

## THE EFFECTS OF PSYCHOLOGICAL SAFETY AND THE WORKPLACE FRIENDSHIP PREVALENCE ON JOB ENGAGEMENT: A RESEARCH ON NURSES

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### Abstract

*The aim of this study is to examine the effects of psychological safety and workplace friendship prevalence on job engagement among nurses. The population of the study consists of approximately 290,000 nurses working in both public and private hospitals in Turkey. The sample comprises 511 nurses selected through an online survey. We used frequency analysis, reliability analysis, normality testing, exploratory factor analysis, correlation analysis, and regression analysis to analyze the collected data. The correlation analysis revealed a positive and significant relationship between psychological safety and workplace friendship, psychological safety and job engagement, and workplace friendship prevalence and job engagement. The regression analysis further indicated that psychological safety and workplace friendship have significant effects on job engagement. We observed that nurses in healthcare institutions with higher levels of workplace friendship exhibit greater job engagement. Based on these findings, the study provides recommendations in its conclusion to enhance both workplace friendship and job engagement in healthcare institutions.*

**Keywords:** *Psychological Safety, Workplace Friendship Prevalence, Job Engagement.*

## PSİKOLOJİK GÜVENLİĞİN VE İŞYERİ ARKADAŞLIĞININ YAYGINLIĞININ İŞE BAĞLILIK ÜZERİNDEKİ ETKİLERİ: HEMŞİRELER ÜZERİNE BİR ARAŞTIRMA

### Öz

*Bu araştırmanın amacı hemşirelerde psikolojik güvenliğin ve işyeri arkadaşlığının işe bağlılık üzerindeki etkilerini incelemektir. Araştırmanın evrenini, Türkiye’de hem devlet hastanelerinde hem de özel hastanelerde çalışmakta olan yaklaşık 290.000 hemşire oluşturmaktadır. Araştırmanın örneklemini çevrimiçi anket yoluyla seçilen 511 hemşire oluşturmaktadır. Elde edilen verilerle frekans*

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*analizi, güvenilirlik analizi, normallik testi, keşfedici faktör analizi, korelasyon analizi ve regresyon analizi yapılmıştır. Korelasyon analizi, psikolojik güvenlik ile işyeri arkadaşlığı arasında, psikolojik güvenlik ile işe bağlılık arasında ve işyeri arkadaşlığı ile işe bağlılık arasında pozitif yönlü ve anlamlı bir ilişki olduğunu ortaya koymuştur. Araştırma kapsamında yapılan regresyon analizinin sonucuna göre psikolojik güvenliğin ve işyeri arkadaşlığının işe bağlılık üzerinde anlamlı etkilerinin olduğu tespit edilmiştir. Sağlık kuruluşlarında işyeri arkadaşlığı yoğunlaştıkça hemşirelerin işlerine olan bağlılık seviyelerinin arttığı gözlemlenmiştir. Bu nedenle araştırmanın sonuç bölümünde sağlık kuruluşlarında hem işyeri arkadaşlığını hem de işe bağlılığı arttıracak öneriler sunulmuştur.*

**Anahtar Kelimeler:** Psikolojik Güvenlik, İşyeri Arkadaşlığının Yaygınlığı, İşe Bağlılık.

## Introduction

Job engagement refers to the degree of emotional attachment and dedication that employees demonstrate toward their tasks. Employees with high levels of engagement to their work are more likely to show high motivation and performance. This allows for increased customer satisfaction, loyalty and overall well-being of the organization. Therefore, understanding the factors affecting job engagement is of great importance for institutions operating in the health sector (Hanaysha, 2016, p. 292).

Psychological safety is defined as the perception that one can express themselves without fear of harming their image, status or career (Golzad et al., 2023, p. 5). The concept of psychological safety relates to how employees receive answers to work-related questions (Cho et al., 2023, p. 448). Psychological safety plays an key role in creating a supportive work environment, especially under high-pressure conditions. Employees who feel safe in the organization they work for can take risks, share ideas, and become prone to collaborative problem solving. This also increases their level of commitment to their job over time (Oppert et al., 2022, p. 11).

Workplace friendships are very important in organizations where both teamwork and cooperation are at the forefront. Employees feel a sense of belonging and social support when they experience a widespread friendship environment in the organization they work for. Thus, both job satisfaction and engagement to work increase (Andika et al., 2023, p. 3132).

As cornerstone professionals in the healthcare system, nurses often work under challenging conditions, including heavy workloads, long hours, and high stress. These demanding circumstances amplify the importance of factors that can influence both individual performance and organizational success. Therefore, understanding the effects of factors such as workplace friendship and psychological safety on nurses' job engagement is critical to enhancing their workplace satisfaction and productivity.

This study aims to examine the impact of workplace friendship and psychological safety on job engagement among nurses. It examines how nurses' social relationships and perceptions of safety at work affect their engagement levels. Job engagement levels among nurses directly influence the quality of patient care and their turnover intentions. Hence, understanding the role of social factors like workplace friendship and psychological safety in fostering engagement is essential for both individual and organizational improvement.

Stressful and demanding work environments can negatively affect nurses' job engagement. However, there is limited literature exploring how factors such as workplace friendship and psychological safety might mitigate these challenges. This study addresses this gap by focusing on the nursing profession, providing valuable insights for healthcare administrators on fostering workplace friendship and enhancing psychological safety to improve employee engagement. The findings are expected to guide healthcare leaders in developing strategies to promote supportive, collaborative and engaging work environments.

## **1. CONCEPTUAL BACKGROUND**

In this part of the research, the conceptual background of the variables will be presented.

### **1.1. Psychological Safety**

Psychological safety refers to employees' perception of how their workplace responds to actions such as asking questions, reporting potential mistakes, seeking feedback, or expressing new ideas will be received in their workplace (Nergiz, 2015, p. 225). Horuz and Taşgit (2020, p. 1520) define psychological safety as an employee's ability to express themselves without fear of negative impacts on their status, image, or career. The team or group assesses psychological safety, unlike the concept of trust, which reflects interactions between two individuals.

Psychological safety, which determines the perceived risk and psychological comfort levels of employees in organizations, allows them to express themselves without fear. In situations where employees might encounter unexpected challenges, they may need to make quick decisions. Employees who feel stressed in such situations are more likely to make mistakes. However, those who feel psychologically secure and comfortable can manage stress more effectively and overcome potential problems with ease (Erkutlu et al., 2019, p. 169).

The characteristics of psychological safety include feelings of security, stability, protection, and freedom from fear, anxiety, and chaos. Employees who overcome their fear can express themselves confidently in their professional lives. Therefore, an organizational environment where all

employees feel comfortable and free to voice their thoughts is considered psychologically safe (Soyalın, 2021, p. 43).

Psychological safety strengthens the bond between employees and the organization, enhancing organizational commitment, job involvement, and teamwork. Consequently, it contributes to the formation of strong and positive relationships among employees (Schaubroeck et al., 2011, p. 866). Koçak (2020, p. 123) explains the factors affecting psychological safety in organizations as follows:

- **Interpersonal relationships:** Strong relationships among employees enhance perceptions of psychological safety.
- **Group Dynamics:** Effective communication, participatory decision making and conflict resolution foster psychological safety.
- **Management Structure:** Supportive and flexible managers help employees feel secure and in control of their tasks.
- **Organizational Norms:** Clear work and behavioral standards create a sense of security for employees.

In organizations, employees feel psychologically safer when they encounter fewer obstacles in achieving their personal goals (May et al., 2004, p. 159). Employees who perceive that they work in a safe organization both learn from their mistakes and accept their failures. Consequently, employees who feel psychologically safe can express their personal thoughts and ideas through their work without hesitation. Knowing they will not face negative reactions for their views, they avoid feelings of shame (Edmondson and Lei, 2014, p. 25).

The concept of psychological safety is particularly important in high-stress and complex environments like healthcare. Nurses, who play key roles in decision-making, problem-solving, and team collaboration during patient care processes, need a safe space to express themselves while fulfilling these responsibilities. In a work environment with high psychological safety, nurses can openly share their potential mistakes, express their concerns, and generate creative ideas (Rangachari and Woods, 2020, p. 4). As a result, this positively impacts individual and group performance, as well as patient safety. Thus, developing organizational policies aimed at strengthening nurses' perceptions of psychological safety can contribute significantly to improving the quality of healthcare services.

## **1.2. Workplace Friendship Prevalence**

Not only are workplaces spaces for professional activity, but they also serve as environments for social and emotional connection. Achieving organizational goals, ensuring desired performance, fostering employee commitment, and enhancing job satisfaction require the development of workplace friendships that address employees' social and emotional needs (Almaki Alparslan et al., 2015, p. 178). Friendship in the workplace enables

organizations to have a more harmonious and integrated working environment (Methot et al., 2016, p. 325).

Şahinbaş and Erigüç (2019, p. 1206) define workplace friendship as relationships between individuals working in the same organization, encompassing mutual bonds, trust, shared values, and common interests. Wright (1984, p. 121) emphasizes that workplace friendships arise as a result of voluntary interactions among organizational members. Similarly, Berman et al. (2002, p. 222) describe workplace friendship as informal, voluntary, and one-on-one interactions occurring among employees. Xiao et al. (2020, p. 2) highlight that workplace friendship facilitates social interactions and is becoming increasingly prevalent due to horizontal organizational structures. Huang (2016, p. 569) describe workplace friendship as interactions resulting from individuals working on similar tasks and developing closer relationships in the process.

Chen et al. (2012, p. 22) emphasizes that workplace friendships connect employees within organizations and contribute to creating a positive work environment (Suomi et al., 2021, p. 55). Colleague support, when combined with a warm and supportive work environment, enhances employee satisfaction and commitment. Bakan et al. (2020, p. 261) note that workplace friendships foster a sense of social support, allowing employees to develop feelings of trust toward themselves, their organizations, and their colleagues.

The defining characteristic of workplace friendship that sets it apart from other workplace relationships is voluntariness. Unlike hierarchical or peer-professional relationships, workplace friendships arise from employees' voluntary choice (Şahinbaş and Erigüç, 2019, p. 1206). Workplace friendships focus on the emotional connections between employees rather than professional duties (Berman et al., 2002, p. 217).

The initiation, development, and maintenance of workplace friendships in organizations require effective communication. Factors such as personality traits, shared tasks, the use of information and communication technologies, and the frequency of face-to-face interactions are crucial for the development of workplace friendships. According to social learning theory, a high level of workplace friendship fosters an environment of mutual support and knowledge sharing (Bakan et al., 2020, p. 261).

According to Üçok (2021, p. 39), the following factors influence the formation of workplace friendships:

- **Similarity and Affinity:** Individuals tend to feel closer to those who are similar to themselves. People with similar cultural and demographic backgrounds often form strong friendship ties.
- **Personality Traits:** Employees with similar personality traits, such as being introverted, are more likely to develop workplace friendships.

- **Shared Workspaces and Projects:** Employees working in the same department, on joint projects, or attending the same training programs have more opportunities to interact. This increased physical proximity provides a foundation for workplace friendships.
- **Organizational Factors:** Managerial attitudes and behaviors, as well as an organizational culture that encourages communication and knowledge sharing among employees, create conditions conducive to workplace friendships.

In organizations, most interactions occur through informal friendships, connections, and random encounters. Therefore, further research on close friendships can help in better understanding the dynamics of organizational behavior (Kobanoğlu, 2023, p. 312). The nursing profession requires a high level of collaboration and communication, making workplace friendships critically important. The trust, solidarity, and emotional support that nurses provide to each other not only affect their individual well-being but also influence team performance and the quality of patient care. Thus, a comprehensive study of the impact of workplace friendships on nurses' work life presents a significant opportunity for achieving positive outcomes at both individual and organizational levels. Workplace friendships in nursing environments facilitate cooperation and communication, fostering a supportive atmosphere that enhances both personal and professional satisfaction. In high-stress professions like nursing, these friendships can improve emotional resilience, teamwork, and the overall quality of healthcare services provided to patients.

### **1.3. Job Engagement**

Job engagement measures how much an employee dedicates themselves to, adopts, and psychologically integrates with their work. Whether an employee feels a sense of belonging to their job is a concept that often manifests through their attitudes and orientations. The emotions demonstrated or managed within organizations affect employees' sense of belonging (Gülova et al., 2013, p. 56; Yıldız et al., 2017, p. 144).

Bostancı and Ekiyor (2015, p.39) define job engagement as the internalization of values regarding the importance and value of the job, the connection of an individual's identity to the job, and their attitudes and tendencies toward the job. Engaged employees work with their colleagues to improve job performance for the benefit of the organization. Karadirek (2023, p.83) associates job engagement with being energetic, internalizing the job, and dedicating oneself to the work. The employee's sense of satisfaction and positive attitude toward their work reflect their job engagement.

Karacaoğlu (2005, p. 58) explains job engagement as the cognitive state of employees' identification with their work. Engaged employees

experience an increase in their self-esteem, job performance, and success (Mitchell et al., 1975, p. 167). Bulutlar and Öz (2010, p. 81) evaluate job engagement based on how employees relate their work content to their personal lives. Koçak (2020, p. 699) asserts that organizations need job commitment, as employees' dedication to their jobs directly influences the organization's performance and productivity. Employees with high levels of job engagement contribute significantly to high-performance and high-productivity organizations. Job engagement is an essential factor for achieving sustainable success in organizations because employees' dedication to their work enhances their motivation, improves their performance, and contributes to the organizational culture.

Job engagement is considered an important component of nurses' commitment to their professional lives. A nurse's belief in and acceptance of the values of the profession they have chosen, their effort to achieve these values, their desire to develop themselves professionally, and their determination to continue in the profession all express their engagement to their job (Benligiray and Sönmez, 2011, p. 29-30). Employees with high job engagement enjoy their work because they perform their tasks with passion and contribute their unique qualities to the work processes. On the other hand, employees with low job engagement feel aimless and become alienated from the organization they work for (Hafer and Martin, 2006, p. 3). We can classify factors influencing job engagement into two main categories. The first factor includes needs, values, and personality traits, while the second factor consists of the characteristics of the job and the work environment. We understand job engagement as a relatively stable attitude over time. Therefore, Kuruüzüm et al., (2010, p. 186), assume that characteristics such as achievement motivation, motivation, and job values influence job engagement more than the actual work environment.

Ulukan et al., (2023, p. 192-194), view job engagement as a central life interest, reflecting employees' positive character traits and strengths, including happiness. Job engagement, known as a positive emotional and cognitive state that is not temporary but rather enduring and not tied to a specific object, event, or person, involves employees who believe in themselves, create positive feedback, possess values aligned with their organizations, and, even when tired, experience job satisfaction. These individuals are those who think about their work even outside of it (Taniş and Yanık, 2021, p. 463). A complex interaction of individual, organizational, and professional factors shapes the dynamic phenomenon of nurses' job engagement. Therefore, determining the levels of job engagement and thoroughly examining the factors that affect it is of critical importance for the sustainability of the nursing profession and the efficiency of the healthcare sector.

## **2. LITERATURE REVIEW AND HYPOTHESES OF THE RESEARCH**

This section of the research will present a literature review on the relationship between psychological safety and job engagement, as well as workplace friendships and job engagement, along with theories and research hypotheses.

### **2.1. The Relation Between Psychological Safety and Job Engagement**

Organizations that prioritize and foster psychological safety have observed an increase in employees' job engagement and job satisfaction levels. Additionally, this positively impacts the overall success of organizations (Ahmad et al., 2022, p.). The role of psychological safety in the participation of employees in work is important. Employees who feel safe in the organization they work for actively perform their duties. Thanks to psychological safety, employees can take risks without fear of negative consequences and failure (Deng et al., 2019, p.). When organizations encourage their employees to fully engage in their work, they can create a safe space for them. We present a literature review below on the relationship between psychological safety and job engagement:

Kyambade et al. (2024) conducted a study on the relationship between psychological safety and job engagement with 250 academic staff members at public universities in Uganda. The analysis revealed that academic staff members who felt they were working in a university with appropriate working conditions and psychological safety exhibited higher levels of job engagement. Basit (2021) prepared a study on the relationship between psychological safety and job engagement with 337 nurses working in hospitals in the Kuala Lumpur region of Malaysia. The analysis found that as psychological safety increased, so did job engagement. Ge (2020) examined the relationship between job engagement and psychological safety with 153 individuals working in a manufacturing company in China. The analysis indicated that employees who felt psychologically safe in their organizations showed higher levels of job engagement and committed themselves to their work. Kassandrinou et al. (2023) conducted a study with 150 private school teachers, addressing the relationship between employee silence, burnout, job engagement, and psychological safety. The analysis revealed that psychological safety and job engagement had a mediating effect on the relationship between burnout and employee silence. Lyu (2016) prepared a study on the relationship between job engagement and psychological safety with 254 teachers working at private schools in China. The analysis highlighted that employees who felt psychologically safe in their organizations had higher levels of job engagement. Dramanu (2020) conducted a study with 263 teachers working in public schools in Ghana, examining the relationship between job engagement and psychological



safety. The analysis revealed that psychological safety increased teachers' job engagement.

The literature uses the social exchange theory (Khairy et al., 2023, p. 3) to explain the relationship between psychological safety and job engagement. Social exchange theory is based on the norm of reciprocity. According to this principle, when a person exhibits positive behavior toward another, the recipient feels a responsibility to reciprocate with an unspecified positive behavior. Social exchanges generate feelings of personal obligation, gratitude, and trust. Additionally, the benefits of these exchanges do not have a fixed cost. Social exchanges create lasting social patterns (Bahar, 2019, p. 240). The literature review and the social exchange theory inform the formation of the study's hypothesis, as presented below:

H<sub>1</sub>: Psychological safety has a significant effect on job engagement.

## **2.2. The Relation between Workplace Friendship and Job Engagement**

In healthcare institutions, workplace friendship has a significant impact on employees' engagement to their jobs. This relationship contributes to the creation of a positive and engaging work environment (Ugwu et al., 2022, p. 525). Workplace friendships provide social support to employees. These friendships, which foster a sense of connection among organizational members, also enable an increase in job engagement levels. When individuals are engaged in their work, they typically demonstrate high levels of energy and mental resilience. As a result, they put more effort into the tasks they perform (Khairy et al., 2023, pp. 4-5). The literature review on the relationship between workplace friendships and job engagement is presented below:

Büyükyılmaz and Biçer (2018) conducted a study with 281 healthcare staff at Karabük Research Hospital, examining the relationship between workplace friendships, intention to leave, and job engagement. The analysis revealed that workplace friendships have a significant impact on job engagement. Furthermore, the study discovered that job engagement acts as a mediator in the connection between workplace friendships and the intention to leave. Khairy et al. (2023) conducted a study with 320 employees working in five-star hotels in Egypt, exploring the relationships between workplace friendships, psychological safety, servant leadership, and job engagement. The analysis concluded that psychological safety and workplace friendships mediate the effect of servant leadership on job engagement. Öztürk and Bilici (2023) explored the relationships between workplace friendships, job engagement, and employee performance with 404 healthcare employees in Konya. The analysis found significant effects of workplace friendships on both job engagement and employee performance. Wyandini et al.'s (2023) study with 409 employees concluded that workplace friendships positively affect job engagement. Andika et al. (2023) conducted a study with 213 nurses working in hospitals in Kalimantan,

Indonesia, focusing on the relationship between workplace friendships and job engagement. The analysis determined that workplace friendships increase the nurses' job engagement.

The social capital theory explains the relationship between workplace friendships and job engagement. According to this theory, the relationships between employees in organizations can contribute to both emotional and professional resources. Workplace friendships enhance social capital, which in turn increases employees' job satisfaction and job engagement over time (Nahapiet and Ghoshal, 1998, p. 257). We present the following research hypothesis based on the literature review we conducted for this research and the social support theory.

H<sub>2</sub>: Workplace friendships have a significant effect on job engagement.

### **3. METHODOLOGY**

In the next chapter, the methodology of the article will be explained.

#### **3.1. Aim and Importance of Research**

This study examines how workplace friendships and psychological safety affect nurses' job engagement. It explores how social connections and a secure environment within their organizations shape nurses' engagement to their work. We have analyzed the relative impacts of workplace friendships and psychological safety on job engagement in this context. The findings of this study can guide healthcare sector managers in developing policies that foster workplace friendships and enhance employees' psychological safety. Notably, considering the more pronounced effect of workplace friendships on job engagement, supporting such relationships is critical for improving employee engagement.

This study makes a unique contribution to the literature by specifically analyzing the distinctive effects of workplace friendships and perceptions of psychological safety on nurses' job engagement. Several factors distinguish this study from previous research. The study focuses on healthcare workers, such as nurses, and not the general workforce. Studies examining the impact of workplace friendships and psychological safety on job engagement in the healthcare sector are limited. While prior studies often focus on individual or organizational factors, this research highlights the interaction between social bonds (workplace friendships) and psychological safety, providing a more comprehensive understanding of their combined effects. Nurses work in high-stress environments requiring strong interpersonal communication and emotional resilience. This study uniquely explores how workplace friendships and psychological safety mitigate these challenges and enhance job engagement. The findings of the study provide specific

recommendations for healthcare managers and policy makers, shedding light on strategies that will increase both employee engagement and business performance.

### 3.2. Scales

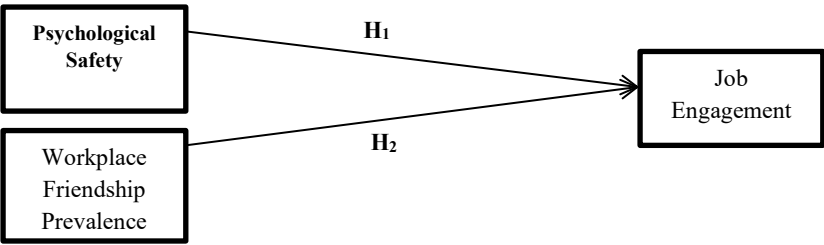
The measurement scales used in this study had not been previously utilized in research conducted in Turkey, as no prior studies or theses explicitly referencing these scales could be identified. Given this, a rigorous adaptation process was followed to ensure their validity and reliability within the Turkish context. The translation and back-translation method was applied to preserve the semantic and conceptual equivalence of the scale items. The initial translation was conducted by bilingual experts proficient in both the source and target languages, and then an independent back-translation was performed to verify accuracy. Both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were performed to establish the construct validity of the scales within the Turkish sample. The results demonstrated that the factor structures were consistent with previous studies, confirming the scales' applicability. Furthermore, reliability analysis indicated high internal consistency, with Cronbach's Alpha coefficients exceeding the acceptable threshold. Considering these methodological steps, the scales were deemed appropriate for use in the Turkish sample. While there were no previous studies using these specific scales in Turkey, the rigorous adaptation and validation procedures ensured their suitability and psychometric robustness within this research.

The measurement of variables in this study utilized the following scales. Workplace Friendship Prevalence: A 6-item scale developed by Nielsen et al. (2000) was applied. The workplace friendship scale was used in the study prepared by Bakan et al. (2020). In the study, the reliability coefficient for the workplace friendship scale exceeded 0.80. Again, in the study of Büyükyılmaz and Biçer (2018) and in the study of Şahinbaş and Erigüç (2019), the workplace friendship scale developed by Nielsen (2000) was used. Job Engagement: A 5-item scale developed by Jung et al. (2021) was utilized. Psychological Safety: A 5-item scale developed by Li and Yan (2009) was used. In our study, the scale developed by Jung et al. (2021) was used as the job engagement scale. Although a direct adapted version of this scale was not available in Türkiye, it was observed that some academic studies referred to the Jung et al. (2021) scale (Gültekin, 2022; Aksu, 2021; Haskebabçı and Aykan, 2024). Although a direct adapted version of the psychological safety scale has not been found in Türkiye, it has been observed that some academic studies refer to this scale (Filiz, 2024). For this reason, scales were adapted to Turkish using the back-translation method based on the original form and in accordance with academic standards during the translation process. During the translation process, feedback was received from academicians who are experts in the relevant field. In

addition, the linguistic and conceptual harmony of the scale was ensured. Therefore, although there are no directly applied versions in the context of Turkey, an appropriate translation process was carried out with academic methods with the sensitivity of using a valid and reliable scale.

The research model for this study is presented below:

**Figure 1. Model of the Research**



**3.3. Population and Sample of the Study**

The population of this study consists of approximately 290,000 nurses working in public and private hospitals in Turkey. The sample of the study includes 511 nurses selected through an online survey method.

Data collection was conducted using Google Forms, and since participants were selected from a specific group (nurses in Turkey), the convenience sampling method was employed (Haşiloğlu et al., 2015, p.20). This method was selected due to ease of access and voluntary participation.

The adequacy of the sample in representing the population is supported by the following calculations (Gürbüz and Şahin, 2017; Örucü et al., 2022, pp.184-185):

Population Size (N): 290,000

Sample Size (n): 511

The determined sample size is statistically accepted as sufficient to represent the general nurse population. It is stated that the sample size is adequate according to commonly used formulas for sample size calculation (e.g., at a 95% confidence level and a 5% margin of error).

$$n = \frac{384,16}{1 + \frac{384,16}{148.000}} = 384 \quad n_0 = \frac{1.96^2 \times 0.5^2}{0.05^2} = 384,1$$

For conducting the surveys of this research, ethical approval was obtained from the Social and Humanities Ethics Committee of a state university, with the approval dated 30/04/2024 and meeting number 2024-4.

## 4. FINDINGS

Demographic findings of the participants is presented in Table 1.

### 4.1. Demographic Findings

**Table 1. Frequency Analysis**

		Frequency	%
Gender	Woman	340	66,5
	Man	171	33,5
Age	25-31 age range	74	14,5
	32-38 age range	163	31,9
	39-45 age range	140	27,4
	46-52 age range	64	12,5
	53 ages and above	70	13,7
	Bachelor Degree	268	52,4
Education	Master Degree	219	42,9
	Doctorate Degree	24	4,7
	Total	511	100

According to the frequency analysis results presented in Table 1, the study included a total of 340 female and 171 male nurses. In terms of age groups, the highest participation was observed in the 32-38 age range, with 163 participants. Regarding educational background, the majority of participants held a bachelor's degree (268 individuals), followed by those with a master's degree (219 individuals), while the number of participants with a doctoral degree was limited to 24.

### 4.2. Findings of Reliability Analysis

The method used to determine whether the measurement tools are reliable is reliability analysis. In reliability analysis, the alpha coefficient ranges between 0 and 1. If the alpha coefficient is between 0.40 and 0.60, reliability is considered low. If the coefficient falls between 0.60 and 0.80, the scale is deemed reliable. When the alpha coefficient is in the range of 0.80 to 1, the scale is considered highly reliable (Gürbüz and Şahin, 2017, p. 160). The findings of the reliability analysis calculated in the study are presented below:

Table 2. Reliability Analysis

	Cronbach's Alpha	N
Psychological Safety	,866	5
Workplace Friendship P.	,898	6
Job Engagement	,881	5

When the alpha values presented in Table 2 are examined, it is found that the value for psychological safety is 0,866, for workplace friendship is 0,898, and for job engagement is 0,881. The internal consistency values among the items of the scales are deemed acceptable and are above the 0,70 threshold.

4.3. Findings of Normality Analysis

In statistical analyses, kurtosis and skewness values are examined to gain insight into the general distribution of the data, determine the normality of the distribution, and identify potential outliers. If the kurtosis and skewness values of the data fall within the range of -2 to +2, it indicates that the data follow a normal distribution and that parametric tests can be applied (Kim et al., 2014, p. 53). The kurtosis and skewness values of the study are presented in the table below:

Table 3. Normality Analysis

	Mean	Std. Deviation	Kurtosis	Skewness
Psychological Safety	2,7229	1,05997	-1,408	0,379
Workplace Friendship P.	2,7828	1,05791	-1,485	0,333
Job Engagement	2,8196	1,09283	-1,513	0,268

When the kurtosis and skewness values presented in Table 3 are examined, it is observed that all values fall within the range of -2 to +2. These results indicate that the data follow a normal distribution.

4.4. Findings of Exploratory Factor Analysis (EFA)

The KMO (Kaiser-Meyer-Olkin) value ranges between 0 and 1. These values determine whether the correlations between variables and the suitability of factor analysis are appropriate. KMO values of 0,80 and above are considered excellent (Büyüköztürk, 2002, p. 483). Exploratory factor analysis reveals the underlying causes of measurable characteristics and uncovers unobservable or unmeasurable dimensions (Tartuk and Turan, 2023, p. 366). The results of the exploratory factor analysis regarding the psychological safety variable are given below:

**Table 4. Exploratory Factor Analysis for Psychological Safety (PS)**

	1
PS2	0,856
PS5	0,820
PS1	0,805
PS4	0,797
PS3	0,758
KMO Value= 0,827	
ChiSquare Value= 1197,791	
Df=10	
Sig=,000	
Total Variance Explained =65,285	

When Table 4 is examined, it is observed that the result of the exploratory factor analysis (EFA) for the psychological safety scale yielded a single-factor solution. It has been determined that the factors explain 65% of the total variance. The results of the exploratory factor analysis regarding the workplace friendship variable are given below:

**Table 5. Exploratory Factor Analysis for Workplace Friendship (WF)**

	1
WF2	0,877
WF1	0,848
WF3	0,812
WF5	0,796
WF6	0,778
WF4	0,776
KMO Value= 0,873	
ChiSquare Value= 1784,036	
Df=15	
Sig=,000	
Total Variance Explained = 66,453	

When Table 5 is examined, it is observed that the result of the exploratory factor analysis (EFA) for the workplace friendship scale yielded a single-factor solution. It has been determined that the factors explain 66% of the total variance. The results of the exploratory factor analysis regarding the job engagement variable are given below:

**Table 6. Exploratory Factor Analysis for Job Engagement (JE)**

	1
JE2	0,877
JE1	0,860
JE3	0,809
JE5	0,793
JE4	0,779
KMO Value=	0,823
ChiSquare Value =	1417,686
Df=	10
Sig=	,000
Total Variance Explained=	67,958

When Table 5 is examined, it is observed that the result of the exploratory factor analysis (EFA) for the workplace friendship scale yielded a single-factor solution. It has been determined that the factors explain 67% of the total variance. Confirmatory factor analysis was performed for the entire research model. As a result of the confirmatory factor analysis, the CMIN/DF (4,529) value was found to be an acceptable value (Gürbüz, 2021). As a result, the values were found as GFI (0,89), CFI (0,92), IFI (0,92), TLI (0,91), RMSEA (0,08). The GFI (0,89) value is considered acceptable (Cho vd., 2020: 197). The CFI (0,92), IFI (0,92), TLI (0,91), RMSEA (0,08) values also indicate acceptable fit (Gürbüz, 2021).

**4.5. Findings of Correlation Analysis**

The correlation analysis findings conducted between the variables are presented in the table below:

**Table 7. Correlation Analysis**

	PS	WF	JE
PS	1		
WF	0,302**	1	
JE	0,41**	0,790**	1

When the results of the correlation analysis presented in Table 7 are examined, it is determined that there is a positive and significant relationship between psychological safety and workplace friendship ( $r(511)$ : 0,302,  $p<0,05$ ), a positive and significant relationship between psychological safety and job engagement ( $r(511)$ : 0,341,  $p<0,05$ ), and a positive and significant



relationship between workplace friendship and job engagement ( $r(511): 0,790, p<0,05$ ).

#### 4.6. Findings of Regression Analysis

The regression analysis findings indicating the effects of psychological safety and workplace friendship on job engagement are presented in Table 8 below:

**Table 8. Regression Analysis**

Independent V.	Dependent V.	B	Beta	t	p	Tol.	VIF
p	JE	,116	,112	3,996	,000	,909	1,101
WF		,781	,756	26,919	,000	,909	1,101
F= 443,311							
R <sup>2</sup> = 0,636							
Adjusted R <sup>2</sup> = 0,634							
DW= 2,153							
Sig.= ,000							
Std. Deviation= ,66086							

When the results of the regression analysis presented in Table 8 are examined, it is found that psychological safety (PG) has a significant effect on job engagement (JE) ( $\beta = 0,112, p<0,05$ ). With this result, H<sub>1</sub> hypothesis is accepted. According to another finding from the regression analysis, workplace friendship has a significant effect on job engagement ( $\beta = 0,756, p<0,05$ ). Therefore, H<sub>2</sub> hypothesis is accepted. Since the 1-R<sup>2</sup> value (0,364) is smaller than the tolerance values, it indicates that there is no issue of multicollinearity (Gürbüz and Şahin, 2017, p. 275). The Durbin-Watson (DW) statistic (2,153) shows that there is no high relationship between the error terms of the dependent variables, meaning there is no autocorrelation (Gündüz and Dağdeviren, 2011, p. 108). The R<sup>2</sup> value (0,636) indicates that 63% of the variation in the dependent variable, job engagement, is explained by the independent variables, psychological safety and workplace friendship. The adjusted R<sup>2</sup> value shows that 63% of the variance in the dependent variable, job engagement, is explained by psychological safety and workplace friendship. When the significance of the model is examined, the ANOVA value (0,000) shows that the regression model is statistically significant.

## **Conclusion**

The research's regression analysis revealed that psychological safety significantly and positively influences job engagement. Ahmad et al. (2022) conducted a study with 483 employees in banks in Pakistan, which yielded similar results. Similarly, Xu et al. (2022) conducted research with 689 nurses working in hospitals in Hebei and Guangxi, China, and found that nurses who experienced psychological safety showed higher levels of job engagement. Rabiul et al. (2023) conducted a study with 294 employees working in hotels in Cambodia, and the analysis revealed a significant and positive effect of psychological safety on job engagement. Another result of the regression analysis indicated that workplace friendship has a significant effect on job engagement. Ugwu et al. (2022) found a similar result with 258 employees working in Nigerian restaurants. The analysis showed that workplace friendship increases employees' motivation and job engagement.

Regression analysis also revealed that workplace friendship had a greater impact on job engagement than psychological safety. In this context, it is evident that, for nurses to establish friendships in their organizations, it is crucial for them to feel a sense of engagement to their work and dedicate themselves to it. Therefore, organizations should not overlook the element of job engagement while carrying out their operations. When nurses develop friendships in the workplace, they are more likely to commit themselves to working toward organizational goals and fulfilling their duties and responsibilities.

While developing the hypotheses, the effect of psychological safety on work commitment was explained by the Social Exchange Theory. According to this theory, individuals are in a mutually beneficial exchange in their social relationships. As a result of the regression analysis, it was determined that psychological safety has a significant effect on work commitment. This result is consistent with the Social Exchange Theory. Employees who feel psychologically safe can express their ideas openly, take risks, and feel valued within the organization. This leads to greater commitment to work. Studies in the literature also support this relationship (Ahmad et al., 2022; Xu et al., 2022). The effect of workplace friendship on work engagement is explained by the Social Capital Theory. According to this theory, social relationships between individuals function as a type of capital, increasing mutual support, trust and a sense of belonging. According to the regression analysis, it was found that workplace friendship has a stronger effect on work commitment. This result is consistent with the predictions of Social Capital Theory. It was determined that nurses with strong social support and friendship relationships at work showed higher work commitment. This finding is consistent with the study conducted by Büyükyılmaz and Biçer (2018) in the literature. In this context, the results of the research support the theoretical infrastructure and reveal the importance of organizational social relations on work commitment.

Workplace friendship strengthens nurses' social connections within their work environment and provides emotional support. In this context, we understand that strong workplace friendships enhance nurses' commitment to their organizations. Friendships established in the workplace not only increase professional resilience, but also strengthen individual motivation, especially in the healthcare sector, where nurses face high pressure and stressful work schedules. Therefore, increasing workplace friendships can be considered a priority goal for organizations. The following suggestions can be made to increase workplace friendship and job engagement in healthcare institutions:

- Encouraging open communication among nurses can create a sincere working environment.
- When healthcare institutions' management shows sensitivity to nurses' personal and professional needs, workplace friendships can be positively affected.
- Nurses can be asked for recommendations regarding social activities and team collaborations. This will make nurses and all valuable healthcare workers feel appreciated and important.
- Organize social and team-building activities to strengthen communication and teamwork.
- Create common spaces where nurses can interact during breaks.
- Encourage collaborative projects to build trust and cooperation.
- Support the integration of new nurses through mentorship or orientation programs.
- Promote open communication and collect feedback on social needs from employees.

The practices aimed at increasing workplace friendship will provide an opportunity for strengthening social bonds among nurses. This, in turn, will indirectly lead to an increase in their job engagement levels. However, the exclusive focus of this study on nurses limits the generalizability of the results to other sectors or professional groups. Future studies involving employee groups from different sectors can contribute to a deeper examination of the relationships between variables. Additionally, addressing factors such as leadership and organizational culture, which influence workplace friendship, could offer a more comprehensive understanding of the topic. In light of these limitations, this research provides valuable insights that can guide practices aimed at increasing job engagement and workplace friendship levels for both nurses and all employees.

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**Hakem Değerlendirmesi:** Dış Bağımsız

**Yazar Katkısı:** İtir HASIRCI: %100

**Destek ve Teşekkür Beyanı:** Çalışma için destek alınmamıştır.

**Etik Onay:** Bu çalışmanın gerçekleştirilmesi amacıyla, Bandırma Onyedü Eylül Üniversitesi Sosyal ve Beşeri Bilimler Etik Kurulu'ndan izin alınmıştır (30-04-2024 / 2024-4) alınmıştır.

**Çıkar Çatışması Beyanı:** Çalışma ile ilgili herhangi bir kurum veya kişi ile çıkar çatışması bulunmamaktadır.

**Peer Review:** Independent double-blind

**Author Contributions:** İtir HASIRCI: %100

**Funding and Acknowledgement:** No support was received for the study.

**Ethics Approval:** Ethics committee approval (30-04-2024 / 2024-4) was obtained from Bandırma Onyedü Eylül University Social Sciences and Humanities Ethics Committee for the purpose of carrying out this study approval.

**Conflict of Interest:** There is no conflict of interest with any institution or person related to the study.

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