisines to be recognized worldwide. Thanks to GI food products, people can change their travel routes to the regions where the products they want to taste are grown. Considering these reasons, it is considered as an important topic that the kitchen staff responsible for food production, especially in the food and beverage departments of 5- and 4-star hotels hosting international guests, should have the necessary awareness about food products with GI and include these products in their menus.

In this context, the study framework focuses on determining the intention of kitchen staff responsible for food production to use GI products in their menus and revealing the factors affecting their intention to use these products. For this purpose, the relationships between the Theory of Planned Behavior and the concepts of attitude, subjective norm, and perceived behavioral control, which are under the heading of behavioral factors that affect the intention of kitchen staff responsible for food production to use GI products in their menus, are examined. In addition, the study was carried out by addressing the staff's familiarity with GI food products and the effect of this familiarity on their intention to use the products.

In the literature, there are studies on food in the context of Theory of Planned Behavior (Conner et al., 2002; Khalek & Ismail, 2015; Doğdubay & Saatçı, 2016; Yay & Çalışkan, 2016; Kumar & Smith, 2017; Yılmaz & Şenel, 2017; Ülker, 2017; Ünlüönen & Işın, 2018; Aksoy & Çekiç, 2019; Şahin & Solunoğlu, 2019; Dursun, 2020). In addition, there

are studies on GI food products (Mercan & Üzülmöz, 2014; Sukenti, 2014; Seal & Piramanayagam, 2018; Chilla et al., 2020; Şahin, 2020) and the inclusion of these products in menus (Küçükyaman et al., 2018; Kaya & Akdemir, 2021).

Theoretical Framework

Theory of Planned Behavior

Based on the Theory of Planned Behavior put forward by Icek Ajzen, there are three independent variables that affect individuals' intentions to perform behaviors. These independent variables are attitude, subjective norm, and perceived behavioral control (Beck & Ajzen 1991). The difference of the Theory of Planned Behavior, which emerged as a continuation of the Theory of Reasoned Action, from the other theory is the addition of the perceived behavioral control variable to the model. The most important point that connects both theories is that the most important factor for individuals to perform their behaviors is the intention towards the behavior (Warshaw, 1980).

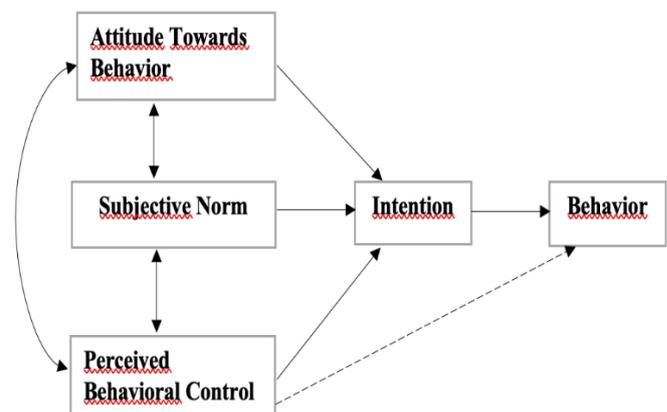


Figure 1. Theory of Planned Behavior Model (Ajzen, 1991)

The attitude towards behavior variable in the model is defined as the way individuals perceive and measure the situation, conditions, and as a state of perceiving and measuring people (Ajzen & Fishbein, 1997). The subjective norm variable, on the other hand, is related to the approval and support of the behavior by the people whom individuals take as reference. The knowledge, thoughts and discourses of the people taken as reference for the behavior affect the subjective

norm of individuals towards performing that behavior (Rutherford & DeVaney, 2009). The perceived behavioral control variable, which is included in the theory with Ajzen, is formed as a result of individuals' perceptions towards behaviors. It refers to the difficulty and ease that individuals perceive to perform the behavior. This concept is also affected by the conditions and resources that individuals have for behavior. These resources can be multiplied as received trainings, mental and physical conditions, beliefs, and circumstances. (Ajzen 1991). The concept of intention is explained as the motivations that individuals have at the point of performing behaviors. The stronger the intention of individuals, the more likely they are to perform the behavior (Conner & Armitage, 1988).

Geographical Indication (GI)

The concept of GI is a registration system that offers the origin information of products to consumers and has emerged to protect the rights of producers. With this registration system, it is aimed to clearly show that the characteristics of the products are provided by the origin of the products and to prevent the production of counterfeit products by protecting local products. In this way, consumers are assured of the authenticity and quality of the products and the rights of the producers are protected. GI is divided into groups as Protected Geographical Indications (PGI), Protected Designation of Origin (PDO) and Speciality Guaranteed Products (Türkpatent, 2021). PGI is the registration given to the products obtained by realizing at least one of the production, processing and other necessary processes of the products that take their characteristics from a region whose borders are determined. PDO, on the other hand, is the type of registration used for the products obtained within the region with defined borders, after the production and processing stages are carried out within those borders (Kızıltepe, 2005). Speciality Guaranteed Products registration does not include geographical borders. In order for a product to obtain this type of registration, it must be proven that it has been traditionally known and used with the same name for at least 30 years in the relevant

area (Türkpatent, 2021). Registered GI and the names of these registrations show semantic differences in other countries (Tepe, 2008).

Looking at the historical process of GI, it is seen that many international conventions have emerged to protect products in various fields and the scope of these protections has increased over time. The most comprehensive agreement where registered GI is conveyed and its conditions are clearly stated is the "Agreement on Trade-Related Intellectual Property Rights of April 15, 1994" (TRIPS). Turkey is one of the parties to the TRIPS agreement. This convention clearly states that GI are part of intellectual industrial property rights (Yıldız, 2008). When the development processes of GI for Turkey are analyzed, it is seen that Turkey is a party to most of the international conventions in this field. In addition, the "Decree Law No. 555 on the Protection of GI" was adopted and put into force by Turkey and the necessary regulations regarding the registered GI processes were officially provided (Gürsu, 2008).

GI create a different market area by providing added value to products and provide economic benefits to countries. Registered GI food products create touristic attraction to the regions they belong to and create opportunities to support the development of the regions. For this reason, it has become an important issue to protect and transfer local products to future generations through registration (Yıldız Coşkun, 2001). In their study, Hoang et al. (2020) took Cao Phong Orange as an example of the economic contribution of GI to countries. With the registration of this type of orange, which was identified as a potential product, the demand for the product was increased by creating a different market area for the product and carrying out various promotional activities, and in this way, it contributed to the increase in employment opportunities for producers.

By marketing local food products in the areas where they originate, tourists can experience the products by seeing and tasting them in the regions where they are grown. In addition, it has been determined that it is possible to deliver the products to anywhere in the world by paying the financial compensation for the labor of the people who produce the products. In regions where local

food products are considered as tourism products, it has been observed that these products contribute to the economic development of the regions (Akdemir & Selçuk, 2018). It is known that the points known for local food products have a high potential to be visited by people for touristic purposes. It is known that foods grown and served in the lands where they belong with traditional methods create attraction points for tourists in these regions where they are grown (Polat, 2017). The geographical indication system, which emerged to protect the rights of local products and producers, is an important factor in promoting the culinary cultures of destinations and transferring these values to future generations (Hazarhun & Tepeci, 2018).

Table 1. Distribution of Registered GI Food Products by Groups

Processed and unprocessed fruits, vegetables and mushrooms	178	Butter, fats and oils	12
Meals and soups	133	Beers and spirits	10
Bakery and pastry products, pastries, desserts	104	Non-alcoholic drinks	7
Chocolate, confectionery and confectionery type of products	33	Dairy products other than cheeses and butter	6
Cheeses	21	Seasonings/ flavorings, sauces and food grade salt	5
Processed and raw meat products	14	Ice creams and edible ices	4
Honey	13	Other products	16
Total			556

Table 1, an analysis of Turkey's products with registered GI on March 1, 2021 shows that there are 675 registered products in all product groups. When the food and beverage groups in the field of food are analyzed, it is determined that there are 556 products in total. It is determined that the group with the highest number of registrations among food products is processed and unprocessed fruits and vegetables and mushrooms group with 178 products. When the other products group is analyzed; Isparta Rose Oil, Isparta Rose, Konuralp Rice, Bolu Kırıscık Rice, Kastamonu Siyez Wheat, Kastamonu Siyez Bulgur, Tosya Rice, Kangal Sheep, Van Breakfast, Antep Menengiç Coffee, Antep Firiği, Antep Bulgur, Karacadağ

Rice, Mardin Bulgur, İpsala Rice, Bilecik Hops, a total of 16 products are included in this list. In addition, there are 7 registered food products in the registered GI Turkey list.

The highest number of registered GI with GIs in Turkey is in the Black Sea Region (109) on the basis of region and Gaziantep (35) on the basis of province. The provinces with no registered GI food products are Istanbul and Yalova.

Research Model and Hypotheses

The model of the research was formed within the framework of the Theory of Planned Behavior and hypotheses were established in line with the model.

H1: Kitchen staff's perceptions of familiarity with GI food products are statistically significant in explaining behavioral factors towards GI food products.

H2: Kitchen staff's perception of familiarity with GI food products is statistically significant in explaining their intention to use GI food products.

H3: Kitchen staff's attitudes towards using GI food products are statistically significant in explaining their intention to use GI food products.

H4: Kitchen staff's subjective norms towards using GI products are statistically significant in explaining their intention to use GI products.

H5: Kitchen staff's perceived behavioral control towards using GI food products is statistically significant in explaining their intention to use GI food products.

H6: There is a significant difference between the accommodation class in which kitchen staff work and their intention to use GI food products

H7: There is a significant difference between the position of kitchen staff and their intention to use GI food products.

In addition to the variables in the Theory of Planned Behavior, the perception of familiarity created by GI food products was added to this research model. When the concept of familiarity perception is examined, the definition of familiarity is explained as people easily recognize, know and perceive situations, objects or people (Dural & Köseoğlu, 2019). The perception of familiarity created by foods with GI is considered as the knowledge of kitchen staff about registered

products, having encountered and worked with the products before.

In the model created, the intention to use GI products is included as the dependent variable, while the perception of familiarity created by GI products, attitude, subjective norm and perceived behavioral control are determined as independent variables. The Research Model is presented in Figure 2.

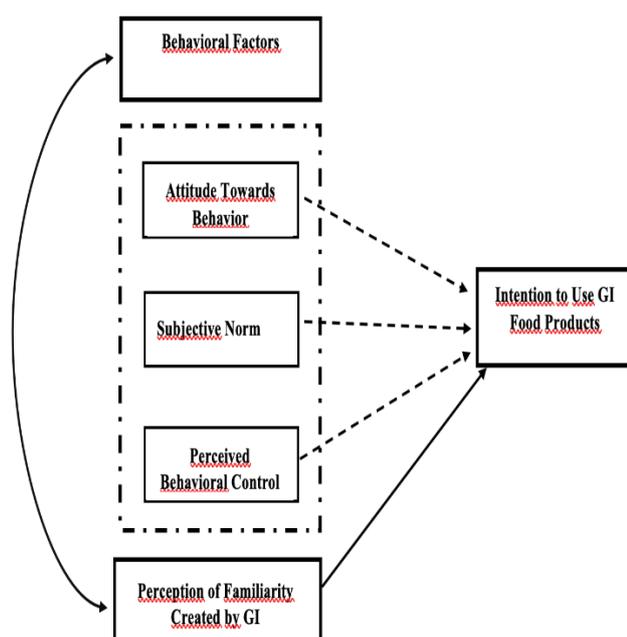


Figure 2. Research Model

Methods

For the purpose of this study, a descriptive survey model was adopted. In survey studies, it is expected to reveal the demographic characteristics of the participants as well as their thoughts and attitudes towards the event and situation. In survey models, it is possible to observe the situation that existed in the past or present (Karasar, 2012; Mazlum & Atalay, 2017).

Sample of the Study

The research population was determined as the personnel working in the kitchen department responsible for food production in hotels operating in Istanbul. Since it is not possible to reach the entire population within the limits of the research, the sample group, which is assumed to represent

the research population in the most accurate way, was determined. The sample of the research was determined as the kitchen staff of 4- and 5-star hotels operating in Istanbul. The reason for this is that since 4- and 5-star hotels host people from many different cultures, the data of the menu contents and kitchen staff will reveal a much clearer picture of the awareness and usage rates of GI food products.

According to July 2020 data, there are 139 5-star hotels and 169 4-star hotels in Istanbul (Ministry of Culture and Tourism 2020). At the time of the fieldwork, due to the Covid-19 pandemic, many hotels either closed down or reduced the number of personnel. For this reason, no clear information on the number of staff could be reached.

Data Collection

The quantitative method was used in the study and the data were obtained through a questionnaire. In the first part of the questionnaire form consisting of two parts, there are questions about the demographic characteristics of the participants such as gender, marital status, age, education level, income level, position, working time in the profession and the class of the business they work in. In addition to demographic characteristics, there are 3 questions about the inclusion of GI food products in the menu contents of the enterprises they work in. The second part of the questionnaire form includes a 33-item questionnaire scale taken from Ülker's (2017) master's thesis. The "local food expression" in the study from which the scale was taken was changed to GI food products in accordance with the study. While Ülker's scale includes a 5-point Likert-type rating, "No Opinion" was added to the scale for this study.

In the data collection process, a pilot study was conducted with 30 participants on December 1-15, 2020. Afterwards, the questionnaire form was administered both through "Google Forms" and face-to-face by the researcher in February-March 2021 and all data were collected. In total, 430 participants were reached. With the removal of incorrect and incomplete questionnaire forms from the study, 423 participant questionnaires were subjected to analysis.

Data Source

The hypotheses formed within the framework of the research model were analyzed in the Statistical Program for Social Sciences (SPSS). In Ülker's (2017) study, from which the scale used to collect the research data was taken, the scale items consisted of 6 dimensions with statements measuring positive and negative attitude, subjective norm, perceived behavioral control, intention and familiarity variables, while in this study, the positive and negative attitude dimensions were considered only as attitude as in the Theory of Planned Behavior model and the data were evaluated in 5 dimensions. In the data analysis process, in addition to simple linear regression and multiple regression analyses, difference tests were performed for the hypotheses deemed appropriate. The ethics committee permission required for the collection of the data used in this study was obtained from Kocaeli University Ethics Committee on 20/12/2020 with the decision number 2020/15 and decision number 8.

Findings

When the information on the participants' gender, age, marital status, educational status, monthly income levels, business class, position and working hours are analyzed, it is seen that the majority of the participants are between the ages of 25-34 (29.6 percent). When the gender distribution rates are analyzed, it is seen that there are 257 male and 166 female participants, and the majority of the marital status distribution is single (52.0 percent). In the educational status of the participants, it is seen that the level of associate degree (32.9 percent) is high, and in the distribution of monthly income, the majority is between 2501-5000 TL (42.1 percent). It was observed that the majority of the enterprises they work in are 5-star enterprises (53.9 percent) and the Other option (61.0 percent) is the leading position. The answers given to the Other option are Sous Chef, Junior Sous Chef, Commis Chef, Demi Chef, Pastry Chef, Staff Cook, Butchery Chef, Chocolate Chef and Kitchen Employees. When the working years of the participants are

analyzed, it is seen that they are in the range of 6-10 years (34.5 percent).

Table 2. Findings on the Inclusion of GI Food Products in Menus

Do you include food products with GI in the 1078 menu of the hotel you work in?		
Variables	Frequency	%
Yes	261	61,7
No	162	38,3
Total	423	100

Table 2 shows that, the majority of the participants (61.7 percent) answered yes to the question "Are there GI food products on the menu of the hotels where you work?". In addition, 51.5 percent of the participants answered yes to the question.

Table 3. Findings on the Reasons for Not Preferring GI Food Products

For which of the following reasons do you not use products with GI in the menu of the hotels where you work? (You can check more than one option.)		
Variables	Frequency	%
Cost	123	15,6
Governance	112	14,2
Supply Difficulty	95	12,1
Seasonality of Products	87	11,0
Dislike of Products	39	4,9
Product Quality	48	6,1
Waste rates	29	3,7

Table 3 shows that, in this question, which accepts more than one answer, the total sample size is high. When the results are analyzed, it is seen that 123 (15.6%) of the participants who did not include GI food products in their menus stated Cost as the most common reason for this. After the cost of the products, Management was stated by 112 (14.2%) participants at the highest rate. Waste rates are at the bottom of the list with 29 (3.7%) respondents.

Table 4. Simple Linear Regression Analysis (H1)

R	R ²	Adjusted R ²	ANOVA F Value	ANOVA Level of Significance	Durbin-Watson
,712	,507	,506	432,577	0,000	1,895
Model			Non-Standardized Coefficients	Standardized Coefficients	Level of Significance

	B	Stand ard Error	Beta		
(fixed)	1,390	,081	-	17,246	,000
Perception of Familiarity Created by GI Food Products	,522	,025	,712	20,798	,000

Table 4 shows that, when the simple linear regression results for H1 are examined, it is seen that the power of the perception of familiarity created by GI food products on explaining behavioral factors is 50.2 percent with an R2 value of ,507. When the findings regarding the coefficients are considered, it is concluded that the H1 hypothesis is confirmed with a significance value of ,000.

Table 5. Simple Linear Regression Analysis (H2)

R	R ²	Adjusted R2	ANOVA F Value	ANOVA Level of Significance	Durbin- Watson
,751	,564	,563	545,144	0,000	1,767
Model		Non-Standardized Coefficients	Standardized Coefficients	t	Level of Significance
(fixed)		B	Stand ard Error	Beta	
		,855	,099	-	8,620
Perception of Familiarity Created by GI Food Products		,721	,031	,751	23,348

Table 5 shows that, The results of the simple linear regression for H2 show that the power of the perception of familiarity created by the GI food products on explaining the intention to use GI food products is 56.4 percent with an R2 value of ,564. When the findings related to the coefficients are analyzed, it is concluded that the H2 hypothesis is confirmed with a significance value of ,000.

Table 6. Multiple Linear Regression Analysis (H3, H4, H5)

R	R ²	Adjusted R2	ANOVA F Value	ANOVA Level of Significance	Durbin- Watson

Model	Non-Standardized Coefficients	Standardized Coefficients	t	Level of Significance	VIF
(fixed)	B	Stand ard Error	Beta		
Attitude	,090	,118	-	,764	-
Subjective Norm	,208	,061	,158	3,391	,001
Perceived Behavioral Control	,532	,047	,494	11,217	,000
	,261	,050	,237	5,262	,000

Table 6 shows that, the results of the multiple linear regression analysis conducted for H3, H4 and H5 show that the power of the independent variables of attitude, subjective norm and perceived behavioral control variables in explaining the intention to use GI food products is 65.4 percent with an R2 value of ,654. Since the VIF values are below 10 and the significance values are less than 0.05 in all dimensions, it is concluded that the hypotheses H2, H3 and H4 are confirmed. In addition, when Beta values are analyzed, it is seen that the subjective norm variable affects the intention to use GI food products at the highest rate (.494).

Table 7. Comparison of Intention to Use GI Food Products and Business Classification Variable by t-Test

Intention to Use GI Food Products	Business Classification	Number of Participants (n)	Mean	t Value	P Significance Value
	4 star	195	3,086	2,301	0,022
	5 star	228	2,775		
			6		

Table 7 shows that, Since Levene's test result was $p=0.014$; $p>0.05$, it was accepted that the variance distribution was not homogeneous. For this reason, average values were taken as basis. It has been concluded that 4 star hotels have a higher rate of using GI food products than 5 star hotels with an average of 3,0863. According to this result, "H6 hypothesis is accepted".

Table 8. Comparison of the Intention to Use GI Food Products with the Position of the Participants, Anova Test

Intention to Use GI Food Products	Position	Number of Participants (n)	Mean	P Significance Value
	Chef de Cuisine	40	1,9708	0,000
	Assistant Chef	43	2,6977	
	Chef de partie	82	3,0671	
	Other	258	3,0556	

In table 8, since the result of Levene's test for equality of variance distribution of the groups was $p=0.087$; $p>0.05$, it was concluded that one-way analysis of variance could be performed. Since the difference in the number of participants between the sample groups was high, Scheffe, one of the Post Hoc analyzes, was used. Since the significance value of the one-way ANOVA analysis was $p=0.000$; $p>0.05$, hypothesis H7 was accepted.

Conclusion and Discussion

Today, consumers' awareness of food products with GI is increasing. As of March 1, 2021, 556 (82.4%) of the 675 registered GI in Turkey are food products. In this context, it is important to prefer these products, which are numerically high. One of the important issues is that the use of these products in the kitchen menus of hotels that host international guests will contribute to the sustainability and promotion of the products. For this purpose, it is thought that it is very important to determine the intentions of the kitchen staff responsible for food production to use GI food products in the menus of the hotels where they work and to understand the strength of the factors affecting their intentions.

According to the findings of the study, it was observed that one third of the participants included GI food products in their menus. It was

determined that the majority of the participants who included registered products in their menus worked in 5-star hotels. The participants who did not include GI food products in their menus cited the cost of the products and management factors as reasons.

Another finding of the study is that the participants' perception of familiarity with GI food products directly affects their intention to use the products. Icek Ajzen revealed that intentions are the precursors of behaviors with the Theory of Planned Behavior. In this study, it was concluded that among the behavioral factors affecting the participants' intention to use GI products, the subjective norm variable had the highest effect. Based on this result, it can be said that kitchen staff care about the opinions and attitudes of the people they take as a reference about GI food products. In addition, it has been determined that the intention to use GI food products progresses in direct proportion with the participants' experience, knowledge and seniority in the profession. In this context, it is thought that the different chefs, people from different cultures, different kitchen concepts, the perspectives of the enterprises on culinary cultures, the budgets allocated to the kitchen department, the awareness gained through the contributions to one's personal and professional development in addition to all these, significantly affect his/her perspective on local products, the labor of producers and the promotion of his/her cuisine in the world during the professional experience process in which a cook progresses from the lowest seniority to the highest seniority in his/her culinary adventure. It is seen that the perspective of a cook working at the lowest seniority level on registered GI is not the same as that of a head chef. This awareness is gradually increasing from cooks working in lower positions to cooks working in higher positions.

In accordance with the findings of this study, recommendations for the sector are presented below:

The positive attitudes of kitchen staff towards the products, the fact that the people around them have worked with these products, their knowledge and awareness of the products lead them to use these products more.

It is a very important issue for businesses to provide kitchen staff with the opportunity to purchase and use GI food products and to allocate a budget in this regard, and it is thought to contribute to the solution of this problem.

It is seen that kitchen staff support producers by using GI food products. In this way, it helps the creation of new employment areas and the economic development of the region of geographical to which the products belong. It is understood how important the registration processes are for kitchen staff who want to reach quality products to meet with producers and to protect the labor of both parties.

The most important limitation of this research is that it was conducted during the Covid-19 pandemic. In this process, hotels either closed down or reduced their staff. For this reason, future studies can be conducted by reaching more kitchen staff over the same sample. In addition, the lack of GI food products in Istanbul is another limitation of this study. In the coming years, after there is a food product that is in the registration process and registered, it can be investigated by making comparisons with other provinces for kitchen staff in Istanbul. In addition, the intention of consumers staying in hotels to purchase GI food products can be investigated and recommendations can be presented by comparing the results with the results. Finally, the perspectives of purchasing departments in hotels towards GI food products can be investigated.

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RESEARCH ARTICLE

Personality, Organizational Climate and Therapeutic Factors of Group Dynamics¹

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Abstract

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This study aims to reveal how therapeutic factors of group dynamics are related to organizational climate and personality dimensions. These therapeutic factors are used to evaluate group strengths and limitations in clinical psychology (Yalom, 1995), and are now adapted to the field of organizational behavior. This adaptation aims to illuminate how an organization's psychological climate and its members' personality traits impact workplace socialization and team social interaction. As part of the research, the therapeutic factors scale (group dynamics inventory, GDI) (Phan et al., 2004), was introduced into the Turkish context, and the necessary validity analyses were carried out. The study was conducted with a sample of service sector employees working as a group (in teams) in Ankara. The research results indicate that group dynamics had a positive and significant link with personality types and organizational climate. As a result, a positive relation was discovered between altruism, which is a group dynamics inventory sub-dimension and these personality dimensions, extraversion, agreeableness, and stability. When the link between organizational climate and group dynamics was explored, a positive and substantial association was discovered. As a result of the analysis, a positive relationship was found between reward, standards, and structure, which are sub-dimensions of organizational climate, and altruism and cohesiveness, which are sub-dimension of group dynamics.

Keywords: Personality, Therapeutic Factors Of Group Dynamics, Organizational Climate

Öz

Bu çalışma, grup dinamiklerinin terapötik faktörlerinin örgüt iklimi ve kişilik tipleri tarafından nasıl etkilendiğini araştırır. Araştırma, hizmet sektöründe bir takım olarak çalışan bireylerden oluşan bir örnekleme içerir. Grup üyeliği ve grupta bulunmanın, insanların sosyal ve psikolojik ihtiyaçlarını karşılayarak terapötik etkiler yarattığı bilinmektedir (Yalom, 1995). Bu faktörler, grupların güçlü ve zayıf yönlerini değerlendirmek için kullanılır ve klinik psikoloji alanında yaygın olarak incelenir. Bu çalışma, bu faktörleri işyeri ortamına adapte ederek grup dinamiklerini terapötik açıdan incelemeyi ve kişilik tipleri ile örgütsel psikolojik iklimin bu dinamikler üzerindeki etkileşimini anlamayı amaçlamaktadır. Çalışma, hizmet sektöründe çalışanların kişilik tiplerini ve organizasyonlarındaki psikolojik iklimi ölçerek, grup dinamiklerinin bu iki faktör tarafından nasıl etkilendiğini gösterme fırsatı sunmaktadır. Terapötik faktörler ölçeği (Phan et al., 2004) Türkçe 'ye uyarlanmış ve geçerlilik analizleri gerçekleştirilmiştir. Analizler, terapötik faktörler ile kişilik tipleri ve örgüt iklimi alt boyutları arasında pozitif bir ilişki olduğunu göstermektedir. Özellikle, dışadönüklük, uyum ve duygusal istikrar gibi kişilik özelliklerinin grup dinamiklerinin özgecilik gibi bir alt boyutu ile pozitif bir ilişkisi bulunmuştur. Örgüt iklimi ile grup dinamiği arasındaki ilişki de pozitif ve anlamlıdır. Özellikle, ödül, standartlar ve yapı gibi örgüt iklimi boyutları ile grup dinamikleri alt başlıklarından özgecilik ve bağlılık arasında pozitif bir ilişki tespit edilmiştir.

Anahtar Kelimeler: Kişilik Tipleri, Grup Dinamiğinin Terapötik Faktörleri, Örgütsel İklim

¹ This study is derived from the master's thesis by Naringul Mammadova, under supervision of Murat Ulubay, titled as "The Effect of Personality and Organizational Climate on Group Dynamics: A Research in the Service Sector" in the Department of Management and Organization, Social Sciences Institute, Ankara Yildirim Beyazit University.

Introduction

Organizations need to continuously develop their strategies in order to adapt to rapidly changing environmental factors, achieve their goals, ensure productivity and sustainability, and quickly adjust to the changing circumstances (Korkmaz, 2012). The significance of individuals, who are the building blocks organizations, cannot be overstated. Recognizing the working styles, skill levels, and personalities of each individual that contribute to and influence the organization is crucial for the success of organizations. Establishing a harmonious relationship between the abilities of individuals and the demands of the environment enables organizations to make logical decisions in personnel selection (Muchinsky, 1987). It is more critical to hire the right people and take action proactively, as there is little to gain from attempting to train individuals who are unsuitable for the job or lack the ability to learn (Schneider, 1968). For instance, Pervin (1968) suggests that a good fit between individuals and their environment contributes to high performance, satisfaction, and low stress levels. Another concept that is as important as selecting the right people for an organization is organizational climate. Organizational climate is perceived by employees and gives the organization a distinctive identity compared to other organizations. The psychological environment of the organization is called organizational climate. Organizational climate allows for the examination of human behavior under a general heading and plays a significant role in determining effective behaviors (Karcioğlu, 2010). Different workplaces, sectors, and environments exhibit differences in employee behavior. In accordance with these differences and definitions, the climate also varies based on the goals, environments, and work areas of organizations (Davidson M. M., 2001). The ability of organizations to create a healthy and positive organizational climate also affects the performance of its members. If employees accept and act in line with the goals of the organizations, it can be said that there is a positive climate in that organization (Korkmaz H., 2012).

The concept of a group emerges over time through repeated interactions based on shared goals, thoughts, and personal similarities (Çiçek I., 2018). Recognizing that humans are social beings and that living in groups is an unavoidable reality, organizations increasingly prioritize group success over individual success due to rapid changes and increasing competition in both internal and external environments. Working as a group often proves to be the most effective way to overcome challenges, increase productivity in production processes, and foster compatibility among group members (Dereli B., 2012; Forsyth D. R., 2010). The importance of selecting the right individuals for group formation is obvious, as it promotes trust, support, and effective communication within the group (Büyükgöz O., 2000). Ensuring the effectiveness of groups and accurately analyzing group dynamics has become essential for organizations to achieve success and continuity.

The study aims to examine how organizational climate and personality types influence the therapeutic effects of group dynamics. In this manuscript when we mention as a variable and outcome, the term "group dynamics" will be used as the short form of the expression "therapeutic factors of group dynamics". While there exists a substantial body of research on personality types, organizational climate, and group dynamics definitions, the role of therapeutic factors of group dynamics has received limited attention, with the exception of Phan et. al's 2004 study, based on our literature search. Therefore, it is crucial to gain a better understanding of how therapeutic factors contribute to intra-group interactions. Specifically, understanding the potential effects of promoting the emotional and mental well-being of employees on creating a healthier and more productive work environment is essential. This research seeks to fill this gap in the literature and aims to assist organizations in developing better management policies.

Yalom (1985) suggests that people's perceptions vary based on the type of group, stage of development, and individual differences. The research sample includes individuals from the service sector working in groups. Group dynamics will be explored with a specific focus on therapeutic factors, including altruism,

cohesiveness, and universality (Phan et al., 2004)). The level of analysis in the research is individuals within workgroups, and this analysis level is not at the team or organizational level. However, when measuring the organizational climate variable, a variable based on individuals' perceptions regarding the organization has been created. The study will measure therapeutic factors to determine their prevalence within each group, considering the influence of organizational climate and personality types. These factors are commonly used in clinical group studies and psychology. Adapting this study to the business field will help identify the relationship between personality types and therapeutic factors in analyzing group dynamics.

This study aims to examine how group dynamics are influenced by personality types and the organizational climate experienced by individuals in the service sector. By measuring the personality types and organizational climate of participants, we can understand human behaviors within the organization. The study provides a comprehensive understanding of organizational and group healing processes, highlighting the interaction between organizational climate and therapeutic elements (Johnson, 2006). Additionally, it helps organizations understand employee behavior, address challenges, and create a healthy atmosphere that influences the organizational climate (Ogrodniczuk, 2003). This research is expected to guide organizations in achieving effectiveness, continuity, and efficiency by exploring the relationships between personality and organizational climate.

Finally, the purpose of our study is to explore the conditions for creating a healthy group environment for individuals who spend a significant amount of their lives in the workplace. Creating a therapeutic group environment promotes compatibility over time (Forsyth D. R., 2010). This research not only serves as a guide for companies but also has the potential to positively impact individuals personally, leading to positive outcomes in both their professional and personal lives.

Table 1. General Hypotheses of the study

Hypothesis 1	There is a positive relationship between personality types such as extraversion, agreeableness, openness to experience, emotional stability, consciousness and dimensions of group dynamics such as altruism, cohesion and universality.
Hypothesis 2.1	There is a positive relationship between organizational climate dimensions such as, structure, rewards, support, standards, etc., and overall group dynamics score.
Hypothesis 2.1	There is a positive relationship between overall organizational climate and dimensions of group dynamics such as altruism, cohesion and universality.

These hypotheses in Table 1, can be grounded in social identity theory, which explores how and when individuals define themselves as group members (Stephen P. Robbins, 2013). It focuses on the characteristics that emphasize group similarities and differences (Tajfel, 1986). In this context, when individuals share similar values and traits in a group, their identification levels are high. In essence, coherent personality types impact group participation and identity formation. Moreover, when we consider this theory together with the construct of organizational climate, we recognize that organizational climate is seen as an important factor in creating group identity. A good organizational climate plays an effective role in creating group identity among employees and can shape group dynamics.

Due to the large number of possible combinations between sub-dimensions of the dependent variables (personality and organizational climate) and GDI, all possible hypotheses among sub-variables is not listed but they are exhaustively analyzed and checked in the SEM and separate correlation analyses. The ones with theoretical and practical significance has been reported (see Table 9 and Table 11) and discussed when they are rejected or accepted in the findings and conclusion/discussion sections. Some of the sub-hypotheses (the pairing of indices of sub-hypotheses with dimensions are shown in Figure 1) in this regard can be exemplified as follows:

H1.5.3.3: There is a positive relationship between openness to experience and universality.

H2.5.3: There is a positive relationship between support dimension of organizational climate and group dynamics.

H2.2.3.3 There is a positive relationship between overall organizational climate and universality dimension of group dynamics.

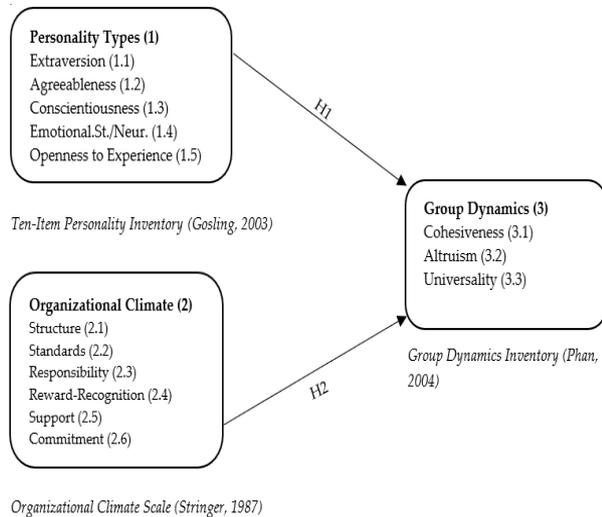


Figure 1. Research Model

Conceptual Framework

Definition of Personality

The concept of personality is a complex and extensively studied topic in various fields. It does not have a universal definition, which presents challenges in explaining it (Fazeli, 2012). Throughout history, personality has been explored through spiritual beliefs, philosophy, and psychology, dating back to ancient Greek times (Davidson R. J., 2006). The term "personality" itself originates from the Greek word "persona," which referred to the masks worn by actors in classical Greek theater (Kelland, 2015).

Big-Five and Personality Traits

The Big Five personality model is a psychological model that combines the concept of personality with five different dimensions. These dimensions are extraversion, emotional stability/neuroticism, agreeableness, openness to experience, and conscientiousness (Costa, 1992).

Organizational Climate and Dimensions

Organizational climate is the psychological atmosphere and distinct set of characteristics that vary across organizations, and shape employees' employee perceptions and behaviors (Drexler, 1977; Bülbül, 2018). It is the collection of individual, organizational, and environmental characteristics that give an organization its distinct character and influence how employees perceive and behave within it.

Organizational climate dimensions encompass the variables that contribute to the development of organizational climate, allowing researchers to examine multiple dimensions of organizational behavior under a single concept (Schneider, 1972). The following dimensions, proposed by Litwin and Stringer, provide a brief overview of the organizational climate:

Table 2. Organizational Climate Dimensions

Dimension	Description
Organizational Structure	Rules, procedures, and regulations shaping the organization (Ahmad, 2018).
Responsibility	Degree of accountability and task prioritization (Hulusi Doğan, 2009).
Support	Climate of trust, mutual support, and attachment motivation (Ahmet Mumcu, 2021).
Rewards and Penalties	Bonuses, consequences, and their impact on achievement and attachment motivation (Ahmad, 2018).
Standards	Pressure to perform at high standards, fostering a sense of pride.
Organizational Commitment	Dedication to organizational goals and pride in association (Mumcu, 2021).
Risk Taking	Encouragement for innovation and risk-taking (Akpulat, 2019).
Organization Adoption	Valuing the organization, belief, willingness to work, and intention to continue (Çise, 2009).
Conflict	Disagreements, interpersonal incompatibility, and effects on organizations (Ogrodniczuk, 2003).

Definition of Group Dynamics

Interaction occurs whenever people are present. The concept of group dynamics in the field of organizational behavior aims to describe the nature of groups, how they grow, and how they interact with each other and with other groups and, institutions (Dorwin Cartwright, 1968). It is a concept that describes how the group is organized

and managed (Dereli B., 2012). Group dynamics is defined as the power that arises from the interaction between an individual and the social group to which they feel they belong. (Muhammed Zincirli, 2021). Group dynamics also describes how members of the group as well as the group's structure respond to changes in any aspect of the group (Eren, 2001).

Kurt Lewin had a significant impact on the emergence of the concept of group dynamics. Lewin believed that groups were dynamic and powerful entities that had the power to influence individuals and society (Dereli B., 2012).

Therapeutic Factors

The definition of therapeutic is "curative." In a specific sense, the word means the capacity of treating a mental illness. The human environment can also be regarded as therapeutic. The environment can make the person feel comfortable and have a healing effect.

In psychology, the word therapeutic is often used by therapists and rehabilitation centers. The goal of therapeutic communication is to create an atmosphere where the patient feels heard, understood, and comfortable expressing his feelings and thoughts to the therapist. When there is a therapeutic relationship present and the patient and therapist's opinions and attitudes are in conversation, the environment is democratic.

Although therapeutic elements are effective in all forms of therapy groups, the ways in which they interact and are measured can vary greatly from group to group. Furthermore, due to individual differences, members of the same group may benefit from quite different combinations of therapeutic elements (Yalom, 2018).

Yalom's (1995), extensive analysis of therapeutic elements highlighted the complicated process of therapeutic development and how human experiences interacted in a group environment. Creating an effective therapeutic environment inside groups necessitates paying attention not just to the therapeutic growth of individual client members, but also to the group's overall development (Burlingame, 2001). In environments where the therapeutic environment is created, people's motivation for change increases.

Individuals are more comfortable taking risks and there is high satisfaction and closeness in group work (Widra, 1987).

According to Yalom's study, there are 11 types of therapeutic factors. These; instilling hope, universality, knowledge transfer, altruism, restorative repetition are of the first group, development of socialization techniques, imitative behavior, interpersonal learning, group cohesion, catharsis, and existential factors are the remaining ones. In this study, we mainly focus on three of them. Which are; group cohesion, altruism, and universality following Phan et. al, (2004), as they found these three factors have a more curative effect in group work.

Universality: Every person thinks and feels that only he/she experiences the problems. Although the reasons are different, similar problems are experienced by others. The person participating in the therapy group will realize that they are not alone when they perceive their similarities with others. This revelation fosters transition to a mental state where they feel more connected with the sense of similarity of their deepest concerns and profound feelings of acceptance (Phan et al., 2004, p.236).

Altruism: People want to feel needed and useful (Yalom, 2018). The willingness to give without expectation is itself a healing factor. Members of therapy groups aim to raise the altruism level by accepting gifts and giving them to the other person.

Group Cohesiveness: Cohesion is the quality of relationships that form among group members (Ogrodniczuk, 2003). Individuals feel like they are part of the same team when there is a commitment among the group members. Early adaptation can also be linked to a group member's ability to deal with disagreement, which occurs often during the beginning phase of group therapy (MacKenzie, 1994). Participation is higher in cohesive groups. In cohesive groups, people are more willing to take risks, open themselves up and help each other.

Therapeutic Factors, Personality, Organizational Climate

Therapeutic elements, we believe, are relevant not just in clinical groups but also in organizational contexts. Therapeutic aspects will promote employee happiness in the workplace. As a consequence, enterprises will benefit and a healthy work environment will be created. For these reasons, we adapt the notion of therapeutic factors to the work environment in our study.

Altruism, cohesiveness, and universality, which we have briefly mentioned above, will be discussed in broader definitions by associating them with the concept of personality in this section. People want to feel needed and useful (Yalom I. D., 2018). This explains the idea of altruism. Altruism is first and foremost the selfless use of one's resources for the benefit of others (Furnham A., 2016). Another definition of altruism is "the act of assisting others without regard for one's own self-interest." (Argan M., 2017).

An important factor underlying altruistic behavior is personality traits (Argan M., 2017). In his research, Bekkers (2006), hypothesized that those with an openness and extrovert personality are more altruistic. This can be explained by the fact that extroverts tend to be more successful at forming social connections. Additionally, Bekker (2006) demonstrated a positive relationship between matching personality type and blood and organ donation. In his study, Batson (1986) was unable to discover any connection between personality traits and altruistic attitudes. It was found to be related to the motivation to help, but it was seen that this motivation was made with selfish feelings. Oda (2014), investigated the relationship between the Big Five personality traits and altruistic behaviors and suggested in his study that altruism contributes to individual differences. Oda (2014), suggested that, like Bekkers (2006), extroverted personality traits contribute to altruism. But other personality traits differed according to the recipient. The agreeable personality trait, for instance, only increased altruism toward friends, and openness only increased altruism toward strangers (Oda, 2014). As a result of this situation, as we can see, the reason for altruistic behavior differs depending on

the connection between the actors and the receivers.

Argan (2017), aimed to examine whether different personality traits can be distinguished in terms of altruistic behavior and whether personality traits affect altruistic behavior. According to this study, a person's personality characteristics have an impact on his or her altruistic behavior. The study's findings include the following: Extroverts were shown to have higher altruistic values. In addition, the altruistic values increased along with the person's compatibility dimension. Furthermore, differences were found between neurotic personality dimensions in terms of altruistic value levels (Argan M., 2017). However, it must be noted that, the question of what kind of personality types and traits predict altruistic behaviour is not a concern of this study. Rather, whether members in a workgroup feel themselves altruistic against others, in certain conditions, is the main focus point.

Cohesiveness pertains to the perception of the group for members about how much the group is unified. In a way, cohesion is the formation of a "we" concept for groups. Group cohesion is not a therapeutic strategy in and of itself, but it is required for other therapeutic variables to operate (Yalom, 2018). One of the biggest characteristics of fixed groups is the high level of cohesion among group members. These sorts of groups have greater rates of involvement, persistence, and mutual support, and the group regards its standards as higher than less cohesive groups (Yalom, 2018). In group psychotherapy, the term "cohesiveness" refers to the therapeutic relationship that results from the interaction of member-leader, member-member, and member-group ties. (Burlingame, 2001). The concept of cohesiveness in group psychotherapy leads to positive results for patients such as improved self-perception (Budman, 1989). Members of a group take required risks and achieve inner discoveries as the group grows more cohesive (Burlingame, 2002). However, the attraction people feel towards the groups they belong to is different for each member. This shows that cohesiveness is not stable.

Many people think they are the only ones with unacceptable problems, thoughts, and impulses.

The sense of uniqueness affects one's life by dominating one's life. After the person's participation in a group and communication, expresses his/her feelings more and provides integrity after hearing the concerns of other members of the group with similar experiences. People obtain the most acceptance from other members when they identify their similarities to others and communicate their innermost problems (Yalom, 2018). As a result, the fact of universality or "we are all in the same boat" is important for individuals and groups. Universality is a concept that helps a person to feel part of a whole, to understand that many people have problems, and to realize that they are not alone. Universality, like other therapeutic elements, has no defined borders; it interacts with other therapeutic factors (Yalom, 1995).

The purpose of research on organizational climate is to determine the factors that influence employees' organizational behavior, and to determine the organizational behaviors for certain purposes. The appropriate organizational climate is seen as a significant resource in guaranteeing employees' mental wellness (Askari, 2017). When employee behaviors are examined in environments where the organizational climate is negative, employees have been reported to be unwilling to provide knowledge or admit their faults (Obel, 2004). Ogrodniczuk (2003), emphasizes the importance of therapeutic factors and the importance of applying the therapeutic environment to workplaces in order to create a healthy workplace environment.

There is a scarcity of research on the link between group atmosphere and therapeutic elements. Organizational climate is only associated with the concept of cohesion in the current literature. The concept of cohesion is considered an organizational climate dimension. Accordingly, in a climate of commitment, employees adopt the organization and its goals with a sense of loyalty, and this situation is perceived by the employees in the organization in a common way (Mumcu, 2021). Group cohesiveness is described as a sense of belonging to a group, whereas group climate is an indication of group members' impressions of the therapeutic environment of the group (Johnson, 2006).

When existing studies are examined, there is a scarcity of research regarding relationship between therapeutic factors and personality and organizational climate. This study aims to address this gap.

Methodology

The research was conducted using a questionnaire as the primary data collection tool. The participants were employees working in the service sector in Ankara, especially those who work physically, face to face, and as a group. The selected individuals were those who work in the same shifts. The research method involved face-to-face interviews along with the questionnaire. Convenience sampling method has been used as the sampling method, however, by conducting a survey in at least 3 different organizations, it has been ensured that the relationship between the variation in the organizational climate variable and other variables can be observed.

Our research design includes a correlational pattern. Correlational research includes studies that examine the relationship between variables within a group and often provides insights into the probability of causality between variables (Büyüköztürk, 2012). A correlational pattern allows us to examine the relationship between personality types and organizational climate variables and group dynamics.

Great care was taken to ensure that the questionnaire questions were clear and understandable. The statistical analysis demonstrated validity, indicating that the applied questionnaires accurately measured the intended features without mixing them with other factors. The reliability of the questionnaires was also high, with consistent responses among individuals.

Out of the total participants, 156 (49.8%) were female, and 157 (50.2%) were male. The gender distribution was almost equal. The survey was conducted with a total of 313 participants, and the sample size was calculated with a confidence level of 90%, a standard deviation of 5%, and a 5% margin of error. The sample size calculation was performed using the formula below, where Z is approximately 1.645 (David S. Moore, 2007). The

results of the calculation indicate that the sample size is sufficient

$$n = \frac{z^2 \sigma^2}{E^2} = \frac{1.645 \times 0.05^2}{0.05^2} = 2.70525 \quad n \approx 270$$

Regarding age distribution, 69 respondents (22.0%) fell in the 18-24 age range, 148 respondents (4 in the 25-34 age range, 47 respondents (15.0%) in the 35-44 age range, 33 respondents (10.5%) in the 45-54 age range, 12 (3.8%) in the 55-64 age range, and 4 respondents (1.3%) in the age range of 65 and above. The majority of participants belonged to the 25-34 age range.

In terms of education, 2 (0.6%) participants were primary school graduates, 48 (15.3%) had a high school education, 197 (63.3%) had a university degree, 54 (17.3%) had a master's degree, and 12 (3.8%) had other degrees. More than half of the participants had a university degree.

Measures

Personality Dimensions

Determining personality types, a short 10-item personality scale (TIPI) developed by Gosling (2003) and which had been previously translated into Turkish by Atak (2013) was used. The Ten-Item Personality Scale, developed by Gosling (2003), consists of 10 items, where each 2 items representing one of the five personality types. The primary aim of using this scale is to save time for researchers, although it is not expected to yield high alphas or provide a perfect fit due to its brief nature. The scale measures broad areas using only two items per dimension, covering both positive and negative aspects of each personality trait. The main focus is on-time efficiency in measurement. Our justification for using this short scale is based on the fact that our overall questionnaire was too long for the service sector employees who have limited time, attention and energy (A101, BIM workers, hotel workers, coffee-shop baristas and waiters) which were tired and time scarce. Due to the length of organizational climate scale which had 24, and GDI 20 items, in addition to demographic questions, using an alternative longer personality scale with an additional 50 questions (Costa's NEO has 240 items (Costa, 1992), shorter version has 60 items) for example,

would lower the quality of the responses. Gosling's [TIPI](#) (Gosling et. al, 2003) is developed and widely accepted in the literature as a result and necessity of similar situations.

Organizational Climate

The Organizational Climate scale was initially developed by Litwin and Stringer (1968) with 24 items. Later, Stringer (1987) conducted revision studies and identified 6 dimensions within the same 24-item scale. High scores on the scale indicate that employees have a positive perceptions of the organizational climate. The scale scoring can be done by separately calculating the sub-dimensions and the overall score.

Therapeutic Factors of Group Dynamics

Group dynamics will be discussed with Irvin D. Yalom's work which is about the therapeutic factors, group work, and groups. These factors are a model that experts use when making assessments about the limitations and strengths of groups. Group Dynamics Inventory (GDI), developed by Phan (2004), will measure group dynamics by including questions about three therapeutic factors (a) altruism, (b) universality (empathy/ approval/acceptance), and (c) group cohesiveness. There are 3 sub-dimensions of this 20-item scale.

Scale Validity and Findings

The validity and reliability of the scales used in the preliminary study were examined before transitioning to the main study. One of the three scales used was the Group Dynamics Scale, which had been adapted from English to Turkish. Adaptation and application of the scale to Turkish were carried out the authors of this study. The translation accuracy was tried to be assured by translating the scale from Turkish to English by experts in the field, and then from Turkish to English by people who did not see the questions. After final corrections of the wording of the items based on the evaluation of the translations, GDI was used for data collection. Explanatory and confirmatory factor analysis were conducted.

The results of the reliability analysis for the first two scales are presented in the table below in addition to GDI. As the Group Dynamics Scale was a newly adapted instrument, its details were also included in this study.

Table 3. Reliability Statistics

	Cronbach's Alpha	N of Item
Ten-Item Personality	,580	10
Organizational Climate	,695	24
Group Dynamics	,848	20

The reliability alpha score of TIPI in our study being 0,58 which is below generally accepted thresholds like 0.7 but the literature interprets such scores like ours as acceptable in the case of short scales, as the original research of Gossling showed low-to-moderate Cronbach's alphas ($\alpha = 0.40-0.68$) (Nunes et.al, 2018), and still a widely accepted and adopted scale and translated into 26 languages (several times for some languages). Gossling cites (Kline, 2000; Wood & Hampson, 2005) as "alphas are misleading when calculated on scales with small numbers of items" (Gossling, n.d.).

Group Dynamics Scale

The theoretical foundation of Group Dynamics Inventory (GDI) (Phan et al., 2004) is built on Yalom's (2005) therapeutic factors and specifically the dynamics of group cohesion, universality, and altruism. GDI consists of 20 items. There are 3 sub-dimensions of this 20-item scale.

The sub-dimensions of the Group Dynamics Scale are altruism, cohesiveness, and universality. In order, the question distributions are as follows; the first four questions in the survey measure altruism, while the next ten questions measure the cohesiveness dimension. While the last five remaining questions measure universality, there are no questions with the opposite item on the scale.

The suitability of the GDI scale for analysis was evaluated and factor analysis was applied. Before conducting the factor analysis, Kaiser Meyer Olkin

Sampling Adequacy Test and Barlett's Sphericity Test were performed for compliance with the factor analysis. The Kaiser-Meyer-Olkin (KMO) Test is used to determine the goodness of the data and suitability for factor analysis in the first stage of explanatory factor analysis. The fact that the measurement value found is close to 1 show that the data group is suitable for explanatory factor analysis (Öngen, 2010).

When the KMO and Barlet Test Table given in the table is examined, it is seen that the sample adequacy dimension is 0.836. The KMO sample adequacy criterion is a variable ranging from 0 to 1, and the result we obtained is quite sufficient for factor analysis.

In order for Bartlett's Sphericity Test result to be meaningful, the $p < 0.05$ condition must be met (Tabachnick, 2013). After analyzing the data, Sig.=0.000 means that the matrix formed by the relationships between the variables is meaningful for factor analysis and factor analysis can be performed.

Table 4. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,836
	Approx. Chi-Square	2406,707
Bartlett's Test of Sphericity	df	190
	Sig.	,000

As a result of the factor analysis, we applied for the scale of the research, three dimensions were obtained. When the rotated component matrix was examined to see under which factors these dimensions were collected, the variables GDIALT1, GDIALT5, GDICH1, GDICH6, GDICH8, GDICH9, and GDICH10 were excluded from the analysis.

The three factors resulting from the analysis explain 52% of the total variance. The analysis was valid when the total variances were greater than 50%. We can see that the Cronbach alpha value of the scale is 0.848.

Confirmatory Factor Analysis for GDI

The GDI scale we used in our study is a scale translated from English to Turkish. Exploratory factor analysis was primarily performed in order to reveal the underlying factor structure of the expressions representing the variables of this scale, which has been translated into another language (Yaşlıoğlu, 2017). In this way, the relations between the variables can be explained and a theoretical evaluation can be made.

After the EFA analysis, Confirmatory Factor Analysis was performed in order to understand whether the scale was suitable for the original factor structure. Confirmatory Factor Analysis is commonly used in scale development and validity analysis to verify a predetermined or constructed structure (Öngen, 2010).

The group climate values obtained as a result of the modifications made with the AMOS program are in the acceptable range and values shown in the Table.

Table 5. Group Dynamics Values

Criteria	Results	Acceptable Fit
CMIN/DF	2,312	CMIN/DF≤5
NFI	0,902	0.9≤NFI≤1.00
RFI	0,901	0.9≤RFI≤1.00
IFI	0,942	0.9≤IFI≤1.00
TLI	0,927	0.9≤TLI≤1.00
CFI	0,941	0.9≤CFI≤1.00
RMSEA	0,065	0.03≤CFI≤0.08

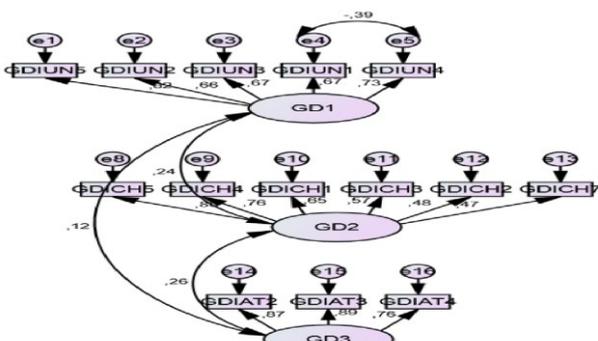


Figure 2. Confirmatory factor analysis results for Group Dynamics Inventory

Table 6. AVE and CR measurement for GDI

Dimensions	Items	Factor loadings	AVE	CR
Cohesion	GDICH1	0,65	0,4917	0,4917
	GDICH2	0,48		
	GDICH3	0,58		
	GDICH4	0,78		
	GDICH5	0,80		
Altruism	GDICH7	0,47	0,8454	0,9422
	GDIAT2	0,87		
	GDIAT3	0,89		
Universality	GDIAT4	0,76	0,6020	0,8133
	GDIUN1	0,67		
	GDIUN2	0,66		
	GDIUN3	0,67		
	GDIUN4	0,73		
	GDIUN5	0,82		

Research Model

As a result of the structural equation model analysis of this model, which we created while conducting our research, the suitability of the model could not be confirmed. Accordingly, we had to exclude personality types from the model. While evaluating personality types with correlation analysis, a structural equation model was applied between organizational climate and group dynamics. In addition, the relationship between organizational climate and group dynamics was evaluated by correlation analysis.

Findings

Structural Equation Model

This analysis method that we have combined independent regression or factor analyzes in a single analysis and looked at the relationship between them. How well the model explains the data obtained using SEM is determined by the goodness of fit indices. As a result of the values in the table, we see how much the model explains the data. Since the initial SEM analysis of the overall model did not produce satisfactory values to accept or support the research model, we have conducted correlation analysis between the each of the independent variables and our dependent variable. Additionally, SEM analyses conducted for confirmatory factor analysis to examine the validity of the organizational climate scale used. Subsequently a separate SEM for Organizational

climate and GDI provided us correlational information on how they were related.

Table 7. Group Dynamics Values

Criteria	Results	Acceptable Fit
CMIN/DF	2,896	CMIN/DF≤5
NFI	0,912	0.9≤NFI≤1.00
RFI	0,901	0.9≤RFI≤1.00
IFI	0,903	0.9≤IFI≤1.00
TLI	0,927	0.9≤TLI≤1.00
CFI	0,906	0.9≤CFI≤1.00
RMSEA	0,078	0.03≤CFI≤0.08

Confirmatory factor analysis results for Organizational Climate Inventory is as follows in Figure 3. As a result of the emerging model produced by SEM, there is a significant relationship between organizational climate dimensions reward, standards and structure and overall Group Dynamics variable.

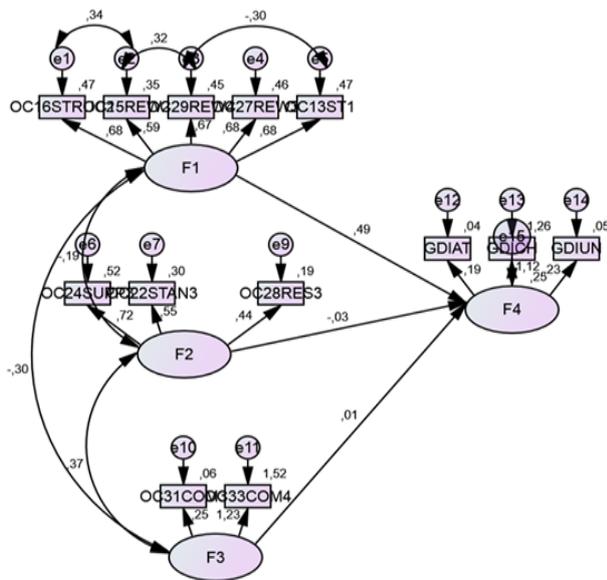


Figure 3 Confirmatory factor analysis results for Organizational Climate Inventory and GDI

These findings confirm the following respective sub-hypotheses of the H2 in Table1. Namely:

H2.1.3: There is a positive relationship between structure dimension of organizational climate and overall group dynamics.

H2.2.3: There is a positive relationship between standards dimension of organizational climate and overall group dynamics.

H2.4.3: There is a positive relationship between rewards dimension of organizational climate and overall group dynamics.

Organizational Climate and Group Dynamics Correlation Analysis Data show normal distribution (see Table 8). Therefore Pearson correlation analysis was utilized.

Table 8. Tests of Normality

	Statistic	df	Sig.
Organizational Climate	,040	313	,200*
Group Dynamics	,052	313	,051*

As a result of correlation analysis, a positive relationship was found between Organizational Climate and Group Dynamics (Altruism and Cohesion). However, no relationship was found between Organizational Climate and Universality.

Table 9. Correlations between overall Organizational Climate and GDI dimensions

		Altruism	Cohesion	Universality	Organizational Climate
Altruism	Pearson Correlation	1	,239**	,112*	,124*
	Sig. (2-tailed)		,000	,047	,028
Cohesion	Pearson Correlation	,239**	1	,240**	,447**
	Sig. (2-tailed)	,000		,000	,000
Universality	Pearson Correlation	,112*	,240**	1	-,083
	Sig. (2-tailed)	,047	,000		,144
Organizational Climate	Pearson Correlation	,124*	,447**	-,083	1
	Sig. (2-tailed)	,028	,000	,144	

These findings confirm the following respective sub-hypotheses of the H2 presented in Table1. Namely:

H2.3.1 There is a positive relationship between overall organizational climate and cohesiveness dimension of group dynamics.

H2.3.2 There is a positive relationship between overall organizational climate and altruism dimension of group dynamics.

Personality and Group Dynamics Correlation Analysis

For the "Personality Types Inventory", the average score of the five sub-dimensions of the scale "Extraversion", "Agreeableness", "Conscientiousness", "Neuroticism/Emotional Stability" and "Openness to Experience" scores were calculated separately and result of the applied normality test (Kolmogorov-Smirnov) and Sig values are $p < .05$. Data did not show a normal distribution (Table 10), we proceeded through the Spearman non-parametric test to check significance.

Table 10. Tests of Normality

	Statistic	Kolmogorov-Smirnov df	Sig.
Extraversion	,250	313	,000
Agreeableness	,217	313	,000
Conscientiousness	,281	313	,000
Emotional Stability	,142	313	,000
Openness to Experience	,146	313	,000

As indicated in Table 11, significant and positive relationships were found between personality types such as extraversion, agreeableness, and emotional stability.

Table 11. Correlations between Personality types and GDI dimensions

		Ext.	Agg.	Cons.	EmotS.	OpennE	Alt. Ch.	Un.
Spearman's rho	Ext. Correlation	1,000	,068	,211**	,253**	,133*	,112*	,030
	Coefficient							
	Sig. (2-tailed)	.	,230	,000	,000	,019	,048	,600
	Agg. Correlation	,068	1,000	,230**	,046	,261**	,147**	,047
	Coefficient							
	Sig. (2-tailed)	,230	.	,000	,415	,000	,009	,411
	Cons. Correlation	,211**	,230**	1,000	,100	,213**	,073	,041
	Coefficient							
	Sig. (2-tailed)	,000	,000	.	,076	,000	,200	,468
	EmotS. Correlation	,253**	,046	,100	1,000	,134*	,128**	-,063
Coefficient								
Sig. (2-tailed)	,000	,415	,076	.	,018	,024	,263	
OpennE. Correlation	,133*	,261**	,213**	,134*	1,000	,055	,021	
Coefficient								
Sig. (2-tailed)	,019	,000	,000	,018	.	,334	,717	

These findings confirm the following respective sub-hypotheses of H1 presented in Table 1. Namely:

H1.1.3.2: There is a positive relationship between extraversion and altruism dimension of group dynamics.

H1.2.3.2: There is a positive relationship between agreeableness and altruism dimension of group dynamics.

H1.4.3.2: There is a positive relationship between emotional stability and altruism dimension of group dynamics.

Conclusion and Discussion

This study addresses some fundamental issues that overlap with similar research in the literature, but it offers a unique perspective by examining group dynamics through the lens of therapeutic factors, highlighting their relation to organizational climate and personality types. This emphasis provides organizations with insights on how promoting the emotional and mental well-being of their employees can contribute to a healthier and more productive work environment. In light of the findings, we observe that both of the hypotheses have been confirmed.

Interactions in the group create group dynamics, in short, it is a state of dynamic balance that occurs as a result of interactions between people. The effort to re-establish this balance, which can be disrupted by any event, creates dynamism within the group (Dereli, 2012). As a result of any changes in this structure, there will be changes and imbalances in the structure of the group and among its members. In order to prevent this and to ensure harmony, it is possible to make evaluations according to the personalities of the people and to create a suitable group and to prevent problems that may arise in this direction. This is an important contribution of this research to attempt to find which personality traits contribute to which group dynamics dimension that has a therapeutic effect. When we examined the relationship between personality types and group dynamics, a positive and significant relationship was found between

extraversion, agreeableness, and emotional stability, and altruism which is one of the sub-dimensions of group dynamics. These results can be claimed to indicate that in a work group of members with the above personality traits, it's more reasonable to expect that the group dynamic of the team can create an altruistic therapeutic effect, where members feel needed and helpful to others, which in return benefits that member.

Individuals have a perception of the working environment as they spent time in the organization. The average of these perceptions constitutes the concept of organizational climate. Organizational climate refers to the psychological environment in relation to an organization. We suggest that the organizational climate, which is a concept that has an impact on the behavior of individuals, can also affect group dynamics. While considering the relationship of the organizational climate, which refers to a psychological state, with group dynamics, evaluations were made in terms of therapeutic factors. Therapeutic factors are a term used in the field of psychology and we suggested that when the relationship between organizational climate and group dynamics is explained, the relationship that emerges will also be meaningful, and as a result of this situation, it will provide an advantage for organizations when making assessing any situation in an organizational context.

One of the biggest reasons for evaluating group dynamics with therapeutic factors is the concept of the individual forming the organization. Physical injuries or diseases for people affect the person in the organization. However, organizations may ignore mental states when evaluating the situations of individuals. People spend most of their time at work. The positive atmosphere to be created in the workplaces will create positive effects for the employees as well as increase the productivity of the organizations. The positive atmosphere to be created within the group will provide reassurance, support, and help to people (Forsyth D. R., 2010). Having a group that will encourage the person in the face of situations that people cannot change on their own power make him more committed to that group, while his commitment and performance to the organization will increase. We suggest that this situation will

affect not only the business life of the person but also his private life in a positive way. Since a positive organizational climate reflects high cohesion, the participation and commitment of individuals to the group will increase in this direction (Ogrodniczuk, 2003). In this case, we see the relationship between organizational climate and therapeutic factors. A positive organizational climate makes people feel like members of a good team (Mumcu A., 2021). In line with the results we have obtained, it has been observed that the altruistic behaviors of individuals would also increase.

In our study a positive and significant relationship was found between organizational climate sub-dimensions, reward, structure, and standards, and altruism and universality as the sub-dimensions of GDI. This suggests that we can expect these therapeutic effects of altruism and universality for the team members when the reward, structure, and standards dimensions of organizational climate is provided. This may be due to the positive psychological environment that fair rewards, predictability and structure brings at the organizational level, also provides an environment in the group (team) level that mitigates the toxic effect of competition with co-workers, blaming each other in chaotic situations, which consequently enables the natural therapeutic outcomes of empathy and similarity with co-workers, they are not alone in their experiences and work/life issues (i.e. universality) and feeling the security of (providing and receiving) helping behavior, i.e. altruism.

In line with the results of the research, it was seen that we could not find personality trait(s) or organizational climate dimension(s) that supports cohesion dimension of GDI. This might be a task for further studies of replication of this novel research question and also may be due to a more general supporting nature of the notion of cohesion in comparison to altruism or universality. Cohesion itself a complex construct that contains both member's attraction to the group and the sense of unity and belongingness (Phan et al., 2004)). A more sophisticated, high resolution measurement tool for this dimension might be a future task for the next steps of this research perspective.

This study contributes to highlighting a human-centered approach in corporate management, which can encourage organizations to prioritize the emotional and mental well-being of their employees for increased efficiency. Drawing from these findings, important conceptual and practical implications can be derived for organizations and researchers. Firstly, organizations should shape their organizational climates positively by considering therapeutic factors, thereby influencing group dynamics in a positive way. For future studies, we recommend research focusing on how therapeutic factors can be further evaluated in organizational contexts and their potential benefits to organizations is crucial. This research has the potential to contribute to organizations adopting a more empathetic approach in human resource management. Organizations that prioritize the emotional and mental well-being of their employees can enhance employee commitment and productivity. Therefore, the widespread impact of this study lies in assisting organizations in reviewing their human resource policies and practices, ultimately promoting a more human-centered and therapeutic approach.

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RESEARCH ARTICLE

Blockchain and Market Dynamics: Correlation between Cryptocurrency Valuations and Market Interest Rates

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Abstract

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In this study, the five most well-known cryptocurrencies in the blockchain-based decentralized financing structure were compared with the centralized market interest rates, and it was examined whether there is a significant relationship between the changes in market interest rates and the prices of cryptocurrencies. Key findings indicate a significant relationship between most cryptocurrencies, such as Dash, Litecoin, Ethereum, and Bitcoin, with market interest rates. However, XRP emerges as an exception. In addition to the comparative analysis between cryptocurrencies and market interest rates, this study delves into the underlying mechanisms that govern these relationships. It explores the role of blockchain technology in shaping the decentralized financing structure and highlights the intricacies of various cryptographic algorithms. The research also emphasizes the need for specialized accounting practices that cater to the unique challenges posed by cryptocurrencies. This study bridges the understanding between conventional economic mechanisms and the innovative world of cryptocurrencies, offering inferences that are important for investors, financial analysts, and accountants in the digital age.

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Öz

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Bu çalışmada, blok zinciri tabanlı merkezi olmayan finansman yapısındaki en bilinen beş kripto para birimi, merkezi piyasa faiz oranları ile karşılaştırılmış ve piyasa faiz oranlarındaki değişimler ile kripto para birimlerinin fiyatları arasında anlamlı bir ilişki olup olmadığı incelenmiştir. Temel bulgular Dash, Litecoin, Ethereum ve Bitcoin gibi çoğu kripto para birimi ile piyasa faiz oranları arasında anlamlı bir ilişki olduğunu göstermektedir. Ancak XRP bir istisna olarak ortaya çıkmaktadır. Kripto para birimleri ve piyasa faiz oranları arasındaki karşılaştırmalı analize ek olarak, bu çalışma bu ilişkileri yöneten altta yatan mekanizmaları araştırmaktadır. Blok zinciri teknolojisinin merkezi olmayan finansman yapısını şekillendirmedeki rolünü araştırmakta ve çeşitli kriptografik algoritmaların inceliklerini vurgulamaktadır. Araştırma ayrıca kripto para birimlerinin yarattığı benzersiz zorlukları karşılayan özel muhasebe uygulamalarına duyulan ihtiyacı da vurgulamaktadır. Bu çalışma, geleneksel ekonomik mekanizmalar ile kripto paraların yenilikçi dünyası arasında bir köprü kurarak dijital çağda yatırımcılar, finansal analistler ve muhasebeciler için önemli çıkarımlar sunmaktadır.

Anahtar Kelimeler: Blok Zinciri, Piyasa Faiz Oranı, Finansal Muhasebe

Introduction

In the ever-evolving landscape of global finance, the emergence of cryptocurrencies has marked a paradigm shift. These digital assets, underpinned by blockchain technology, have not only introduced a new form of currency but have also challenged traditional financial systems. As cryptocurrencies like Bitcoin, Ethereum, and others gain traction, they inevitably intersect with established economic indicators, such as market interest rates, which have long been the barometers of a country's economic health and stability.

However, as the adoption of cryptocurrencies grows, so does the complexity of accounting for these digital assets. Cryptocurrency Accounting, a relatively nascent field, copes with challenges ranging from valuation to transaction verification. The decentralized nature of cryptocurrencies, coupled with their volatility, presents unique accounting challenges that traditional financial systems are not equipped to handle.

At the point where technology has become indispensable in human life, it is thought that cryptocurrencies will form the infrastructure of digital finance. Cryptocurrencies have recently reached a level that can almost compete with real currencies. The first generally accepted area of blockchain technology, which is not managed by any company, financial institution, government or bank and has a completely decentralized structure, was Bitcoin. The blockchain emerged in 2008 with an article published by Satoshi Nakamoto, whose real identity is unknown. The aim of this technology is "Peer-To-Peer" data transfer (Erdoğan & Bodur, 2020). Blockchain is a technology protocol that enables the exchange of data between two parties without the need for an intermediary and is realized anonymously with an encrypted identity between the parties (Yılmaz, 2021).

With the digitalization of capital, investment rates in money markets are increasing. Financial markets, where medium and long-term fund supply and demand are met, have started to be used effectively. Central bank monetary policies are used to maintain stable economic growth and price stability. The volatility of interest rates makes

investors uneasy and consumers hesitant to consume. Therefore, Central Banks have adopted the main objective of ensuring the stability of financial markets (Altuntaş, 2012). Interest rate is one of the main indicators of a country's economic stability and is the main tool of monetary policy. The price of giving up the current use of money is the most familiar definition of interest. However, it is not possible to talk about a single interest rate in economies. There are many interest rates in the economy, such as deposit rates, loan rates, central bank monetary policy rates, interbank money market rates, bond-bill rates and Libor rates (Kartal, 2019).

Changes in interest rates affect the overall economy. It also plays a decisive role in the entire economy. Interest rates fulfill many functions as the most influential variable of the economy (Demirgil & Türkay, 2017). Therefore, the factors affecting interest rates also gain importance.

Conceptual Framework

In this section, conceptual information about blockchain and market interest rates is presented.

Blockchain Technology

"Fundamental aspects of blockchain that emphasize its reliance on hashing techniques that support both cryptocurrency trading and smart contract implementation (Pierro, 2017) increase transparency in financial transactions and reduce information asymmetries. Karthik (2018) offers a perspective that characterizes blockchain as a decentralized distributed ledger where blocks are sequentially linked. The potential of blockchain in both financial and non-financial domains is explored in depth by Chatterjee & Chatterjee (2017). Junejo, Memon, Junejo, Talpur, and Memon (2020) delves deeper into the applications of blockchain, shedding light on current research trajectories, inherent limitations, and prospective future avenues. Collectively, these studies underscore the transformative potential of blockchain, suggesting its capacity to challenge conventional business models and decentralize the World Wide Web.

Cryptography is highlighted as a pivotal component of blockchain technology, ensuring data security. Digital encryption technology, as explained by Zhai, Yang, Li, Qiu, and Zhao (2019), is vital for safeguarding user information and transaction data within the blockchain. Delving into the technicalities, Jiang, (2023) discusses the array of cryptographic primitives employed in blockchain, including hash functions and digital signatures. The potential of blockchain in bolstering cyber security, especially in the realm of securely storing Personally Identifiable Information (PII) and certification schemes, is emphasized by Taylor, Dargahi, Dehghantanha, Parizi, and Choo (2020). A quantum-secured blockchain platform leveraging quantum key distribution for ironclad authentication is proposed by Kiktenko et al. (2017). These studies underscore the indispensable role of cryptography in blockchain data security, pointing towards promising avenues for future research and innovation in the domain.

Blockchain's utilization of hashing to store data securely and immutably is a recurring theme in academic literature. Each new block to be added in the blockchain system, in other words, each new record to be made, uses the protocol created by the nodes in that block to verify the record (Çetin, 2022). Rahardja, Hidayanto, Lutfiani, Febiani, and Aini (2021) delve into the mechanics, explaining how hash functions label each block of data in the blockchain. This hashing not only connects each block to its predecessor but also fortifies the entire blockchain transaction against alterations or deletions. In a comparative study, Kuznetsov, Oleshko, Tymchenko, Lisitsky, Rodinko, and Kolhatin (2021) evaluates the efficacy of various hashing algorithms, shedding light on their suitability for contemporary decentralized blockchain networks. This aids in pinpointing the optimal candidates for constructing decentralized systems. Introducing a novel perspective, Kamal and Fareed (2021) puts forth a hash algorithm rooted in chaos theory and the Merkle-Damgard construction. This innovative approach not only ensures a secure integration with the blockchain but also is more resource-efficient than its counterparts. Building on the theme of optimization, Zheng, Li, Chen, and Dong (2018)

champions an IPFS-based blockchain data storage model. By harnessing the unique attributes of the IPFS network and the nuances of the IPFS hash, this model significantly trims the size of blockchain data, paving the way for a more scalable decentralized network.

The types of cryptocurrencies examined in this study are Bitcoin, Ethereum, Ripple, Dash, Litecoin. The reasons why these cryptocurrencies were chosen are:

As of February 10, 2023, 40% of the cryptocurrency market consists of Bitcoin and 17% consists of Ethereum. For this reason, bitcoin and etherium, the two locomotives of the market, were chosen.

Ripple is the first crypto currency established as a remittance network where large companies and banks can make large payments simultaneously.

Litecoin, which has a different algorithm system than Bitcoin, can create blocks faster, has a higher sending speed and lower confirmation times. It was preferred because it was the first cryptocurrency issued for this purpose.

Dash has created a centralized-autonomous form for the first time in the cryptocurrency field. It has a privacy feature and uses a different encryption technique. Therefore, it was preferred. (Figure.1)

<p>Bitcoin (BTC)</p>	<ul style="list-style-type: none"> •Introduction: Bitcoin is a decentralized digital currency, without a central bank or single administrator, that can be sent from user to user on the peer-to-peer bitcoin network without the need for intermediaries. Transactions are verified by network nodes through cryptography and recorded in a public distributed ledger called a blockchain. •Website: [Bitcoin.org](https://bitcoin.org/) •Whitepaper: [Bitcoin: A Peer-to-Peer Electronic Cash System](https://bitcoin.org/bitcoin.pdf) by Satoshi Nakamoto
<p>Ethereum (ETH)</p>	<ul style="list-style-type: none"> •Introduction: Ethereum is an open-source, blockchain-based platform that allows developers to build and deploy decentralized applications (dApps). Unlike Bitcoin, which is primarily a digital currency, Ethereum focuses on running the programming code of any decentralized application. It introduced the concept of "smart contracts," which are self-executing contracts with the terms of the agreement directly written into code. •Website: [Ethereum.org](https://ethereum.org/) •Whitepaper: [Ethereum Whitepaper](https://ethereum.org/en/whitepaper/)
<p>Ripple (XRP)</p>	<ul style="list-style-type: none"> •Introduction: Ripple is both a platform and a currency. The Ripple platform is an open-source protocol designed to allow fast and cheap transactions. Unlike Bitcoin that uses a decentralized system to transact, Ripple uses a consensus ledger and a network of validating servers, rather than blockchain, to confirm transactions. •Website: [Ripple.com](https://ripple.com/) •Whitepaper: [The Ripple Protocol Consensus Algorithm](https://ripple.com/files/ripple_consensus_whitepaper.pdf)
<p>Dash (DASH)</p>	<ul style="list-style-type: none"> •Introduction: Dash is an open-source blockchain and cryptocurrency focused on offering a fast, cheap global payments network that is decentralized in nature. It seeks to improve upon Bitcoin by providing stronger privacy and faster transactions. Originating as a fork from the Bitcoin protocol, Dash has unique features enabling it to process anonymous transactions, apart from its core advantages of speed and low transaction costs. Dash is also recognized as a decentralized autonomous organization (DAO) run by a subset of its users known as "masternodes". •Website: dash.org •Whitepaper: While Dash doesn't have a specific whitepaper like Bitcoin or Ethereum, its foundational technology and updates can be explored through its official website and community forums.
<p>Litecoin (LTC)</p>	<ul style="list-style-type: none"> •Introduction: Litecoin is a peer-to-peer cryptocurrency created as a "lite" version of Bitcoin. It was designed to produce more frequent block generation, allowing for faster transaction confirmation. While inspired by, and in most ways technically nearly identical to Bitcoin, Litecoin has some technical improvements over Bitcoin. •Website: [Litecoin.org](https://litecoin.org/) •Whitepaper: Litecoin doesn't have an official whitepaper like Bitcoin, but its technical details and updates can be found on its official website.

Figure 1. Cryptocurrency Types

It is possible to summarize the differences between these types of cryptocurrencies as follows.

Purpose: While Bitcoin was designed primarily as a digital currency, Ethereum was developed as a platform for decentralized applications. Ripple, on the other hand, focuses on facilitating real-time, cross-border payments for banks.

Technology: Bitcoin and Litecoin use a proof-of-work consensus mechanism, Ethereum initially used proof-of-work but is transitioning to proof-of-stake, and Ripple uses a consensus ledger.

Transaction Speed: Ripple transactions are faster than Bitcoin's, and Litecoin aims to have faster transaction confirmation times than Bitcoin.

Market Position: Bitcoin is often viewed as the leading cryptocurrency, with the others considered "altcoins" or alternatives to Bitcoin.

The differences between these cryptocurrencies can be summarized in detail as shown in Table 1.

Table 1. The Differences Between Cryptocurrencies

Cryptocurrency	Nature/Origin	Primary Use	Technology/Consensus Mechanism	Notable Features
Bitcoin (BTC)	Pioneering cryptocurrency; decentralized digital currency without a central authority.	Digital currency for transactions.	Peer-to-peer network with proof-of-work.	Operations on a public ledger called the blockchain.
Ethereum (ETH)	Open-source, blockchain-based platform.	Building and deploying decentralized applications (dApps).	Initially proof-of-work, transitioning to proof-of-stake.	Known for "smart contracts".
Ripple (XRP)	Both a platform and a currency.	Fast, global transactions, especially for banks.	Consensus ledger with network of validating servers.	Real-time, cross-border payments.
Dash (DASH)	Forked from Bitcoin protocol; operates as a DAO with masternodes.	Fast, cheap payments with a focus on privacy.	Proof-of-work with a network of masternodes for governance.	Known for strong privacy features and fast transactions.
Litecoin (LTC)	"Silver to Bitcoin's gold"; peer-to-peer cryptocurrency.	Faster transaction confirmation.	Proof-of-work with different hashing algorithm.	Faster block generation time than Bitcoin.

Source: coinmarketcap.com

Table 1 provides a concise overview of the key characteristics and differences between the five major cryptocurrencies.

Market Interest Rate

The market interest rate, often referred to as the nominal interest rate, represents the return investors expect to receive for lending their money in the market. It's influenced by a variety of factors, both microeconomic and macroeconomic.

Various authors have delved into distinct facets of interest rates. Belongia (1987) emphasizes the significance of fluctuations in interest rates and the associated risks. Reinhart and Sack (2002) conduct an in-depth study of the trends in major long-term U.S. interest rates post-1993, attributing their shifts

to fundamental determinants. The Bank of England's methodology for deriving interest rate forecasts from money market instruments is worth examining (Brooke, Cooper, & Scholtes, 2000). Meanwhile, Thornton (1986) investigates the connection between the Federal Reserve's discount rate and the rates in the money market. Hence, while these studies offer valuable perspectives on interest rates, they don't directly address the core research query.

Several factors play a pivotal role in determining the interest rates for corporate debt and other financial tools. Notably, the credit standing of borrowers, the term of the financial instrument, and the current economic climate are crucial determinants. For example, the likelihood of a borrower defaulting, or the default risk, has a marked effect on the disparity between the market value and the face value of debt capital (Терещенко, Стецько, Ткаченко, & Бабяк, 2021). The spreads in Credit Default Swaps (CDS) can act as a gauge for how the market views credit risks. Elements like a company's performance, overarching economic trends, and market dynamics are instrumental in shaping CDS spreads. Specific metrics, such as Tobin's Q, stock market yields, and the risk-free rate, offer valuable insights into CDS spread variations (Fu, Li, & Molyneux, 2021). Central banking institutions, by implementing their monetary policies, strive to steer market interest rates. However, the extent to which a central bank's policy rate affects market rates can differ, depending on local financial market attributes and international considerations. For example, factors like the level of foreign investment in money markets and global risk indicators can profoundly influence the gap between policy and market rates (Fermo, 2016).

In essence, the market interest rate is a reflection of the time value of money in the context of the current supply and demand conditions in the money market and broader economic factors. It serves as a critical benchmark for various financial activities, from setting rates on loans and credit cards to determining the return on various investment vehicles.

Various elements play a role in shaping market interest rates. Long-zhen and Wan-jun (2008) identified that shifts in official rates, inflationary

trends, and the gap between market and official rates significantly impact market rate fluctuations in China's bond market. Dale (2010) observed that when the Bank of England adjusts its official rates, there's a notable ripple effect on market interest rates with maturities spanning from 1-month to 5-years. This indicates that rates with extended maturities are swayed by predictions regarding the trajectory of shorter-term rates. Reinhart and Sack (2002) dissected the dynamics of crucial long-term U.S. interest rates, attributing their movements to factors like risk-free interest rates, liquidity preferences, credit risks, and unique shocks in the Treasury and swap markets. They also noted a recent shift in the significance of these factors. Various interest rates on consumption, mortgages and deposits in the Czech Republic profoundly affect the amount of mortgages and consumer loans (Kostikov, Jílková, & Kofátková Stránská, 2019). Additionally, they found that a bank's return on equity is influenced by its profit margin and liquidity, but inversely affected by its financial leverage and the volume of loans it offers.

Methodology

The primary objective of this research is to delve into the intricate relationship between blockchain technology, cryptocurrency accounting, and market dynamics. With the advent of blockchain-based decentralized financing structures, there's a burgeoning interest in understanding how these novel financial mechanisms interact with traditional economic indicators, such as market interest rates. Market interest rates, being pivotal indicators of a nation's economic stability and essential tools of monetary policy, offer a compelling contrast to the decentralized nature of blockchain finance.

Within the realm of blockchain, blocks are intricately linked through preceding encrypted signatures, culminating in chains. This research embarks on a comprehensive comparative analysis, juxtaposing the nascent realm of blockchain-based decentralized finance (DeFi) structures with the established domain of market interest rates. Central to this exploration is the correlation between market interest rates and the

valuations of prominent cryptocurrencies, including Bitcoin, Ethereum, Ripple, Litecoin, and Dash.

In this study, the London Interbank Offered Rate (LIBOR) was used as a representative measure of market interest rates. LIBOR is commonly used as a benchmark for short-term interest rates around the world and serves as an indicator of the average rates at which banks lend to one another. Given its widespread use and recognition in both academia and the financial industry, LIBOR was deemed an appropriate metric for this research."

To achieve a robust understanding, this study harnesses a range of data collection methodologies. Historical data on interest rates and cryptocurrency valuations serve as the foundation, with subsequent correlation analyses shedding light on the intricate dynamics between these two financial realms.

In the "Data Collection" of the research, the methodologies used to collect the data required for the analysis are given as follows.

Interest Rates: Data on interest rates was collected from online sources such as central bank websites, financial market databases and other authorized financial news platforms. The data consisted of historical interest rates for the period under review.

Cryptocurrency Prices: Data on the prices of selected cryptocurrencies (Bitcoin, Ethereum, Ripple, Litecoin and Dash) was collected from cryptocurrency market data platforms such as CoinMarketCap, Marketwatch or through APIs provided by cryptocurrency exchanges. This data was also historical and matched the time frame of the interest rates data.

Data sets: Cryptocurrency Prices and Libor Interest rates from <https://www.marketwatch.com>, TLREF, Repo, Exchange Rate, Deposit Rate and Loan Interest rates from <https://evds2.tcmb.gov.tr> collected weekly from January 2019 to April 2023.

In the analysis of the research, the relationship between cryptocurrencies and interest rates were analyzed by correlation analysis. The findings obtained in the research were analyzed with the SPSS package program. While giving descriptive findings of the measurement tools, mean and

standard deviation values were used, and Pearson correlation analysis was used to examine the relationship between Cryptocurrencies and Interest Rates as a result of the normal distribution of the data.

Once the data is collected, correlation analysis was used to measure the strength and direction of the linear relationship between online interest rates and cryptocurrency prices. This shows whether there is a positive or negative correlation between the two variables or whether there is a significant relationship.

Before conducting the analysis, the data was processed and cleaned to ensure that it is free from errors and inconsistencies. The SPSS package program was used to conduct the correlation analysis.

Findings

The normality distributions of the data used in the study and the mean and standard deviation values of the variables used in the study are given below.

Table 2. Findings Related to Data Distribution

Variables	Central Tendency		Skewness-Kurtosis Measures	
	Mean	Median	Skewness	Kurtosis
DASH	105.13	88.15	0.82	-0.44
LITECOIN	97.37	76.12	1.44	2.10
XRP	48.03	0.37	15.00	225.00
ETHEREUM	1,328.83	1,210.00	0.83	-0.38
BITCOIN	23,484.15	19,019.00	0.74	-0.68
LIBOR	1.43	0.94	0.84	-0.36

As a result of the normal distribution analysis, it was determined that the data obtained from the central tendency measurements examined were from a normal distribution since the mean-median was close to each other and the kurtosis and skewness were between ± 2 (George, 2011). At the same time, since the data set included in the study was sufficient ($n \geq 30$), parametric methods, which are statistically more powerful based on the central limit theorem, were used (Ghasemi & Zahediasl, 2012).

Table 3. Mean and Standard Deviation Values for Cryptocurrencies and Market Interest Rates

Variables	Mean	Std. Dev.
DASH	105.13	48.50
LITECOIN	97.37	59.02
XRP	48.03	713.30
ETHEREUM	1,328.83	1,238.94
BITCOIN	23,484.15	17,036.96
LIBOR	1.43	1.46

When Table 3 is analyzed, it is determined that the average value of Dash is 105.13 ± 48.50 , the average value of LITECOIN is 97.37 ± 59.02 , the average value of XRP is 48.03 ± 713.30 , the average value of ETHEREUM is 1328.83 ± 1238.94 , the average value of BITCOIN is 23484.14 ± 17036.96 dollars, and it is determined that BITCOIN has the highest average in cryptocurrencies while XRP has the lowest average. At the same time, the high standard deviation of the XRP value indicates that this cryptocurrency shows a lot of periodic variability. The LIBOR market interest rate has a mean of 1.43 with a standard deviation of 1.46. This close proximity of the mean and standard deviation indicates that the LIBOR rates have values that are closely packed around the average, with occasional fluctuations. In summary, the table underscores the inherent variability in cryptocurrency values, with some like XRP and Ethereum showing significant volatility. In contrast, the LIBOR market interest rate, while variable, has values that are more closely clustered around its mean.

The hypotheses for this study were formulated based on a comprehensive review of empirical literature. Pearson correlation analysis was subsequently employed to test these hypotheses.

H1: There is a statistically significant relationship between Cryptocurrencies and Market Interest Rates.

H2: There is a statistically significant relationship between Dash and Market Interest Rates.

H3: There is a statistically significant relationship between Litecoin and Market Interest Rates.

H4: There is a statistically significant relationship between XRP and Market Interest Rates.

H5: There is a statistically significant relationship between Ethereum and Market Interest Rates.

H6: There is a statistically significant relationship between Bitcoin and Market Interest Rates.

Below is the table showing the relationship between LIBOR interest rates and cryptocurrencies.

Table 4. Relationship between LIBOR interest rates and cryptocurrencies

Variables	LIBOR	
	r	p
DASH	-0,548	0,001*
LITECOIN	-0,399	0,001*
XRP	-0,062	0,354
ETHEREUM	-0,289	0,001*
BITCOIN	-0,426	0,001*

The table presents the correlation coefficients (r) between the LIBOR market interest rate and selected cryptocurrencies. Additionally, the significance (p) values indicate the statistical significance of these correlations.

DASH: With a correlation coefficient of -0.548 and a significance level of 0.001*, DASH shows a moderately strong negative correlation with LIBOR. This suggests that as LIBOR increases, DASH's value tends to decrease, and vice versa.

LITECOIN: Litecoin exhibits a negative correlation of -0.399 with LIBOR, which is statistically significant at the 0.001* level. This indicates a moderate inverse relationship between Litecoin and LIBOR.

XRP: XRP's correlation with LIBOR is -0.062, which is not statistically significant with a p-value of 0.354. This suggests that there's a weak or no linear relationship between XRP and LIBOR.

ETHEREUM: Ethereum has a negative correlation of -0.289 with LIBOR, significant at the 0.001* level. This indicates a weak to moderate inverse relationship between Ethereum and LIBOR.

BITCOIN: Bitcoin shows a correlation of -0.426 with LIBOR, which is statistically significant at the 0.001* level. This suggests a moderate negative relationship between Bitcoin and LIBOR.

In summary, most of the selected cryptocurrencies exhibit a negative correlation with LIBOR, with DASH having the strongest inverse relationship. XRP stands out as the only cryptocurrency with a weak and non-significant correlation with LIBOR.

Table 5. Results of Research Hypotheses

Hypot hesis No	Hypothesis Statement	Acceptance/Rejection
H1	There is a statistically significant relationship between Cryptocurrencies and Market Interest Rates.	Partially Accepted
H2	There is a statistically significant relationship between Dash and Market Interest Rates.	Accepted
H3	There is a statistically significant relationship between Litecoin and Market Interest Rates.	Accepted
H4	There is a statistically significant relationship between XRP and Market Interest Rates.	Rejected
H5	There is a statistically significant relationship between Ethereum and Market Interest Rates.	Accepted
H6	There is a statistically significant relationship between Bitcoin and Market Interest Rates.	Accepted

The table provides an overview of the results for various hypotheses tested concerning the relationship between different cryptocurrencies and market interest rates.

H1: The general hypothesis suggests a relationship between cryptocurrencies as a whole and market interest rates. The results indicate a partial acceptance, implying that while some cryptocurrencies may have a significant relationship with market interest rates, others might not.

H2-H6: These are specific hypotheses for individual cryptocurrencies. Dash, Litecoin, Ethereum, and Bitcoin all show a statistically significant relationship with market interest rates, leading to their hypotheses being accepted. In contrast, XRP does not exhibit a significant relationship with market interest rates, resulting in the rejection of its hypothesis.

In essence, while most of the selected cryptocurrencies show a significant relationship

with market interest rates, XRP stands out as an exception.

Conclusion

The primary aim of this study was to delve into the relationship between various cryptocurrencies and market interest rates, while also exploring the intricacies of Cryptocurrency Accounting. As the financial world evolves, understanding the accounting practices associated with these digital assets becomes as crucial as understanding their market dynamics.

Market interest rates are pivotal indicators of a country's economic stability and are essential tools of monetary policy. Simultaneously, the rise of blockchain-based decentralized finance (DeFi) structures, represented by cryptocurrencies, has brought forth new challenges and considerations in the realm of accounting. This research bridges the gap between traditional economic indicators and the emerging world of cryptocurrency, shedding light on the accounting practices and challenges associated with these digital assets.

The study revealed a significant relationship between most of the selected cryptocurrencies (Dash, Litecoin, Ethereum, and Bitcoin) and market interest rates. However, XRP was an exception.

The overarching hypothesis (H1) posited a statistically significant relationship between cryptocurrencies in general and market interest rates. The results partially supported this claim, indicating that while some cryptocurrencies exhibit a significant relationship with market interest rates, others do not.

The hypothesis (H2) proposed a significant relationship between Dash and market interest rates. The results confirmed this hypothesis, suggesting that fluctuations in market interest rates might influence Dash's value or vice versa. The hypothesis (H3) postulated a significant relationship between Litecoin and market interest rates. The study's findings supported this claim, indicating a potential correlation between Litecoin's value and market interest rate changes. The hypothesis (H4) suggested a significant relationship between XRP and market interest rates. However, the results did not support this

hypothesis, indicating that XRP's value might be influenced by factors other than market interest rates. The hypothesis (H5) posited a significant relationship between Ethereum and market interest rates. The study's findings validated this claim, suggesting a potential interplay between Ethereum's value and market interest rate fluctuations. The hypothesis (H6) proposed a significant relationship between Bitcoin and market interest rates. The results confirmed this hypothesis, indicating that market interest rate changes might have an impact on Bitcoin's value.

The study revealed that most of the selected cryptocurrencies, namely Dash, Litecoin, Ethereum, and Bitcoin, have a significant relationship with market interest rates. This suggests that these cryptocurrencies' values might be influenced by economic indicators like market interest rates. However, XRP stands as an exception, with its value potentially being influenced by other factors. The findings provide valuable insights for investors, policymakers, and researchers interested in the dynamics between cryptocurrencies and traditional economic indicators.

The world of finance is undergoing a transformative phase, with cryptocurrencies at the forefront of this evolution. While their market dynamics with traditional economic indicators like market interest rates are crucial, understanding the accounting practices associated with them is equally vital. This research underscores the importance of a holistic approach to cryptocurrencies, considering both their market behavior and the accounting challenges they present. As digital assets continue to gain prominence, ensuring robust and transparent accounting practices will be pivotal for their integration into the broader financial ecosystem.

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Assessing the Psychometric Qualities of the Refugee Post-Migration Stress Scale: A Study of Syrian Immigrants in Turkey

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Abstract

The aim of this study is to adapt the Refugee Post-Migration Stress Scale (RPMS) to Syrian immigrants living in Türkiye and to determine the factors associated with RPMS. In this context, the WHO-5 Well-Being Index was administered with RPMS to 250 participants living in Mardin, one of Turkey's border provinces with Syria, for the study's first phase. In the second stage, RPMS and Multidimensional Perceived Social Support Scale were administered to 409 Syrians together with the demographic information form prepared by the researchers. According to the CFA results applied in the first stage, the psychometric properties of the adapted version of the scale were found to be satisfactory. In the second study, it was found that social support was negatively related to the post-migration stress levels of the participants and PMS differed significantly in terms of marital status, educational status, social support, income and employment status, language proficiency, hope for the future, and ethnicity variables. Study implications and limitations are discussed.

Keywords: Post-Migration Stress, Syrian Migrants, Mental Health, Well-Being, Social Support

Öz

Bu çalışmanın amacı, Göç Sonrası Mülteci Stres Ölçeđi'ni (RPMS) Türkiye'de yaşayan Suriyeli mültecilere uyarlamak ve RPMS ile ilişkili faktörleri belirlemektir. Bu kapsamda, çalışmanın ilk aşamasında Türkiye'nin Suriye ile sınır illerinden biri olan Mardin'de yaşayan 250 katılımcıya RPMS ile birlikte WHO-5 İyi Oluş Endeksi uygulanmıştır. İkinci aşamada ise 409 Suriyeliye araştırmacılar tarafından hazırlanan demografik bilgi formu ile birlikte RPMS ve Çok Boyutlu Algılanan Sosyal Destek Ölçeđi uygulanmıştır. İlk aşamada uygulanan DFA sonuçlarına göre, ölçeđin uyarlanan versiyonunun psikometrik özelliklerinin tatmin edici olduđu görülmüştür. Çalışmanın ikinci aşaması için yapılan analiz sonuçlarına göre, katılımcıların sosyal destek algıları ile göç sonrası stres düzeyleri arasında olumsuz ilişki bulunmuştur. Ayrıca katılımcıların göç sonrası stres düzeylerinin medeni durum, eğitim durumu, sosyal destek, gelir ve istihdam durumu, dil yeterliliđi, geleceđe yönelik umut ve etnik köken deđişkenleri açısından anlamlı bir şekilde farklılaştığı tespit edilmiştir. Çalışmanın güncel önerileri ve sınırlılıkları tartışılmıştır.

Anahtar Kelimeler: Göç Sonrası Stres, Suriyeli Göçmenler, Ruh Sağlığı, İyi Olma Hali, Sosyal Destek.

Introduction

Ongoing internal conflicts in the Syrian Arab Republic displaced 13.4 million Syrians and 5.6 million people migrated to other countries from Syria. Accordingly United Nations Refugee Agency (UNHCR) among those who fled, 65% of Syrians (3.7 million) live in neighbouring Turkey which hosts the most refugees in the world (UNHCRa, 2023). Apart from refugees from Syria, Turkey also hosts around half a million people from Iran, Iraq, Afghanistan, and some African countries (UNHCRb, 2023). Syrians in Turkey have difficulties in terms of temporary status (insecure), accessing public services, inadequate integration facilities, limited work permits, poor living conditions (Akın & Bozbaş, 2020), discrimination, lacking language (Güneş Aslan & Güngör, 2019), low socio-adaptation, economic concerns, and uncertainty regarding duration of stay (Şafak-Ayvazoğlu et al. 2021). These problems are considered stress factors in post-migration living conditions (Tinghög et al., 2017).

Refugees who have been exposed to traumatic events such as conflict, death, disappearances, torture, and genocide, both before and during migration, must continue their lives with psychological and physical side effects while starting their lives after the migration (Acarturk et al., 2018; Lindert et al., 2016). Refugees experience mental health issues due to their experiences of traumatic events before, during, and after immigration (Li et al., 2016) and the problems include but are not limited to post-traumatic stress disorder (PTSD), depression, and anxiety (Acarturk et al., 2018; Bogic et al., 2015; Turrini et al., 2017). Turrini et al. (2019) claim that exposure to traumatic experiences such as excessive stress, torture, rape, and war brutality before and during migration has a negative impact on the mental health of refugees and asylum seekers. Schiess-Jokanovic et al. (2021) revealed a bidirectional relationship between post-migration difficulties and complex post-traumatic stress disorder. The prevalence of psychological disorders among refugees is associated with traumatic events and post-migration poor quality of life (Mahmood, 2014).

While studies on the well-being of refugees initially focused on risk factors such as pre-migration and PTSD, depression, anxiety, and trauma (Lindert et al., 2016; Sangalang et al., 2019) the effects of post-migration living conditions on refugees' mental health have just recently begun to be examined (Lies et al., 2020; Sengoelge et al., 2020; Tinghög et al., 2017). One of the concepts about well-being after migration is post-migration refugee stress (PMRS). Although substantial research is available, there is no clarity on the concept of post-migration stress (PMS) and how it will be evaluated (James et al., 2019; Sangalang et al., 2019).

The concept of PMS focuses on the stress caused by the living conditions after resettlement. Therefore, PMS is considered separate from post-traumatic stress experienced by refugees before and during migration (Malm et al., 2020). One definition of PMS is "the subjective appraisal of reoccurring or persistent post-resettlement related living conditions as distressing" (Malm et al., 2020 p. 2) and PMS is associated with: (1) socioeconomic factors (housing, security, employment, economy); (2) social and interpersonal factors (division of the family, failure to achieve family reunification, insufficient social support, change in social roles, discrimination, change in economic status); (3) the asylum-seeking process and immigration acceptance practices (limited residence permits, prolonged processing of applications, insufficient temporary accommodation opportunities) (Li et al., 2016). James et al. (2019) evaluated the experiences of refugees under five post-migration stressors including unemployment, perceived underemployment, inadequate housing, homelessness, and exposure to discrimination/violence.

Considering the post-migration living conditions of refugees, it is perhaps unsurprising that a strong association between mental health and social and economic losses (Li et al., 2016; Malm et al., 2020), ethnic discrimination (Pascoe & Richman, 2009), poor language skills (Tinghög et al., 2010), unemployment (not allowed to work) (Sengoelge et al., 2020) and insufficient social support (Tinghög et al., 2010) could be identified. Refugees may become socially isolated as a result

of the deteriorating social relationships after migrating (Simmons et al. 2020).

Silove et al., (1997) assessed and measured the problems and stress that refugees experience after resettlement via a checklist consisting of 17 items in the areas of asylum application processes, employment, and access to health services. Most stressors were refoulement, prolongation of asylum application, inability to connect with family members and access health care services (Aslan, 2021), worrying about the safety of family members, and social assistance. Tinghög et al., (2017) evaluated PMS under seven areas: perceived discrimination, problems of adaptation to the host country (language, culture, etc.), economic problems, anxiety about losing social relations in their country, worries about their country and family, social tensions, and family conflicts. Last but not least, the Refugee Post-Migration Stress (RPMS) scale was developed to assess the stress stemming from the living circumstances of refugees following their resettlement (Malm et al., 2020). RPMS was preferred in this study because it was developed on Syrian sample and it is more comprehensive than checklist (Silove et al., 1997).

The lack of a reliable tool to measure the PMS (apart from the traumatic events before and during the migration) in Turkey, which hosts a large population of refugees, is considered an important shortcoming. Therefore, we adapted the RPMS scale into Turkish context (Arabic version).

Well-being

After adapting RPMS into Turkish context, we then examined the relationship between the RPMS and well-being in the study one to examine the association between the two constructs to establish criterion validity. We wanted to explore well-being from a holistic perspective to highlight the association between migration and its effects on the immigrant community. In addition to the negative effects of resettlement on mental health, positive mental health research has recently been conducted in refugees (van der Boor, 2020). In this context, the concepts of quality of life and well-being are frequently addressed (Alexander, 2021). We purposefully chose the WHO (2001)

definition of well-being as it links well-being to stress and capacity. It defines wellbeing as “a state in which an individual can realize their own potential, cope with normal stresses, can work productively, and can contribute to their community”. Alexander et al. (2021) found a negative relationship between post-migration stress and subjective well-being in a study conducted with adult Syrian refugees who settled in Sweden.

The lack of a reliable tool to measure the post-migration stress of refugees (apart from the traumatic events before and during the migration) in Turkey, which hosts most refugees in the world, is considered an important shortcoming. Therefore, the first aim of this study is to develop a tool that can measure the post-migration stress of Syrian refugees, the largest refugee group in Turkey. In the first study, an adaptation study of the RPMS scale to Syrians in Turkey was carried out. In the second study, we examined the relationship between the post-migration stress of Syrians in Turkey and their perceived social support with socio-demographic characteristics.

Study 1: Adaptation of the Post-Migration Refugee Stress Scale (RPMS)

The purpose of the first study was (1) to adapt the form developed for Syrian refugees living in Sweden for Syrian refugees living in Turkey, (2) to perform Confirmatory Factor Analysis (CFA) to examine the construct validity of the RPMS, (3) to examine the criterion validity, and (4) to examine the validity of the scale and subscales.

Materials and Methods

For both stages of the study the cross-sectional design was used. Refugees resettled in Mardin province in Turkey were reached during 2021 March-June.

Participants

In study 1, 250 refugees participated ($N_{\text{male}} = 138$ -%55,2, $N_{\text{female}} = 112$ -%44,8). The sample of the first step of the research was determined using the convenience sampling method, which is not based

on probability due to the ease of access and convenience of the participants (Creswell, 2014). The inclusion criteria were to be over 18 years of age and to voluntarily participate in the study. It is stated that the sample size should be at least 5-10 times the number of items (Nunnally, 1978). Considering that the number of items in the scale is 21, the number of 210 participants is considered to be sufficient; however, 250 people were reached in the study, exceeding 210. Therefore, it can be stated that the number of 250 is sufficient for the analysis.

All participants are citizens of the Syrian Arab Republic and are fluent in Arabic. The study's participants willingly gave their oral consent to take part. The ages of the participants varied from 18 to 70 ($M = 32.06$, $SD = 11.27$). The majority of the participants consist of middle school-high school graduates (45.6%) and married (55.2%) Syrians. Among participants, 53.2% of the participants are Arab and 46.0% are of Kurdish origin.

Materials

Sociodemographic Data Form: This form was created by researchers in Arabic. socio-demographic form was used to obtain information on gender, age, education level, and ethnicity.

The Refugee Post-Migration Scale (RPMS): This scale was originally developed by Malm et al. (2020) in Arabic. The scale consists of seven sub-dimensions including perceived discrimination, lack of host country-specific competencies, material and economic strain, loss of home country, family and home country concerns social strain, and family conflicts with 21 items using a five-point Likert-type scale (1: Very often, 5: Never). The scale has no cut-off point and no reverse items. A high score on the scale indicate high levels of stress. Questions include "Difficulties understanding documents and forms from authorities" and "Feeling excluded or isolated in the Swedish (Turkish) society". The internal consistency coefficient for Cronbach's alpha was determined to be 0.83. $M = 2.67$, $SD = .59$, and the range is 21–105. The adapted version of the RPSM for Syrians in Türkiye is presented in Appendix 1.

The WHO-5 Well-Being Index: The World Health Organization-5 Index of Well-Being (WHO-5) is a five-item tool used to screen for depression. The scale is used to evaluate the well-being of the general population and individuals with health problems. Questions include "I have felt calm and relaxed and "My daily life has been filled with things that interest me." The Arabic form of the scale has valid psychometric properties as a surveying tool for depression among elderly individuals in Lebanon (Sibai et al., 2009). The internal consistency coefficient for Cronbach's alpha for this study was estimated to be 0.84. ($M = 3.39$; $SD = 1.11$; 0–25).

The internal consistency coefficient for Cronbach's alpha for this study was 0.84 ($M = 3.39$; $SD = 1.11$; 0-25).

Procedure

We contacted the authors who developed the RPMS scale via e-mail and their permission was obtained. The words "Swedish" and "Sweden" in items 1, 5, 6, 13, 16, 17, and 18 of the scale have been changed to "Turkish" and "Türkiye", respectively. All the scales used in both phases are in Arabic language and administered to Syrian participants face to face. The translation was originally undertaken by a translator. Afterwards, the translations were evaluated by the academicians in the two Arabic Language and Literature departments, and the final Arabic version of the scales was obtained. After the scales were translated and the original and translated forms were compared, the items were appropriate to determine the fit of the model to a new culture. Native speakers of Arabic language and authors were present during data collection to discuss research related issues with the participants. Verbal consent obtained from participants. Syrian refugees were initially told of the study's goal and given an assurance of confidentiality during the data gathering phase. In order to reach the refugees, we first received support from a gatekeeper (refugee college student). The gatekeeper played a facilitating role in reaching

Correlations between RPMS subscales and total were computed with the subscale removed from the total score. Cronbach alphas are shown in the table as bold.

The results indicated that the scale's psychometric qualities were satisfactory. According to the DFA results, the seven-factor and 21-item RPMS was found suitable for Syrian refugees living in Turkey. Moreover, all item loads related to the factors were found to be higher than 0.5. The correlation between the scale (WHO) used for criterion validity analysis and the RPMS was also significant and negatively correlated. After validating the RPSM scale, we wanted to investigate whether post migration stress and social support was related in Syrian immigrants living in Turkey.

Study 2: Post-Migration Stress and Social Support

The purpose of the second study was to examine the effect of perceived social support on RPMS Syrian refugees, and the relationship between demographic characteristics of participants and post-migration stress levels of them.

Social Support and Post-Migration Stress

Starting a life in a new country is challenging in many ways and the loss of social capital is a major one. Studies on social support demonstrate that it acts as a barrier against post-traumatic stress disorder (Visser et al., 2017; van der Boor, 2020). Loss or decrease in social support is seen as one of the principal causes of mental health problems amongst refugees (Miller & Rasmussen, 2010) and perceived social support appears to be a supportive factor in the process of coping with mental health problems after migration (Ryan, 2021). Daily living conditions such as living in unsafe neighbourhoods, not being able to access basic services, and being deprived of adequate social support mediate the mental disorders of refugees exposed to war and conflict (Miller & Rasmussen, 2010).

Materials and methods

Participants

Almost half of the Syrian refugees in Turkey are hosted by the border cities of Gaziantep, Kilis, Şanlıurfa, Hatay and Mardin. Among these cities, Mardin has the least number of Syrian refugees (Apak, 2022). In Turkey's border province of Mardin, which hosts around 90,000 Syrian refugees, the survey was administered to 409 people of Syrian origin who fled to Turkey after 2011 and who have temporary protection status. In cases where the size of the population is known, sampling calculation (Naing, Winn, & Rusli, 2006) could be made. We determined that the 409 questionnaires included in the analysis were sufficient in terms of sample size. The ages of the participants ranged from 18 to 60. The majority of the participants were male (58.4%), secondary school graduates (44.5%), and married (59.4%).

Materials

In the second stage of the research, Refugee Post-Migration Scale (RPMS) and Multidimensional Scale of Perceived Social Support (MSPSS) scales were used.

Refugee Post-Migration Scale (RPMS): This scale was developed by Malm, Tinghög, Narusyte, and Saboonchi (2020). The construct validity and reliability of the scale were provided by the researchers in Study 1. In this second phase, the Cronbach's Alpha coefficient of the RPMS Scale was calculated as .87. ($M = 2.64$, $SD = .67$, range = 21–105). The RPMS is a concise, multidimensional self-assessment instrument for the evaluation of post migratory stress among refugees. The original scale was developed for Syrian refugees. They were exposed to war and losses. Therefore, as this study also focuses on Syrian refugees, this measurement was particularly selected to address Syrians in Turkey.

Multidimensional Scale of Perceived Social Support (MSPSS): The scale was developed by Zimet et al. (1988) and was adapted to the Arabic language by Kazarian (2015). There are 12 questions in the scale. Responses range from 1 (Strongly Disagree) to 7 (Strongly Agree). Questions about the social support received from

three different groups: family, friends, and significant others. Questions include “I can talk about my problems with my family” and “There is a special person in my life who cares about my feelings”. The Cronbach’s Alpha coefficient, showing the reliability of the adapted scale, was calculated as .88. In the current study, the calculated Cronbach’s Alpha coefficient was .90. (M = 5.20, SD = 1.23, range = 12–84).

Procedure

Necessary permission was obtained from the Ethics Committee of X University (decision dated 01.03.2021 and numbered 2021/2-4) for the prepared questionnaire. Study two data were collected between April and May 2021. Detailed information about the data collection process was given in the previous phase. During the data collection phase, the participants were informed of the purpose and scope of the research. A total of 433 forms were collected. Due to incomplete surveys, 24 forms were removed from the dataset. Analyses were performed on the remaining 409 forms.

Statistical analysis

The SPSS 25.0 program was used to analyse the data. The normality test shows that the items' Skewness and Kurtosis values were between -1.50 and +1.50 and the items were normally distributed (Tabachnick, B. G. & Fidell, 2013). The One-way Analysis of Variance (ANOVA) and Tukey were used to compare group differences, and the multiple regression analysis was carried out to determine the factors that influenced post-migration stress.

Results

Findings regarding the PMS scores of Syrian refugees according to demographic variables are presented below.

Marital Status						
1.Married	243	2,72	0,71	4,207	0,016	1-2
2.Single	135	2,51	0,62			
3.Divorced- Widow	31	2,61	0,58			
Total	409	2,64	0,67			
Education						
1. Illiterate	41	2,73	0,56	4,311	0,003	2-3
2.Primary School	77	2,87	0,75			2-4
3.Secondary- High School	182	2,55	0,67			
4.University	109	2,58	0,63			
Total	409	2,64	0,67			
Income						
1.No income	81	2,67	0,74	5,667	0	1-4
2,0-1000	90	2,71	0,66			2-4
3,1001-2000	153	2,74	0,66			3-4
4,2001-3000	69	2,33	0,62			
5.3000+	16	2,48	0,46			
Total	409	2,64	0,67			
Turkish Proficiency						
1.Very Well	136	2,35	0,56	25,073	0	1-3
2.Adequate	99	2,51	0,71			1-4
3.Very Little	113	2,86	0,66			2-3
4.None	61	3,06	0,53			2-4
Total	409	2,64	0,67			
Employment						
1.Unemployed	77	2,8	0,69	8,22	0	1-4
2.Employed	183	2,63	0,69			2-4
3.Housewife	67	2,81	0,65			3-4
4.Student	82	2,35	0,55			
Total	409	2,64	0,67			
Looking to Future with Hope						
1.Yes	109	2,45	0,62	7,018	0	1-2
2.No	24	3,07	0,49			1-3
3.Partially	259	2,66	0,68			2-3
4.No Answer	17	2,84	0,78			
Total	409	2,64	0,67			

There are significant differences in RPMS scores in terms of marital status [F(2-422) = 4.207, p < 0.05], the level of education [F. (3-409) = 4.311, p < 0.01], income level [F(3-409) = 5.667, p < 0.01], Turkish proficiency [F(3-409) = 25.073, p < 0.01] and working status. [F(3-409) = 8.220, p < 0.01]. Moreover, there was a significant difference between Kurdish participants' and Arab participants' test scores (t. (414) = 7.26, p < 0.01). As hypothesised, multidimensional social support predicts RPMS (B=-.137, SH=.026, p<.001).

Table 2. ANOVA analysis of post-migration stress levels according to participants' demographic characteristics

Independent Variable	N	RPMS	Ss	F	p	Difference
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Table 3. Regression Analysis of Post-Migration Stress Level and Multidimensional Social Support of Syrian Refugees

Dimension	B	SH	β
Post-Migration Stress Level (Dependent Variable)	3.359	.141	
Multidimensional Perceived Social Support Level	-.137	.026	-.250*
R ²	.062		
F	27.04		

*p < .001

General Discussion

In the first part of this study, we adapted the RPMS scale, developed by Malm et al. (2020), evaluated its psychometric properties for Syrian refugees living in Turkey. The RPMS factor structure was obtained using CFA, the values obtained were appropriate and showed acceptable fit indices (Schermelele-Engel et al., 2003). The internal consistency coefficient obtained from the overall scale was found to be .83. This tool has demonstrated high reliability by measuring an alpha coefficient of .86 in previous research (Malm et al., 2020). We found a significant and negative correlation between WHO-5, which was used for criterion validity analysis, and the RPMS. We conclude that the RPMS is a suitable and valid measure for Syrian refugees living in Turkey.

In the second stage of the study, we found that stress levels were lower in single people than in married participants. Tinghög et al., (2010) in their study of Iraqi and Iranian refugees in Sweden, reported that single people experienced fewer mental health problems than married or divorced refugees. Previous research showed that divorced, widowed, or individuals who are separated from their spouses are more likely to have psychiatric disorders than those who are married living together (Roberts et al., 2008). We also found that the RPMS level decreased as the education level increased. Previous studies have also reported a higher prevalence of PTSD, anxiety, and depression in refugees with low education levels (Solberg et al., 2020). However, in the study by Tinghög et al. of refugees in Sweden, the level of education was not significant in predicting wellbeing (Tinghög et al., 2017).

Employment was found to be one of the factors affecting the levels of RPMS of the participants. The levels of RPMS amongst employed

immigrants are lower than those who are not. The influence of employment on different mental health problems has been demonstrated in studies conducted on both non-immigrants (Moxham et al., 2018) and immigrants (Wu et al., 2021). In addition to having stable income, employment can also have functions such as strengthening the network of relations in the society they live in, learning languages, and understanding cultural elements, especially for the immigrant population (Sengoelge et al., 2020). Paul and Batinic (2010) showed that employment has latent functions such as contributing to meeting the psycho-social needs of individuals and ensuring better mental health utilising producing social participation and relations, and providing social status. Income status, which is one of the factors related to employment, was also related to RPMS. We found a negative correlation between income and RPMS in our participants. In line with this finding, Wu et al. (2021) found that depressive symptoms and low socioeconomic status were associated in Chinese immigrants. Similarly, Dangmann et al. (2021) revealed that economic problems are post-migration stressors that negatively influence their quality of life. We argue that having a low socioeconomic level causes people to engage in less social activity, which diminishes the protective effect that social interaction has on mental health. RPMS scores among the students are significantly lower compared to the working, non-working, and housewives among the participants. In addition, being unemployed as a refugee is seen as a high-risk factor in terms of depression and anxiety (Tinghög et al., 2010).

We found the RPMS levels of the Arab Syrian immigrants are significantly higher than those of the Kurdish Syrian immigrants. Having relatives and using the same language as the local host people may explain this difference. Moreover, pre-war conditions of Kurds living in Syria were also difficult with no official identity or recognition as citizens and basic rights (education and health care) (Yildiz, 2005). This may shed light on the different perceptions on post migration experiences.

Another factor affecting RPMS is proficiency in speaking Turkish. In different studies, no evidence

was found regarding the relationship between language skills and RPMS, but studies show that lack of language skills is a stressor for post-migration mental problems (Dangmann et al., 2021). Moreover, there are studies in the literature that showed that inadequate knowledge of the language of the local culture may be linked to a range of mental health problems amongst immigrants (Brown et al., 2010; Damen et al., 2021). Dangmann et al. (2021) attribute the decrease in psychological problems in children to the improvement in their language skills.

Furthermore, we found a negative relationship between social support and RPMS. Studies measuring the relationship between social support and depression have found that the two are inversely related to each other (van der Boor, 2020; Ryan, 2021). Close relationships with relatives, being married, having emotional support from a spouse and family, living with extended family, and positive relationships with family were found to be effective when counteracting mental health problems amongst immigrants (Guo & Stensland, 2018). Li et al. (2021) argue that social support increases psychological well-being and alleviates the effects of stressors. It could be that an increase in social support for immigrants is effective in reducing RPMS via making them more visible and by increasing their social participation (Lai et al., 2019; Vaughan et al., 2016).

Limitations, implications, and conclusion

This study, to our knowledge, is the first to investigate the RPMS of Syrian refugees in Turkey and its relationship with social support and well-being. However, the work is not without its limits. First, due to the mobility of refugees and the difficulty of identifying the same people at the same address, test retests could not be performed in the first phase. The second limitation is that, due to the cross-sectional nature of the study, we could not assess stress over a period. For this reason, in future studies, longitudinal studies could be undertaken to allow for a better understanding of the characteristics and processes of RPMS. The third limitation is the observation that a significant number of Syrians refused to participate in the survey due to privacy concerns. Using online

platforms and a nationally representative sample of hard-to-reach groups is recommended. In future studies, RPSM scale can be used in quasi-experimental studies to test the effectiveness of various interventions for refugees and this could provide evidence-based, practice-oriented data.

Declarations

No funding was received for conducting this study.

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Authors declare no conflict of interest.

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Appendix 1. The Refugee Post-Migration Stress Scale (RPMS)

Arabic version

يرجى أن تضع علامة موضحا هل غالبا ما تتعرض إلى موقف من المواقف التالية في تركيا؟

أبدا	نادرا	أحيانا	غالبا	كثيرا	
					1 التمييز من قبل السلطات التركية
					2 التمييز في المدرسة أو العمل
					3 الشعور بعدم الاحترام بسبب جنسيتي
					4 قيام أشخاص بتلميحات عنصرية تجاهي
					5 الانزعاج بسبب صعوبة التواصل باللغة التركية
					6 صعوبة فهم الأنشطة اليومية المعتادة في تركيا (التسوق, قطع التذاكر, السفر.....إلخ)
					7 صعوبة فهم الوثائق والمستندات والنماذج المستخدمة لدى السلطات والجهات المعنية
					8 القلق بشأن الوضع المالي غير المستقر
					9 الإحباط بسبب عدم القدرة على إعالة نفسي ماليًا
					10 القلق بسبب الديون
					11 الإشتياق لحياتي الاجتماعية التي كنت أشعر بها في موطني
					12 الحنين إلى بلدي الأم (موطني الأصلي)
					13 الإشتياق للأنشطة التي اعتدت أن أقوم بها قبل المجيء إلى تركيا
					14 القلق على أفراد الأسرة التي انفصلت عنها
					15 لشعور بالحزن بسبب عدم لم الشمل مع أسرتي
					16 الشعور بالاستبعاد أو منعزل في المجتمع التركي
					17 الإحباط بسبب فقدان المكانة في المجتمع التركي
					18 الإحباط بسبب عدم قدرتي على الاستفادة من إمكانياتي في تركيا
					19 خلافات مزعجة في أسرتي
					20 الشعور بعدم الاحترام في أسرتي
					21 الشعور بعدم الأهمية في أسرتي

Examining Online Comments of Employee Through The Concept of External Whistleblowing: A Study on Restaurants

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Abstract

The concept of whistleblowing is very important in revealing all illegal behaviors and negative actions in businesses. Those who disclose these events are called whistleblowers. Whistleblowing has become an increasingly important concept in recent years. The aim of this study is to determine the negative behaviors experienced in restaurant businesses, and to determine the attitudes and behaviors of employees and managers against these negative actions. In this context, this study used employee platform websites to examine employee feedback. The US-based company has had a platform where users can write reviews of companies and job opportunities since 2008. Employees can express their views and feedback about the organization on this platform. 1.250 restaurant reviews in English with searchable comments have been uploaded to the platform. These restaurants have been evaluated for unethical acts such as low pay and overtime, illegal negligence and policies, psychological violence, harassment and discrimination, workplace safety, mismanagement and theft. According to the results obtained, those working in restaurants are exposed to these whistleblowing categories. Employees mostly complain about poor management and lack of support from managers and therefore use external disclosure channels.

Keywords: Whistleblowing, External Whistleblowing, Restaurants, Employee, Online Comments

Öz

İhbarcılık kavramı, işletmelerdeki tüm yasa dışı davranışların ve olumsuz eylemlerin ortaya çıkarılmasında oldukça önemlidir. Bu olayları ifşa edenlere muhbir denir. İhbarcılık son yıllarda önemi giderek artan bir kavram haline gelmiştir. Bu çalışmanın amacı, restaurant işletmelerinde yaşanan olumsuz davranışları belirlemek ve bu olumsuz davranışlara karşı çalışan ve yöneticilerin tutum ve davranışlarını belirlemektir. Bu bağlamda, bu çalışmada çalışan geri bildirimlerini incelemek için çalışan platformu web siteleri kullanılmıştır. ABD merkezli şirket, 2008 yılından bu yana kullanıcıların şirketler ve iş fırsatları hakkında yorum yazabilecekleri bir platforma sahiptir. Çalışanlar bu platform üzerinden kurumla ilgili görüş ve geri bildirimlerini ifade edebilmektedir. Bu kapsamda, bu platformda toplam 1.250 restaurant çalışanın yorumu incelenmiştir. Bu restaurantlar, düşük ücret ve fazla mesai, yasa dışı ihmal ve politikalar, psikolojik şiddet, taciz ve ayrımcılık, iş yeri güvenliği, kötü yönetim ve hırsızlık gibi etik dışı davranışlar açısından değerlendirilmiştir. İhbarcılıkla ilgili bu kategorilere maruz kalmaktadırlar. Elde edilen sonuçlara göre; restaurantlarda çalışanlar ihbarcılık eğilimi göstermektedir ve bunu da dışsal ihbarcılık kanalları ile yapmaktadırlar. Çalışanlar çoğunlukla kötü yönetimden ve yöneticilerin desteğinin olmamasından şikayet etmişlerdir ve bu nedenle dışsal ihbarcılık kanallarını kullandığı görülmüştür.

Anahtar Kelimeler: İhbarcılık, Dışsal İhbarcılık, Çalışanlar, Restaurantlar, Online Yorumlar

Introduction

Today how an organization behaves against the law and ethical principles is gaining more and more importance for both employees and customers (Günay & Özyurt, 2020). Moral rebels operating in the absence of clear protocols or rules are more likely to have worse, stigmatizing experiences due to a lack of protection. Failure of a staff working in a restaurant to wash their hands may require reporting as it violates the hygiene rules and justifies the whistleblower. On the other hand, there is no clear rule prohibiting this, although restaurant employees use nicknames related to their appearance to make it easier for them to remember customers while communicating with each other, even though they act unethically (Chang, 2023).

Whistleblowing is generally handled from a professional ethical perspective (Bouville, 2008). Because whistleblowing occurs only when an individual observes someone else's misconduct and decides to take action, only some subsets of the organization will experience whistleblowing and retaliation (Near & Miceli, 1996).

One factor that distinguishes whistleblowers from informers and gossipers is that whistleblowers aim to stop something wrong and prevent it from happening again (Near et al., 2004). The literature supports that serious consideration of cultural influences and their impact on individual whistleblowing tendencies are important and cross-cultural differences and that ethical perceptions of whistleblowing also influence whistleblowing tendencies (Chiu, 2003). Passive observers who are aware of the abuse but do not report it claim that the abuse they observe is insignificant, has no direct impact on them, and has much less evidence of the abuse than whistleblowers. In addition, passive observers were found to be less involved in organizations than whistleblowers (Miceli & Near, 1985).

According to Miceli (2004), whistleblowers are moderately strong, relatively experienced and high-income, high-performing, morally motivated, and generally more active in seeing and reacting to problems. Interestingly, it turns out that employees who are significantly less likely to express their concerns in real life are more likely to

report hypothetical situations and underestimate retaliation (Oelrich & Erlebach, 2021).

Since the tourism sector has a labor-intensive feature, employees need to notice wrong behaviors and fight against unethical behaviors, since unethical and illegal behaviors between employees and guests, between managers and subordinates, can harm the organization in the long run (Günay & Özyurt, 2020). Recently, the need to understand the existence of whistleblowing in hotel businesses has led to efforts to investigate these activities (Yu et al., 2019).

It is possible to say that tourism sector employees who are generally satisfied with their jobs are more likely to whistle from internal channels (Yu et al., 2019; Srivastava & Gupta, 2022). With the Sarbanes-Oxley Act in the United States and similar laws applied in other countries, public and multinational organizations have recently had to create channels where whistleblowers can report abuse anonymously (Bowen et al., 2010; Ernst & Young, 2009). To avoid harm to whistleblowers and to provide added security to stakeholders and the community, many organizations are turning to increased governance, so it is increasingly important to use the Online Whistleblowing Reporting System (WBRS). Events and setbacks in different markets have increased demand for WBRS and whistleblowing protection, raising public concern about organizational failures. WBRS allows users to submit whistleblowing reports anonymously via the internet and differs from traditional whistleblowing techniques in that it reports to the Supervisor or Ombudsman. Because WBRS requires interaction with computer systems, telephone hotlines, mailboxes, and other internal tools can be used. This complicates the concept of whistleblowing as the user must understand the system to use it successfully (Lowry et al., 2013).

It is thought that this study will contribute to the literature in terms of revealing the channels of disclosure of the restaurant employees' view of whistleblowing on online platforms and how they evaluate these actions.

Whistleblowing Concept

Whistleblowing refers to an employee reporting illegal, unethical, questionable, or wrong behavior within an organization to the authorities or the public, that is, non-binding disclosure (Jubb, 1999). Near & Miceli (1985), who have many studies on this concept, define whistleblowing as "usually reporting a wrongful act to a person or organization believed to have the authority to stop it". Also, they define whistleblowing in other words and more broadly as "disclosure by members of the organization (former or new) of illegal, immoral or illegitimate practices under the control of their employers to individuals or organizations that may take action."

A whistleblower reports behavior that an employee (or former employee) believes is unethical or illegal to management (internal whistleblowing) or external authorities or the public (external whistleblowing) (Bouville, 2008). The act of whistleblowing consists of four elements (Near & Miceli, 1996):

- the whistleblower or person revealing the abuse,
- the revealed misbehavior
- the organization or employees who show misconduct
- the authority (the recipient of information about the abuse)

Keenan (2002) describes whistleblowing behavior in three categories: "serious", "non-serious" and "harming others". According to the author, examples of serious misconduct include theft of business funds or property, bribery, or kickbacks. Non serious behaviors can be exemplified as abuse by consultants or vendors, unfair advantage, or wasteful use by purchasing unnecessary or inappropriate services or goods. Also, examples of behavior that harms others are discrimination, sexual harassment, and health and safety violations.

Types of Whistleblowing

Park et al. (2008) examine types of whistleblowing in three dimensions. Each dimension represents an employee choice: "formal versus informal,

identified versus anonymous, internal versus external".

Table 1. Types of Whistleblowing

Whistleblowing Types	Formal	Informal
	Identified	Anonymous
	Internal	External

Source: Park et. al. (2008)

Park et. al. (2008) explains formal whistleblowing as "an institutional form of reporting wrongdoing, following the standard lines of communication or a formal organizational protocol for whistleblowing and cultural orientation such reporting, whereas informal whistleblowing is done by the employee personally telling close associates or someone s/he trusts about the wrongdoing". Also they define identified whistleblowing as "an employee's reporting of a wrongdoing using his or her real name (or in some other form giving information which might identify him or her) whereas in anonymous whistleblowing the employee gives no information about himself or herself, and may use an assumed name".

Çolak & Genç (2018) state that the internal and external whistleblowing patterns vary according to the employees' feelings of hope or anger, their seniority, the evidence they have, and their individualism and idealistic levels. Also, Oelrich (2021) states that personal and organizational factors affect internal or external whistleblowing behavior. Table 2 demonstrates these differences.

Table 2. Internal and External Whistleblowing Behaviors

Internal Whistleblowing	External Whistleblowing
Feeling of hope feeling of anger	Feeling of anger
High seniority Low seniority	Low seniority
Weak evidence or no evidence	Strong evidence
Low individualism and idealism	High individualism and idealism
Personal and organizational factors	Personal and organizational factors

Source: Barnett, Cochran & Taylor, 1993; Henik, 2015; Dworkin & Baucus, 1998, Nayir & Herzig, 2012, Colak & Genc, 2018, Oelrich, 2021.

Internal whistleblowing occurs when a whistleblower reports that an employee in an organization has committed misconduct. On the contrary, external whistleblowing occurs when a whistleblower reports misconduct to a person or institution outside of the organization, such as law enforcement or the media (Caillier, 2015). In external whistleblowing, fraud is reported to an external organization believed to have the necessary authority to correct the fraud (Park et al., 2008).

Intention to internal whistleblowing is the act of an individual to report unethical behavior to the top management of an organization (Nisar et al., 2019). Internal whistleblowing is defined as the insider disclosure of unfair or suspicious activities within an organization to detect and address workplace abuse (Near & Miceli, 1985). For this reason, it is important to encourage employees to internal whistleblowing to adopt ethical standards of behavior in the tourism sector, protect the image of the business, and fulfill responsibilities toward stakeholders (Cheng et al., 2017).

This study is about external whistleblowing, as employees examine the reports they have expressed on an online platform open to everyone outside the organization. Since there is no other study examining the external whistleblowing behavior of tourism workers on an online platform, it can be said that this study is the first study on this subject. In addition, examining the external whistleblowing of the employees is important in terms of preventing external whistleblowing and encouraging the employees to internal whistleblowing.

Studies in the Literature on Whistleblowing

Some studies in the literature on Whistleblowing, which has become a very popular topic in the field of organizational behavior in recent years, are as follows;

Çekiç et al. (2023) analyzed nurses' ethical attitudes, whistleblowing intentions and reasons, and the relationship between them. According to the result obtained, nurses mostly encounter unethical events related to management. It has been observed that the reporting rates of unethical incidents are high and they do not hesitate to

report, but try to keep the incidents within the institution. Also, idealistic nurses are more likely to whistleblowing, and the reasons for whistleblowing are mostly associated with moral and professional values. It is recommended that the ethical position of Nurses in Clinical Practice and their whistleblowing intentions and motives be supported and developed through the corporate culture.

Callahan & Dworkin (1994) argue that when employees fail to get results in internal whistleblowing or when they believe that senior management is involved in wrongdoing or they fear the employer, they are more likely to use mass media as an external whistleblowing channel.

Lin et al. (2022) emphasized that whistleblowing has an important role in preventing corporate misconduct. He investigated the effect of internal whistleblowing on the risk of stock price collapse in China. It shows that internal whistleblowing reduces companies' accounting violations and fraud risk. Rorthschild & Miethe (1999) found that 44% of malpractices changed as a result of external whistleblowing and 27% as a result of internal whistleblowing.

Smaili et al. (2022) argued that businesses increasingly have special systems and personnel (receivers) to receive and process internal whistleblowing reports, and it is important to establish and improve internal whistleblowing channels. Nielsen (1996) considers why and how external whistleblowing should be implemented in the absence of an effective internal whistleblowing system

Indari et al. (2022) found that the sense of organizational support affects the relationship between organizational commitment and whistleblowing intention. Saygan (2011); Lindblom (2007); Yılmaz (2015 and Ray (2006) stated that there is a relationship between whistleblowing and organizational ethical climate and ethical dilemma. Atalay (2017) found that the perception of organizational justice plays a role in reporting ethical violations. Seifert et al. (2014) suggested that trust is a mechanism that connects whistleblowing with organizational justice.

Çetinel & Taslak (2019) found that there is a relationship between the personality traits of the employees and their whistleblowing tendency. He

found that perceived organizational justice had an effect on whistleblowing tendency. He concluded that perceived organizational justice does not have a mediating role in the relationship between personality traits and whistleblowing tendency. Iwai (2021) found that fear of retaliation has a mediating role in the effect of peer ethical behavior on whistleblowing intentions in organizations.

Scheetz et al., (2021) discussed the relationship between perceived power of internal control and whistleblowing intentions in non-profit and operating organizations. In conclusion, he stated that the use of an anonymous website for whistleblowing in a non-profit organization may require additional attention and resources if employees in nonprofit organizations use this medium to the extent that it is used in a for-profit organization. Lee et al., (2021) found that the more ways of protection against whistleblower are available at key reference points, the higher their intention to disclose wrongdoing and whistleblowing.

Srivastava et al., (2023) investigated the direct effects of workplace bullying on internal whistleblowing and workplace withdrawal in the hospitality industry, as well as indirect effects, including the mediating role of moral injury and the moderator role of inclusive leadership. According to author's findings harassment in an organization has a direct impact on internal whistleblowing and dismissal from the workplace. Moral harm plays a mediating role in the relationship between workplace harassment and whistleblowing, workplace harassment and workplace withdrawal.

Mkheimer et al., (2023), in the study on hotel workers, has examined the relationship between the ethical behavior of managers and the internal monitoring of hotel staff through its role as a mediator of organizational virtue. According to the findings ethical leadership has a positive effect on organizational virtues and thus has a significant impact on whistleblower intentions. Intention of moral subordinate leaders to denounce associations mediated in part by organizational virtues. To help them report ethical violations, most hotel employees need organizational characteristics (such as organizational climate and psychological empowerment) as well as personal

characteristics (such as moral courage and moral efficacy).

According to Rabiul et al. (2021) reports are very important, especially in the hotel industry. Mesmer-Magnus and Viswesvaran (2005) note that, to the authors' surprise, a strong positive relationship was found between proximity to the offender and intention to report. Yu et al. (2019), draw attention to the need to understand why whistleblowing occurs in hospitality establishments drives recent efforts to investigate some of the whistleblowing activities.

Srivastava & Gupta (2022) found that there is a positive relationship between workplace spirituality and internal whistleblowing in hotel operations. They found that employee moral courage and ethical leadership had a parallel mediating effect on the relationship between workplace spirituality and internal whistleblowing.

Abdelaal & Nafei (2022) found that there is a significant relationship between ethical awareness in hotel employees and external whistleblowing, anonymous, and internal whistleblowing intentions. Also they found that cultural values have a moderator role on the impact of ethical awareness only through internal and anonymous whistleblowing intent.

In the light of these studies, it can be stated that whistleblowing has an important place in businesses. If whistleblowers perceive that they will not be punished or faced with retaliation, they can report the actions that have occurred or may occur in the enterprises to the relevant units, and this ensures that possible mistakes are prevented in the enterprises.

Method

Research Design

The "indeed" website for the human resources platform was used in this study to examine the employee comments. This company, which is based in the US, has a platform where users can post reviews of businesses and job openings since 2008. Employees can express their opinions and assessments of institutions on this platform. On this platform, 1.250 restaurants reviews in the

English language with comments were downloaded for the study. A web-scraping programme was used to collect comments between March and May 2023. The data was obtained using the WebHarvy 5.0 program. Orange program was used to create word clouds. The comments gathered span the period from May 2023 through the end of 2008, when the platform first began accepting comments. The data were moved into the context of Excel.

Online whistle-blowing reviews were looked for and learned about using the content analysis technique. The study subjects and online reviews that emerged in the first stage are correctly categorised by "manual content analysis". The hidden message content, which consists of ideas that cannot be measured, can be found using this technique (Neuendorf, 2002)¹. Three researchers looked at online comments independently and produced precoding classifications to identify statements. To avoid overlaps in the themes and key ideas discovered, the researchers collectively discussed the data.

The 1.250 comments were initially coded and examined by the researchers. The content analysis involves two steps, which are as follows:

Step 1: The researchers chose words or phrases from the descriptions that were connected with the whistle-blowing characteristics based on their definitions.

After generalising the assertions from Step 1, the researchers divided them into a number of distinct qualities. A word cloud of the dimensions obtained from the comments was created.

The purpose of the research was to acquire a thorough understanding of how restaurant employees thought about whistleblowing; hence the research methodology was created within an interpretative paradigm that used a broad inductive qualitative technique. In Figure 1, the research procedure is depicted.

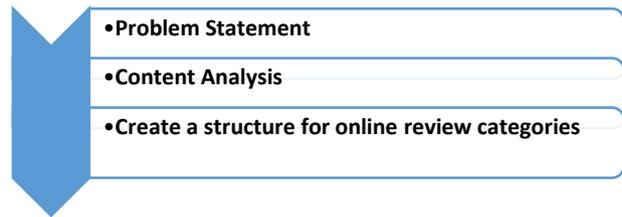


Fig. 1. Research Process

Each researcher evaluated the content of the sample individually. The early findings were contrasted. The researchers jointly examined the context when differences arose, analysed them, and came to their conclusions. To prove the validity and reliability of the content analysis, interrater reliability was investigated. The rate of coding consistency was 89%.

Results

Results on Whistleblowing Dimensions

Six dimensions were chosen as a consequence of the content analysis. The analysis unit consists of sentences assembled from complaints made by restaurant staff members and explanations of whistleblowing. Following that, the researchers used qualitative analysis to group the sentences. Table 3 provides a summary of the content analysis' findings. The following is a thorough explanation of some of the major conclusions:

Table 3: Dimensions and Keywords of Whistleblowing

	Dimension	Keywords
Whistle-Blowing	1. Low wages and overwork	Hours, work, long, pay, low, time, management
	2. Illegal omissions and policies	Work, policy, managers, employees, company
	3. Psychological violence, harassment and discrimination	Harrasment, management, sexual, discrimination
	4. Workplace safety	Stressful, work, environment, busy, times, safety
	5. Poor management	Management, bad, poor, work, pay, rude, low, time
	6. Theft	Horrible, rude, burglarly, wrong, food, place, stealing

¹ Neuendorf, K. A. (2002). *The content analysis guidebook*. Thousand Oaks: Sage Publications

their goals, it also reveals a number of activities in order to prevent mistakes in the enterprises and to take the necessary measures.

Mistakes in businesses are reported through internal and external whistleblowing channels. It is expressed as a person who has the right to access information, although there is no obligation, voluntarily, to a person or institution outside or inside the organization that has the authority to correct the injustice, a real or anticipated injustice or an illegality that can be considered important within the scope of the organization, to the relevant channels. For employees, this may not be as easy a process as it seems, and sometimes retaliatory actions may be encountered.

Thanks to "whistleblower", many unethical activities such as cheating, extravagance, mismanagement, workplace safety problems, psychological violence, discrimination, harassment and abuses, neglect and theft are uncovered and the relevant institutions are provided to take measures against them.

In this study, the comments of restaurant employees on the online platform, where they disclose their approaches to the business they work and the negative actions experienced in the businesses were examined. According to the findings obtained from the research, the employees disclosed that they received low wages despite the difficult working conditions. They also stated that they were uncomfortable with long working hours. It has been stated that the employees are not given legal leave, that there is no forgiveness policy for the sick days, which a lot of work is done with less labor, and that the negativities experienced due to too many working hours are normalized and are not reflected in the salary. It was also stated that breaks were not used during long shifts and vacation wages could not be collected.

Employees were able to easily share their thoughts on this issue on the online platform. It can be said that voicing this on such a platform enables the employee to easily express the negativities in the workplace. Using external whistleblowing channels is important because it enables the employee to express their feelings and thoughts without being exposed to fear and retaliation.

Another finding obtained from the research is that there are sexual harassment incidents against employees, but nothing is done to prevent this, and even negative practices such as humiliation, threats, racism and harassment are made by the management. It has been observed that there are discriminations such as gender discrimination and weight. The management should take the necessary measures in this regard as soon as possible, legal actions should be initiated to protect the legal and legal rights and the mobbing applied to the employees should be eliminated.

In the research, it was stated that workplace safety was insufficient in restaurants, there were small working areas and insufficient staff. It has been determined that worker violations and unnecessary standardization and inspections have a negative impact on both employees and customers and cause an unsafe environment. In such a business environment, it will be very low to ensure employee satisfaction. The top management of the enterprise should take urgent measures to provide a safe and peaceful working environment to the employees and to balance the workload of the employees. It is very important to create a safe workplace environment in order to ensure the well-being of the employees and increase their motivation.

In the research, it has been determined that there are types of theft such as theft of safes and theft of food in restaurants. Whistleblowers have reported that theft is often caused by management bad practices and lack of system. Also, it has been found that whistleblowers use external disclosure channels as a result of bad management in restaurant businesses, the management does not take the necessary measures in case of negativities in the enterprises, and as a result, whistleblowers prefer directly external disclosure channels.

This research revealed the importance of business management. The company needs to support its employees and take the necessary measures quickly in the face of adverse events. The most important resource that helps businesses reach their goals is human resources. Open communication channels should be established in the business. Employees should be able to report negative actions to the senior management and relevant authorities without fear and thinking that

they will be exposed to any retaliation. If negative events in businesses are not resolved, these unethical events affect both employees and businesses. For this reason, it is important that negative actions in whistleblowing businesses are identified and shared with the relevant institution, organization and public vote in order to take the necessary precautions.

The research includes the attitudes and behaviors of restaurant business employees towards negative events. In this context, it can be said that the study contributes to the public, businesses, employees and managers. Preventing such negative events will contribute to the expansion of the fields of the enterprises and their longevity. The reasons such as the closed communication channels in the restaurants discussed in the research and the lack of awareness about ethical values do not constitute a healthy basis for internal disclosure channels. In this context, the importance of creating more open communication channels for restaurant businesses has emerged.

This study is limited to restaurant employees only. And the limitation of the research is that it only includes 1250 reviews of restaurants on the Indeed platform. In future studies, the whistleblowing behaviors of employees in different organizations in the tourism sector can be examined. In addition, the tourism sector can be compared with different sectors.

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