Adaptation and Validation of Career Influence Inventory in Turkish Context[1]

Tansu Mutlu Çaykuş[2]

ABSTRACT

This study aimed to adapt the Career Influence Inventory to Turkish and examine its psychometric properties. It is a 4-point Likert-type scale consisting of 35 items and six subscales (Teachers' Influence, Negative Social Events, Parents' Influence, High School Academic Experiences and Self-Efficacy, Ethnic-Gender Expectations, and Friends' Influence). The participants of this study were 386 university students (205 female, and 181 male) studying at different faculties of a state university in Turkey. The confirmatory factor analysis results showed that the Turkish version of the Career Influence Inventory comprises six subscales, as does the original scale (χ^2 (542)=1217.45, p=.00; χ^2/df-ratio=2.25; CFI=.96, NNFI=95; SRMR=.061; RMSEA=.057). The internal consistency coefficient of the entire scale was found to be .86. The internal consistency coefficients of the subscales Teachers' Influence, Negative Social Events, Parents' Influence, High School Academic Experiences and Self-Efficacy, Ethnic-Gender Expectations, and Friends' Influence were .90, .85, .85, .78, .83, and .75, respectively. As a result, the obtained findings indicate that the Turkish version of the Career Influence Inventory is a valid and reliable measurement tool that can be used to determine the influential factors on career development and planning of university students.

INTRODUCTION

A historical review of studies in the field of career counseling reveals that the concept of 'career' has been approached in diverse ways from the past to the present, and as we move closer to the present, it evolves to be addressed more in the context of the individual. Historically, the concept of 'career', which was initially linked to choosing of the most suitable profession for personal characteristics and progress within it, has undergone a semantic transformation over time. Primarily due to the economic imbalances, uncertainties in the business world and changes in jobs, the concept of career has transformed into a structure that includes not only individual factors but also contextual factors (McMahon & Patton, 2018). 'Career' is considered as a multidimensional notion involving the individual's construction and reconstruction with the effect of shifting life roles in the 21st century (Savickas, 2015). As time passes, the concept of 'career' expands beyond an individual's professional life to influence many parts of life (Kalafat, 2019). Thus, the concept of career has evolved to encompass not just choosing a profession but also new terms such as 'unlimited career' and 'multifaceted career', which are based on the mutual interaction of individual and contextual factors and feature individual construction, all finding their place in the relevant literature and in the world of work characterized by uncertainties and unpredictability (Blustein, 2019; Dugger, 2016). As a result, it has become a multidimensional notion that emphasizes connectivity across the past, present, and future while moving away from linearity.

Globalization has had an impact on the lives of people of all ages, either directly or indirectly. These changes, which influence individuals' lifestyles, worldviews, and interpersonal relationships in various ways (Blustein, 2019; Wen et al., 2020), also influence career decision-making, which is regarded as a developmental task that needs to be completed successfully throughout life (Lancaster et al., 1999). Although career decision-making, which enables the individual to take part in the world of work, to get job satisfaction by using their potential, and to draw a suitable path for themselves in their educational life, is regarded as a developmental task, it is also positively and directly associated with having a healthier mood (Arslan & Bayraktar-Uyar, 2020; Polat, 2022), contributing effectively to society (Desjarlais et al., 1995), and experiencing less career-related problems such as frequent job changes and inability to establish work-life balance (Hom et al., 2017). Even though a healthy career decision-making process is associated with positive outcomes in the individual and social context, the career decision-making process, which requires the simultaneous or nearly simultaneous use of many skills, involves a series of difficulties arising from the interaction of personal and contextual factors and career barriers (Ulaş & Kızıldağ, 2018).

Career Decision Making in Emerging Adulthood

Emerging adulthood, which covers university years, in which individuals explore various aspects of their lives such as the world of work, identity, worldview, and interpersonal relationships (Arnett, 2000), is a period in which individuals make decisions about their career, fulfill career development tasks (Şahin, Özaydın, & Siyez, 2019), and try to adapt to the benefits of globalization. In terms of the developmental process, university years are defined as a period in which individuals explore various career alternatives, get ready for the job search process, identify their career and academic goal for their future, synthesize the information they collect in the career decision-making process, and, as a result, are able to demonstrate their career decision-making skills (Gati, Krausz, & Osipow, 1996). In this way, university years transform into a period in which career decision-making skills are exhibited and developmental tasks are fulfilled at the same time. During these challenging years, university students complete career development tasks such as assessing the suitability of the chosen profession/major for themselves, gaining a professional identity, and developing job search skills (Creed, Fallon, & Hood, 2009). In the process of fulfilling these challenging career development tasks, they have difficulties in making decisions about career development issues such as transition from school to work, setting work or educational goals, and self-assessment on the other (Gati, Ryzhik & Vertsberger, 2013; Kelly & Lee, 2002). Previous research (Ranta, Dietrich, & Salmela-Aro, 2014) shows that the emerging adulthood period is when career-related concerns increase and reach their peak. Furthermore, di Fabio et al. (2014) state that, developmentally, university students have higher levels of developmental career indecision compared to high school students. Among the problems that university students seeking assistance at counseling and career centers in universities express and request support about, the problems they experience during their career development process and the stress they have about their career are at the forefront (Akyol & Bacanlı, 2019; Lipshits-Braziler et al., 2017). Many university students in Turkey receive career counseling services in order to change the major they study, to study a major that is more suitable for their individual characteristics and contextual conditions, and to choose a profession that offers wider employment opportunities than the major they study so that they can find a job more easily (Bacanlı and Salman, 2018). A similar situation is true abroad as well, where more than 50% of university students who are dissatisfied with their major want to change it at least once during their education life (Grier-Reed & Skaar, 2010). Students who need career support during their university years and have difficulties in making career decisions feel more stress and anxiety than students who do not experience these difficulties (Anghel & Gati, 2021). Most university students feel lost when they experience career indecision and think that they do not have the skills to make career decisions (Miller & Rottinghaus, 2014). These cumulative experiences and difficulties lead to more career indecision and turn into a phenomenon that creates stress, anxiety, and mental health problems for university students (Parola & Marcionetti, 2022).

The underlying reason for career indecision and difficulties in making career decisions among university students is their lack of knowledge about their individual, environmental, and social characteristics (Yerin-Güneri et al., 2016; Yaghi & Alabed, 2021), limited work experience (Patton & McMahon, 2006), limited exhibition of career exploration behaviors (Lee et al., 2022), lack of consistent information (Yaghi & Alabed, 2021), and limited contextual consideration of their conditions (Lee et al., 2022; Kim & Choi, 2019). Many university students face difficulties in making career decisions because they lack sufficient skills in the transition from university to work, have not developed job search skills, and lack knowledge about the nature of jobs (Atuahene, 2021; Yaghi & Bates, 2020). Studies examining the career indecision levels of university students and the factors that cause them to have difficulty in making career decisions (Lee et al., 2022; Yaghi & Alabed, 2021) emphasize that career support can be provided to students through some preventive and intervention work, thus strengthening their psychological well-being and helping them make healthier career decisions. At this point, to reduce or prevent the lack of knowledge and motivation, which is one of the main problems mentioned, and to develop career development interventions that will facilitate the learning of consistent and accurate information and support the development of effective career planning skills, the first step is for university students to know the factors that affect their career decisions and career development (Atuahene, 2021; Freeman et al., 2017; Yaghi & Alabed, 2021). In addition, it is stated that career indecision cannot be reduced, and career decisions cannot be made without adequate research on individual and environmental characteristics and without sufficient knowledge and awareness of the factors affecting career development (Xu, Hou, & Tracey, 2014).

When studies in the field of career counseling and statements by scientists are examined, it is seen that many factors affecting the career development of individuals have been addressed, and various classifications have been introduced regarding these factors. Studies involving emerging adults (e.g., Fernández, Ryan & Begeny, 2023; Tu & Okazaki, 2021) have revealed that various sociodemographic variables, such as gender, age, perceived socioeconomic status, field of study, and academic year, influence the career development of university students. In addition to sociodemographic factors, attitudes and actions that support career development play a significant role in this process. These include the existence of career exploration (Lee et al., 2022), the utilization of career counseling services (Lipshits-Braziler et al., 2017), and access to career information resources and motivation (Yaghi & Alabed, 2021). Perceived social support (Parola & Marcionetti, 2022), childhood experiences (Parola & Marcionetti, 2022), high academic achievement, and academic self-efficacy (Macakova & Wood, 2020) are among the influential factors when university students make their career decisions. According to Feldman (2003), political and economic trends and developments and current changes in the world of work are among the most important factors affecting university students' career decisions. With the intention of categorizing elements influencing career decisions, several models and theoretical approaches have been also developed in the field of career counseling to synthesize the results of previous studies and/or widespread perspectives on career development. For instance, The Career Sailboat Model (Korkut-Owen et al., 2015a; 2015b) states that individual factors such as aptitudes, interest, values, and personal characteristics, social factors such as friends, family members, relatives, media, and social groups, environmental/societal factors such as globalization, geographical location, and world of work, and the chance factor can be influential factor on individuals' career development and planning process. According to the Systems Theory Framework, which considers the individual as a system and explains the effect of the systems surrounding the individual, with the individual at the center, and the factors in these systems on career development, the individual system characteristics such as gender and age, the social system factors such as friends and teachers, and the environmental-societal system factors such as geographical location and political decisions interact over time and affect the individual's career development (McMahon & Patton, 2018; McMahon, 2020). The previous studies and theoretical frameworks significantly advance our understanding of how people construct their careers, the design of career interventions tailored to their needs, and the organization of more efficient support for individuals looking for career support. Understanding these elements as a result not only adds to the body of knowledge in the field of career counseling but also aids individuals in the process of career development. Individuals can structure their careers, investigate their career demands, and improve their career adaptability by understanding the aspects that have an impact on how people build their careers (Brown, 2016; Niles & Harris-Bowlsby, 2017). For individuals receiving career support, quantitative and/or qualitative assessment tools that facilitate understanding of these factors provide a personal contribution. These tools also help career specialists comprehend their clients holistically, rapport and maintain therapeutic relationships, and design more efficient career support (Rossier & Duarte, 2019). From this angle, it makes sense to claim that the development or adaption of assessment tools aimed at comprehending these elements will improve the career development of both individuals and experts' career counseling competencies. Since these tools assist in revealing individual, interpersonal, cultural, and environmental dynamics across a certain time, individuals can get important insights (Wood & Hays, 2013). Because of the aforementioned factors, assessing and evaluating influential factors on career development is seen as a crucial component of career counseling (Brown, 2016). In the literature, there are qualitative assessment tools developed based on the Systems Theory Approach while examining the qualitative and quantitative assessment tools that comprehensively measure the factors influencing career development. These are the "My Career Chapter: A Dialogical Autobiography" (McIlveen, 2015), the "My System of Career Influences" (McMahon et al., 2013), and the "Career Systems Interview" (McIlveen et al., 2003). As far as is known, the Career Influence Inventory is one of the quantitative assessment tools among these tools. Due to the subjective nature of qualitative assessment, the lack of a clear cause-and-effect relationship between the results of qualitative assessment and an individual's career decisions, the inability to compare these results with those of other people, and this, there is a need for quantitative assessment tools as well (Brown, 2016; Niles & Harris-Bowlsbey, 2017). Therefore, this study intends to adapt the "Career Influence Inventory" which is theoretically anchored in a particular classification system and comprehensively analyzes the factors impacting university students' career development.

Career Influence Inventory

Fisher and Griggs (1995) undertook the categorization of factors influencing career decision-making into six distinct groups, comprising: 1) Parental support, 2) Friend support, 3) Teacher support, 4) Negative social events, 5) Academic self-efficacy, and 6) Ethnic-Gender expectations. This comprehensive classification served as a foundational framework for their subsequent scale development and research endeavors. According to this categorization, family, friend/peer, and teacher influence perceived by university students, negative social events, high school experience and academic self-efficacy, and ethnic–gender expectations play a role in their career development. Given classification of Fisher and Griggs (1995), Fisher, and Stafford (1999) developed the 35-item, six-dimensional Career Influence Inventory (CII) to measure perceived factors that influence on career development of university students. They assigned these names to the sub-dimensions of the scale, resulting in the development of a scale comprising six dimensions and 35 items. The subscales in the CII can be explained as follows:

Parental, Friend/Peer and Teacher Influence: Perceived support, which has been emphasized in many studies in the relevant literature (Parola & Marcionetti, 2022; Wang et al., 2021; Zhang, Yuen, & Chen, 2021), ranks among the foremost factors that shape the career decisions of university students. The support provided throughout career development enables individuals to access the information they need in order to make career decisions, to feel motivated to cope with difficulties when they encounter any, to take suggestions that will facilitate their decision-making, and to receive financial support that will help them implement their decisions (Malecki & Demaray, 2003). Fisher and Griggs (1995) provided a comprehensive explanation of one of these types of support, namely parental support, which included both parental encouragement and their ambitions for their children along the career pathways. Researchers such as Zhang, Yuen, and Chen (2021) and Parola and Marcionetti (2022) have highlighted the critical importance of parental support in individuals' career decision-making, career planning, career-related behaviors, and overall career development processes in the relevant literature. Additionally, there exists a body of research asserting that parental support holds the foremost sway in an individual's career decision-making (Hlad'o et al., 2020; Marcionetti & Rossier, 2016). In addition to the invaluable backing from family members, the reinforcement derived from one's circle of friends/peers constitutes a pivotal pillar in the sphere of individual career development, the intricate process of career decision-making, and strategic career planning.

Despite the paramount role that peer support plays, there exists a notable scarcity of studies that duly emphasize its significance within the overarching realm of career development (Slaten & Baskin, 2014). Acknowledging this research void, Fisher and Griggs (1995) expounded upon the notion of friend/peer influence in the subsequent manner: Friend/peer influence encompasses the expectations that individuals hold for their friends, the support they provide to one another, and the consequent influence of these expectations and support on their academic and vocational aspirations. The presence of nurturing and encouraging friendships holds pivotal significance in facilitating effective career decision-making, particularly during the formative and exploratory phases frequently encountered by university students (Wang et al., 2021). It is highlighted in the associated literature that, in addition to friends and family members, the support backing from teachers, trainers, and instructors can help an individual make a career decision and transition from school to work (Griffin et al., 2019).

Fisher and Griggs (1995) defined teacher support thoroughly, including not just the expectations that teachers have for their students, but also the actual help that teachers provide to facilitate their academic and career goals throughout the career decision-making process. Teacher support encompasses aid in knowledge acquisition, problem-solving, and managing the hurdles offered by stressful events experienced along the career development (Garcia et al., 2015; Han and Rojewski, 2015). A recent study done by Wang and colleagues (2021) involving university students in China found that support from both university instructors and friends plays a critical impact in boosting proactive behaviors. Simultaneously, this support reduces emotional exhaustion during the process of career development and planning, so improving university students' career adaptability. All the opportunities provided through support from family members, friends, and teachers help university students continue their academic life in a stable manner (Sultana & Islam, 2019), to be satisfied with their career decisions (Simmons, 2008), to have reduced future anxiety (Rodriguez, 2009), to have high self-esteem (Marcionetti, 2014) and life satisfaction (Parola & Marcionetti, 2022). In addition, getting support from people in their environment help them to make more definitive decisions regarding their envisioned career pathways (Zhang, Yuen, & Chen, 2021), and to invest greater time and passion into the pursuit of chosen career paths (Griffin et al., 2019; Guan et al., 2018). Two studies including university students in Turkey, Işık

(2013) and Aslan and Koçak (2023), investigated the impact of perceived social support on the vocational decision-making process. They both came to the conclusion that perceived social support from family was related to university students' career outcome expectations.

Especially in countries where collectivist culture is dominant, like Turkey, when people in one's close circle, such as family, friends, teachers, and relatives, support university students during their career decision-making process, hold career expectations from them, collaborate to provide information, and enhance their motivation, this plays a facilitating role in both their education and professional life (Raque-Bogdan et al., 2013). Through the support received from friends, family, and teachers in the career decision-making process, individuals gain an understanding of the world of work, develop new job search skills, accurately assess their circumstances, explore their individual characteristics, and find ways to use their potential in the most appropriate way (Cheung & Arnold, 2014; Sultana & Islam, 2019; Zhang, Yuen, & Chen, 2021). Empirical research continually highlights the important roles that these influential figures collectively help to shaping students' career decisions, developing career decision making self-efficacy, encouraging them to explore multiple career alternatives and increasing career related stress. However, the dynamics of support networks and their impact on professional advancement appear to be complex and culturally dependent. Studies (e.g., Sultana & Islam, 2019; Wang et al., 2021; Zhang, Yuen, & Chen, 2021) involving individuals from various cultural contexts give insight on intriguing differences in how these support systems function and their relative importance. These nuanced findings imply that cultural influences can greatly shape the roles and efficacy of those offering career development support. In this point, Cheung and Arnold (2014) conducted research that yielded interesting findings. This study focused on Hong Kong Chinese university students and discovered a link between their self-efficacy in career decision-making and the level of career-related knowledge acquisition during the career decision-making process, both of which were significantly correlated with friend support. However, it was discovered that teacher support had a greater impact on undergraduate students' self-efficacy and proclivity for career exploration than both friends and parental support in these specific aspects of career development (Cheung & Arnold, 2014). These findings highlight the diverse nature of support systems in the professional decision-making process, as well as the various roles that teachers, peers, and parents play in molding students' career goals and self-efficacy beliefs. As a result, while the general premise of the significance of parental, peer, and teacher support in career development remains unchanged, the exact manifestations and relative influence of these support networks may vary across varied cultural landscapes. This acknowledgement emphasizes the importance of taking a more culturally sensitive and context-specific approach when addressing career development and planning for university students from diverse cultural backgrounds.

Negative social events: The concept of negative social events aims to elucidate the repercussions of challenging and negative social events individuals might encounter, such as the sudden loss of a securely attached family member or close friend, or the diagnosis of a chronic illness (Fisher & Griggs, 1995). These negative social events, such as unexpected family bereavements, challenges faced by peers at school, or other distressing occurrences, have been observed to precipitate a range of issues for the individuals affected, ranging from mental well-being to career development (Fisher & Stafford, 1999). Significant negative social events, such as the death of a loved one or dealing with chronic disease, fundamentally alter people's self-perceptions, beliefs about the world, and interpersonal relationship. These encounters elicit difficult feelings such as anxiety, hopelessness and guilt, which individuals find difficult to regulation. Navigating their career development process becomes a challenging task for those who struggle to regulate their emotion and construct their believes. Because of negative social events, these individuals face difficulties in acquiring knowledge about their personal characteristics, interpersonal dynamics, and environmental circumstances through career development (Chronister et al., 2012). Furthermore, they struggle with exploring career alternatives, defining clear career and academic goals, and displaying the necessary behaviors and having positive attitudes to grow toward these goals during their career development process (Liu et al., 2013; Murphy et al., 2010). Kim and Smith (2021) found that adverse childhood experiences have a direct and negative influence on the career adaptability of female university students. According to their findings of research conducted by Prescod and Zeligman (2018), both trauma symptoms and posttraumatic growth acted as predictors of career adaptability. As found in undergraduate students who have survived traumatic experiences, the presence of trauma symptoms and the possibility for posttraumatic growth can dramatically influence on their career adaptability. Similar to these research findings, Zeligman, Prescod, and Haynes-

Thoby (2020) reached a similar conclusion in a study involving 212 undergraduate students. Their research findings revealed that individuals who encountered more negative social events until their university years had more difficulty in forming their vocational identity and had an unhealthier developmental work personality compared to individuals who encountered fewer events.

High school experience and academic self-efficacy: Fisher and Griggs (1995) focused university students' perceptions on their high school experiences and academic self-efficacy. They hypothesized that these experiences, as well as the level of academic self-efficacy during high school, fundamentally impact university students' career planning, educational and career aspirations, career decision making self-efficacy and overall career development. The Career Influence Inventory' subscale called as "High School Experience and Academic Self-Efficacy" along with the construct of academic self-efficacy, are based on Bandura's (1986) Self-Efficacy Theory. Academic self-efficacy is an individual's belief in their ability to successfully complete tasks presented to them in any learning context (Bandura, 1986). The foundation of this concept is people' belief in their ability to perform academic responsibilities at a set level competently (Bandura et al., 1996). Individuals with high levels of academic self-efficacy are more likely to supportive close relationships, display competency in career planning, have high motivation and achieve their academic and career goals (Komarraju & Dial, 2014; Wilcox & Nordstokke, 2019; Wright et al., 2014). Several research (e.g., Kim & Yun, 2015; Macakova & Wood, 2020; Şahin & Gülşen, 2022) have found that academic self-efficacy can be a valuable resource for university students when making significant educational or career decisions. These findings highlight the crucial significance of academic self-efficacy in assisting undergraduate students in dealing with difficulties during critical career decision-making processes, career development and planning.

Ethnic–gender expectations: The literature (e.g., Damaske, 2011; Zhang, Yuen, & Chen, 2021) has repeatedly shed light on the continuing significance of societal, familial, and cultural expectations in significantly affecting the trajectory of career choices among university students across the continuum of historical and contemporary scholarship. Ethnic-gender expectations, in particular, have emerged as a critical component in this respect, comprising the amount to which university students anticipate demands imposed on them based on their gender or ethnic origin (Fisher & Griggs, 1995). Some undergraduate students perceive their gender as a possible hindrance to their career development and planning (Damaske, 2011; Fernández, Ryan & Begeny, 2023). Several research have found that gender-related barriers reduce individuals' self-efficacy in career decision-making, typically resulting to increased career decision and decreased career exploration (Schelmetic, 2013; Tu & Okazaki, 2021). In a similar line, ethnicity, like gender, plays a noticeable role in the complex landscape of career decision-making (Kim & Choi, 2019; Lewis et al., 2018). The level of career exploration, career adaptability and career decision among undergraduate students varies according to their cultural values, society norms and expectation of people around them (Leong, Hardin, & Gupta, 2010). Recognizing these contextual influences, which include both gender-related and ethnicity-related restrictions and influence, highlights the importance of a thorough understanding of the numerous dynamics that shape and influence through career decision making process of individuals. It also emphasizes the need of individuals realizing the various obstacles, barriers, and opportunities that diverse demographics might provide as they navigate the complex field of career development.

The Career Influence Inventory (CII) was developed with the objective of delineating the factors influencing the career decision-making, career development, and career planning process of university students. The initial study, which led to the development of the CII, concluded that the scale exhibited satisfactory psychometric properties. Following this seminal study, the inventory found utility in various research investigations, with some studies focusing on its adaptation to different contexts. In original version of CII, internal consistencies for the scale's subscales have been observed to range between .74 and .91 (Fisher & Stafford, 1999). According to Grygo's (2006) research, the entire 35-item scale has a Cronbach's alpha of .91, with subscales for university students ranging from .77 to .92, indicating strong internal consistency. The remaining two subscales, Negative Social Events (NSE) (.85) and Ethnic–gender Expectations (EGE) subscale (.79) demonstrated moderate internal consistency (Grygo, 2006). According to Rogers, Creed, and Glendon (2008), the internal reliability coefficient for the entire scale was .89. Khasawneh (2010) adapted CII to Arabic for Jordanian university students. A confirmatory factor analysis revealed that 35 items fit well like the original version of CII. According to the findings, the subscales of Parental Influence (PI) (.94) and NSE (.87) had the strongest internal consistencies. Moderate internal consistencies were found for the other subscales. Chinyamurindi et al. (2021) conducted a study aiming to adapt the CII for high school students studying in

South Africa. The exploratory and confirmatory factor analysis indicated that the 19-item CII fit better compared to the 35-item CII. The findings demonstrated that Cronbach's alpha coefficients were .743 for the total scale; subscales ranged from .63 to .74 (Chinyamurindi et al., 2021). In sum, the validity and reliability of CII has been rigorously examined by a few scholars, demonstrating its significance in the field of career counseling. These efforts, led by researchers such as Chinyamurindi et al. (2021) and Khasawneh (2010), not only examined the instrument's reliability and validity, but also expanded our understanding of career development and planning as a multidimensional phenomenon. Their findings highlight the importance of the CII as a useful instrument for assessing and addressing significant influences on career development among individuals in a variety of educational and professional settings. Indeed, while the CII has benefited from the valuable contributions of researchers, it is important to acknowledge certain limitations associated with its application. These limitations warrant careful consideration in both research and practical contexts. To the best of our knowledge, no other scale has been developed to measure the factors that affect career development and shape the career planning process of individuals who speak languages other than English and Arabic and have different cultural backgrounds in which these languages are used. The adaptation studies of the CII were conducted only for high school and university students who speak English and Arabic. The previous research findings indicated that the 35-item CII is validated for high school and university students and presents acceptable reliability coefficients.

To the best of current knowledge, while the extant literature lacks comprehensive studies encompassing all dimensions outlined by Fisher and Griggs (1995), there are indeed research endeavors (e.g., Wright et al., 2014) that combine select dimensions. For example, significant findings resulted from a study involving university students enrolled at state university in the United States. The academic and career decision-making self-efficacy of university students who received support from securely attached peers, teachers, and family members while also encounter less career barriers in their career development was significantly lower. These findings offer light on the complex interplay between perceived support, academic self-efficacy and career decision making process among university students. Khasawneh (2010) conducted another study based on Fisher and Griggs' (1995) categorization and incorporating the variables contained within the Career Influence Inventory. The findings of these research offer important insights into the varied nature of career development and planning among university students, highlighting the complicated interplay of several elements in defining their career pathways. These studies explore the collective influence of these career determinants on the intricate processes of career development and career planning among university students. Remarkably, the findings highlight the importance of support gathered from family members, peers, and teachers as the most powerful elements affecting university students' career development and planning. In contrast, features such as ethnic and gender-based expectations, as well as negative social events, appeared as having little impact on university students' career growth. Within the purview of Fisher and Griggs' (1995) categorization, these findings provide useful insights into the salient elements that influence university students' career and academic aspirations and decisions. These studies explore the collective influence of these career determinants on the intricate processes of career development and career planning among university students.

Aim of the Study

To summarize, in today's rapidly developing and changing world, university students experience difficulties in areas such as acquiring job transition skills, setting educational and career goals, networking, and gaining professional identity in the career development process. These difficulties cause them to worry about their career development in the 21st century, where uncertainty and unpredictability prevail, and therefore experience mental health problems, not being able to choose a suitable career for them and not exhibiting the desired academic skills. In order to support university students in this challenging process, studies are needed to examine the factors influencing this process and to provide students with the opportunity for self-assessment. Among the quantitative assessment tools related to the career development of university students in the Turkish literature are the data collection tools such as the Career Adapt-Abilities Scale (Işık et al., 2018), the Adult Career Concerns Inventory-Short Form (Şahin, Özaydın, & Siyez, 2019), the Career Commitment Scale (Ulaş-Kılıç & Peila-Shuster, 2023) and the Career Goal Feedback Scale (Korkmaz & Kırdök, 2019). However, it's important to note that within Turkish culture, there is currently a lack of quantitative assessment tools capable of providing a comprehensive overview of the various factors influencing the career decision-making and career planning process. In addition to this significant gap in both in national and international literature, that completely analyze the multiple aspects that influence university

students' career development. This research gap underlines the need for more holistic and inclusive investigations of the intricate mechanisms behind university students' career pathways, career development and planning. Expanding the scope of study in this subject is critical for gaining a more nuanced understanding of the numerous factors that contribute to career development, allowing for more effective career counseling and assistance for this critical population. For this reason, the adaptation of the Career Influence Inventory (CII), which was classified by Fisher and Griggs (1995) and developed by Fisher and Stafford (1999) based on this classification, to Turkish culture will help to examine the career development and career planning process of university students who grew up in this culture and/or study in Turkey. From this point of view, this study aimed to adapt the CII, developed by Fisher and Stafford (1999), for the identification of factors affecting the career decision-making process of university students to Turkish culture and to examine its psychometric properties. To this end, answers were sought to the following research questions:

1. Is the original six-factor structure of the Career Influence Inventory confirmed in its Turkish version?
2. What is the reliability level of the Turkish version of the Career Influence Inventory for the entire scale and its sub-dimensions?

METHOD

This section presents the procedures implemented for the Turkish adaptation of the Career Influence Inventory, developed by Fisher and Stafford (1999), for the identification of factors affecting the career decision-making process of university students.

Study Group

The convenience sampling method was used for the sample selection of the pilot study. The fact that the Career Influence Inventory consists of 35 items was taken into account when determining the number of individuals to be included in the study group. It is acknowledged in the relevant literature that in scale adaptation studies, the number of individuals to be included in the study group should be at least 10 times the number of items on the scale (Nunnally, 1978). For this reason, the study group consisted of 386 university students (205 female, and 181 male) studying at different faculties of a state university in Turkey. There were 111 freshmen among university students, while seniors constituted approximately 23.6%, totaling 91 university students. Additionally, 28.2% of the participants, specifically 109 individuals, were identified as sophomores, while juniors comprised 19.4%, totaling 75 students. The participants were drawn from a variety of faculties, including 23.3% (n = 90) from the Faculty of Theology, 41.5% (n = 160) from the Faculty of Education, and 35.2% (n = 136) from the Faculty of Economics and Administrative Sciences. While their majors encompassed areas like Counseling and Guidance, Public Finance, Theology, Special Education, and International Relations. These categories comprised 77 participants from Department of Counseling and Guidance, 61 from Department of Public Finance, 90 from Department of Theology, 83 from Department of Special Education, and 75 from Department of International Relations.

Instruments

Demographic Information Form: This form was created by the researcher to collect information about the participants' gender, grade level, faculty and current major.

Career Influence Inventory: Fisher and Stafford (1999) developed The Career Influence Inventory (CII) to measure the career influences on career development and planning. The scale consists of 35 items rated on a 4-point Likert-type scale ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree"). The 35-item CII consist of six type of career influence: 1) Parental Influence (PI) (7-items), 2) Friend/Peer Influence (FI) (5-items), 3) Teacher Influence (TI) (8-items), 4) Negative social events (NSE) (7-items), 5) Highschool Experiences and Academic self-efficacy (HSA) (6-items), and 6) Ethnic-Gender expectations (EGE) (3-items). Fisher and Stafford (1999) reported that the possible scores for the PI, TI, FI, EGE, HSA, and NSE subscales are 7 to 28; 8 to 32; 4 to 16; 3 to 12; 6 to 24; and 7 to 28. The factor loads of the items forming the CII ranged from .66 to .84. According to exploratory factor analysis conducted by using oblimin rotation revealed that six factors collectively explained 63.6% of the variance. Fisher and Stafford (1999) reported the internal consistency coefficients of .91 for PI, .90 for TI, .74 for FI, and .75 for EGE. Cronbach's alpha was reported as .89 for the entire scale.

Procedure

The process of adapting the Career Influence Inventory (CII) began with the formal acquisition of authorization from the CII's second author, Dr. Stafford. Permission to translate and adapt the CII was obtained by contacting the second author via email. Following the acquisition of the necessary permission, the

critical phase of translating and adapting the scale was formally launched. The translation and cross-cultural adaptation process of the scale adhered to a well-structured methodology, guided by a series of steps meticulously detailed by Beaton et al. (2000) and Hambleton (2005). This systematic approach was crucial in ensuring the scale's linguistic and cultural equivalence, thus enabling meaningful cross-cultural comparisons and assessments. In the process of adapting the CII to Turkish, a series of steps specified by Hambleton (2005) and Beaton et al. (2000) was applied: (1) Translation from the source language to the target language; (2) Comparison of the two versions; (3) Expert evaluation; (4) Taking the target population's opinion before the study; (5) Gathering data by using last version of scale; and (6) Conducting validity and reliability studies.

In the translation process from the source language to the target language, the original items of the Career Influence Inventory were sent to five independent experts having a good command of the English language and the Turkish culture. Care was taken to ensure that the experts who would take part in the translation process were also familiar with the culture in which the scale was developed and the concepts it measures as suggested by Beaton et al. (2000). Three of these experts have a doctorate in Guidance and Psychological Counselling, as well as studies in the field of career counselling. The other two experts are English Language Teaching undergraduate program graduates with a doctorate in Educational Sciences and have studies aiming to adapt scale to Turkish. For comparison of the two versions, the translations from the experts were compared and evaluated both semantically and culturally by the researcher and researcher's colleague, as suggested by Borsa, Damasio, and Banderia (2012). The researcher's colleague, who has a doctorate in Guidance and Psychological Counselling, specializes in career counseling, has extensive field knowledge and expertise in the trait assessed by CII, has previously participated in scale adaptation studies and has provided continuous support and guidance to the researcher throughout this study. The translated items were subjected to a content validity assessment during this step by comparing them to the original English version of the CII. Any discrepancies between the five translated versions were rectified, and an expert consensus was obtained following a comprehensive analysis of the translated materials. The scale items that were translated into Turkish with high fidelity and closely connected with the original meaning were chosen by the researcher and researcher's colleague. As part of expert evaluation, the original version of the scale and the version that was evaluated and accepted by the researcher and researcher's colleague as a result of the translation process were given to six field experts (2 Psychological Counseling and Guidance faculty members, 2 English Language and Literature faculty members, and 2 English teachers). These experts evaluated the scale and its items in terms of their suitability and applicability to Turkish culture. Following the experts' opinions, minor changes were made to the items on the scale. For taking the target population's opinion before the pilot study, 11 university students completed the final version of the CII, which was obtained based on the application of the expert opinions and expressed their opinions. The researcher's goal in this step was to construct a varied sample of participants, with a range of academic majors and ages. This conscious effort was made to get a thorough understanding of various perspectives on CII. During the focus groups, university students were encouraged to express their thoughts on the CII completion processes. The researcher provided an open discourse, allowing participants to share their opinions while providing comments on the content, format, and placement of scale items. Remarkably, no significant changes were deemed essential for the CII components, as participants did not raise significant problems or provide comprehensive comments on the scale itself. Consequently, the Turkish version of the CII was confirmed as finalized for current study. Then, the stage of gathering data by using last version of scale was conducted to test the scale psychometrically, and data were collected and analyzed within the scope of validity and reliability studies. The researcher explained the study's objectives and emphasized the participants' voluntary and confidential participation. The survey took roughly 5-10 minutes to complete.

Data Analyses

Statistical Package for the Social Sciences (SPSS) 21 and Linear Structural Relations (LISREL) 8.8 statistical packages were used to analyze the data obtained in this study, in which the Career Influence Inventory was adapted to Turkish. The SPSS 21 was employed to conduct initial descriptive analyses, compute Cronbach's alpha reliability coefficients, and test assumptions of confirmatory factor analysis (CFA). CFA was executed using LISREL, version 8.8 for Windows.

Before proceeding to the analyses, the suitability of the data for analysis was examined. Before commencing the analysis, an evaluation of the assumptions requisite for CFA. was conducted, including the examination of sample size, missing values, data accuracy, univariate normality, and linearity following the

guidelines outlined by Ullman (2001). Firstly, the adequacy of the sample size for CFA was assessed. Multiple sample size requirements were considered when determining the appropriateness of the sample size. A sample size of 200 individuals is generally deemed sufficient for conducting CFA according to the criteria established by Boomsma (1985) and Kline (2011). In this context, 386 examples were found to be more than sufficient for CFA purposes. The missing value analysis revealed that missing values for all item measures were below 5%. As a result, the Expectation-Maximization (EM) technique was employed for handling missing values, as recommended by Tabachnick and Fidell (2013). Then, the skewness and kurtosis values were examined to test assumption of univariate normality. The skewness and kurtosis statistics were determined to be within the acceptable range of -3 to +3, showing that assumptions of normality for this sample (Kline, 2011). Bivariate scatterplots were investigated for each individual item to evaluate the linearity assumption. According to Tabachnick and Fidell (2013), the scatterplot relationships are shown to be linear when the plots have an oval-shaped pattern. Given the oval form of the bivariate scatterplots, it is reasonable to assume that the linearity assumption was met. The oval-shaped bivariate scatterplots showed that the linearity assumption was met. As a result of the evaluations regarding data accuracy, missing data, outliers, normality, and linearity the data were determined to be suitable for analysis.

To assess the CII's validity, both construct validity and convergent validity were examined. Upon deciding that the obtained data were suitable for factor analysis, CFA was conducted to test the construct validity of the scale. The analyses examined the common factor variance of the factors on each variable, the factor loadings of the items, and the explained variance ratios. When determining the factor structures, values not less than .30 were included (Costello & Osborne, 2005). The results obtained through the CFA were interpreted by checking various model indices, including chi-square, CFI, NNFI, SRMR, and RMSEA. Then, internal consistency coefficients were calculated to examine the reliability of the scale. In determining the goodness of fit values, the following criteria well-accepted in the literature were considered: $\chi 2/df<3$ (Kline, 2011; Ullman, 2001), CFI≥.95, NNFI≥.95 (Hu & Bentler, 1999; Schumacher & Lomax, 2010), .05<RMSEA<.08 (Schumacker & Lomax, 2010), and SRMR≤.08 (Hair et al., 2010). Convergent validity measures how well a construct is represented by its underlying structure. The degree of variance among latent constructs can be investigated in the examination of convergent validity using criteria such as Average Variance Extracted (AVE) >.50 and Composite Reliability (CR) >.70, as advocated by Hair et al. (2014) and Hu and Bentler (1999). Notably, CR values were used in current study since they are deemed less rigorous than AVE values, according to Malhotra and Dash (2011). Then, the internal consistency coefficient was calculated to examine the reliability of the scale.

FINDINGS

This section presents, respectively, the findings obtained from the validity and reliability studies conducted for the adaptation of the Career Influence Inventory to Turkish.

Findings on the Validity of the Career Influence Inventory

Construct validity

The confirmatory factor analysis (CFA) was conducted through the LISREL 8.8 package to evaluate the factor structures of the Career Influence Inventory (CII). With the CFA, it was aimed at obtaining information about the validity of the scale adapted to Turkish and the accuracy of the model established. While interpreting the CFA results, the fit indices and cut-off criteria for fit indices suggested by Hu and Bentler (1999) and Schumacher and Lomax (2010) were taken into consideration. Kline (2011) emphasizes that the χ^2/df value should not be greater than 3. RMSEA values less than or equal to .05 indicate a good fit, and values between .05 and .08 indicate a mediocre fit (Schumacker & Lomax, 2010). CFI and NNFI values greater than or equal to .95 indicate a good fit. (Hu & Bentler, 1999; Schumacker & Lomax, 2010). SRMR values less than .10 indicate an acceptable fit (Hu & Bentler, 1999). The CFA results for the model are given in Table 1.

Table 1. Model Adaptation Indices Obtained by CFA for Career Influence Inventory

χ^2	df	χ^2/df	RMSEA	NNFI	SRMR	CFI
1271.45	542	2.25	.057	.95	.061	.96

Considering the fit indeces and cut-off criterias (Hu & Bentler, 1999; Schumacher & Lomax, 2010), the results of the CFA indicated an adequate model fit for six-factor structure of the Turkish version of Career Influence Inventory (CII) [χ^2 (542) = 1217.45, p = .00; χ^2/df- ratio = 2.25; CFI= .96, NNFI = 95; SRMR= .061; RMSEA = .057]. It's important to note that there are precisely three modification suggestions between CII22 and CII16,

CII31 and CII8, and CII26 and CI21 after examining the modification recommendations that result from the CFA. According to Kline's (2011) recommendations, a maximum of three modifications may be made while taking the analysis's modification suggestions into account. Each of the modification suggestions was evaluated in terms of both theoretical framework and the results of the analysis. It was seen that each modification suggestion was in accordance with the theoretical classification of career influences (Fisher & Stafford, 1999) and the items to be modified were included in the same subscale. While CII22 and CII16 items are in the subscale named High School Academic Experiences and Academic Self-Efficacy (HSA), CII31 and CII8 are the items of the subscale named Negative Social Events (NSE). CII26 and CI21 items are in the subscale named Parents' Influence (PI). The conclusion that there might be a potential relationship between the items as a result of this analysis led to the implementation of the required modifications. Based on the findings in Table 1, the value χ^2/df-ratio=2.25, being less than 3, is consistent with the suggestion in the literature (Kline, 2011; Ullman, 2001), and the RMSEA (.057) and SRMR (.061) values indicate good fit according to Schumacher and Lomax (2010). The CFI (.96) and NNFI (.95) values also indicate good fit, according to Hu & Bentler (1999). Estimates of parameters for the model are shown in Figure 1.

Figure 1. Estimates of parameters of confirmatory factor analysis of Career Influence Inventory
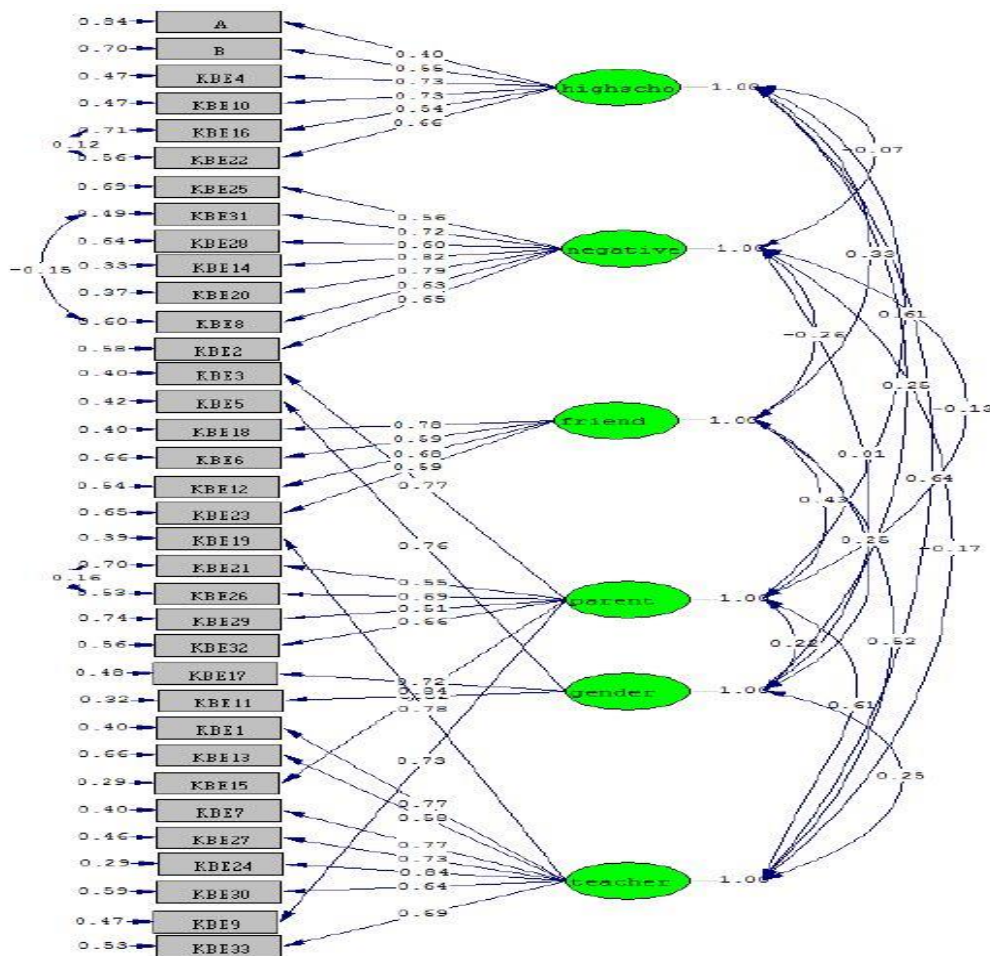
Note. Highscho= High School Academic Experiences and Academic Self-Efficacy, teacher=Teachers' Influence, negative= Negative Social Events, parent= Parents' Influence, gender= Ethnic-Gender Expectations, friend= Friends' Influence, KBE= The Career Influence Inventory

As shown in Figure 1, the factor loadings obtained in the CFA for the CII ranged from .58 to .84 for the Teachers' Influence (TI) subscale, from .56 to .82 for the NSE subscale, from .51 to .69 for the PI subscale, from .40 to .73 for the HSA subscale, from .72 to .92 for the Ethnic-Gender Expectations (EGE) subscale, and from .59 to .79 for the Friends' Influence (FI) subscale. It ranged from .55 to .92 for the entire scale. The results indicated substantial saturation for all items, with item loadings ranging from .55 to .92 for the entire scale, surpassing the recommended cutoff value of 0.30 (Costello & Osborne, 2005), please refer to Figure 1 for details. In addition, the results of CFA revealed statistically significant t-values (p< .05) for all factor loadings ranging from .40 to .92. The square of a standardized factor loading (R^2) was used to evaluate the extent to which each item effectively measured its relevant factor, as described by Hair et al. (2010). R^2 values in current

study varied as follows: .16 to .71 for all scale, .34 to .71 for the TI, .31 to .67 for the NSE, .26 to .71 for the PI subscale, .16 to.53 for the HSA,.52 to.68 for the EGE subscale, and.34 to.60 for the FI. When the correlation values between the subscales of the CII are examined, it is seen that although the factors are interrelated, they are differentiated from each other because the correlation values are below .85 (Tabachnick & Fidell, 2013). To summarize, as seen in Figure 1, the CFA results showed that the Turkish version of the CII consists of six subscales, as does the original scale. Therefore, it can be said that the scale has a six-dimensional structure, as does the original, and the tested measurement model has a good fit (Bentler, 1990; Hu & Bentler, 1998).

Convergent validity

Both Average Variance Extracted (AVE) and Composite Reliability (CR) were used as criteria to examine the convergent validity of the Career Influence Inventory. The following CR values were determined:.85 for High School Experience and Academic Self-Efficacy, .91 for Negative Social Events, .84 for Friend Influence, .91 for Parental Influence,.88 for Ethnic-Gender Expectations, and.94 for Teacher Influence. When the AVE values of the subscales were examined, they ranged from .59 to .38. In this study, CR values were emphasized over AVE values, as they are deemed less severe, following the advice of Malhotra and Dash (2011). Importantly, all CR values for the subscales exceeded the Hair et al. (2014) recommended criterion of >.70. As a result, it can be concluded that there is good support for convergent validity, confirming the Career Influence Inventory's robustness in measuring the targeted constructs.

Findings on the Reliability of the Career Influence Inventory

To check the reliability of the Career Influence Inventory, internal consistency coefficients were calculated using Cronbach's alpha. According to the analysis results, the internal consistency coefficients for the subscales of Teachers' Influence, Negative Social Events, Parents' Influence, High School Academic Experiences and Self-Efficacy, Ethnic-Gender Expectations, and Friends' Influence were .90, .85, .85, .78, .83, and .75, respectively. The internal consistency coefficient for the entire scale was found to be .86. The findings indicate that the scale is a valid and reliable measurement tool.

RESULT, DISCUSSION AND SUGGESTIONS

This study adapted the Career Influence Inventory (CII), developed by Fisher and Stafford (1999), to Turkish. The obtained results show that the Turkish version of the CII, whose adaptation study was conducted for the identification of factors that affect the career decision-making process of university students, is a valid and reliable measurement tool in the Turkish culture. The confirmatory factor analysis revealed that CII has a six-factor structure in the Turkish version, as in the original scale, and has acceptable goodness of fit values.

According to the reliability analysis results of the CII in the present study, the internal consistency coefficients for the subscales of Teachers' Influence (TI), Negative Social Events (NSE), Parents' Influence (PI), High School Academic Experiences and Self-Efficacy (HSA), Ethnic-Gender Expectations (EGE), and Friends' Influence (FI) were .90, .85, .85, .78, .83, and .75, respectively. The internal consistency coefficient was found to be .86 for the entire scale. Cronbach's alpha values above .70 are considered acceptable, and values above .80 are considered good (George & Mallery, 2016). In the line with these findings, it can be said that the CII demonstrates good reliability. The original version of the scale demonstrated a Cronbach alpha internal consistency coefficient of .89 for the entire scale, with sub-dimensions exhibiting internal consistency reliability coefficients ranging from .74 to .91 (Fisher & Stafford, 1999). Similarly, Khasawneh adapted the CII into Arabic in 2010 and found that the internal consistency coefficient of this inventory was .80. The reliability coefficients of the subscales vary between .67 and .94. In summary, it can be said that the CII is a valid and reliable measurement tool that can be used to determine the factors that affect the career decision-making process of university students. It is possible to say that the findings obtained from the validity and reliability studies of the Turkish version of the CII are similar to the values of the original scale (Fisher & Stafford, 1999) and Arabic version of scale (Khasawneh, 2010).

The literature contains many studies examining the effect of support from family members and friends on the career development of university students. (e.g., Guan et al., 2018; Hlad'o et al., 2020; Wang et al., 2021). On the other hand, there is limited research examining the role of variables such as teacher support, academic self-efficacy, ethnicity, and gender roles, which are frequently underlined and whose roles in career development are highlighted in the literature, in the career decision-making process. Furthermore, there is no valid and reliable measurement tool, except CII, in the literature that holistically measures the variables of family, peer, and teacher support, ethnic-gender expectations, academic self-efficacy, and negative social events (Fisher & Stafford, 1999). In this respect, the present study adapted the CII to Turkish, thereby

contributing to filling the said gap in the literature. Future studies can use the CII adapted in this study to identify the career development of university students. Career counselors can use this measurement tool to enhance the awareness of students who experience career indecision and have difficulty in making career decisions, to reveal the factors influencing their career goals and career development process that they cannot recognize, and to enable them to make analyses that will contribute to their more effective career planning. In this way, university students can identify where they currently stand in the career development process. The CII, which can be used as a screening/descriptive tool, can be used in career counseling sessions to find out from whom students receive support, how adequate the support they receive is for them, what is expected of them in terms of their gender and ethnicity, and how academically competent they consider themselves. By utilizing the results of the measurement tool, it is possible to plan areas in which support should be provided to students who need career support.

The Career Influence Inventory has been used as a data collection tool in studies conducted in English-, Arabic- and Turkish-speaking countries so far (e.g., Chinyamurindi, 2021; author; Sevilla, Snodgrass & Rangel, 2023). The career decision-making process is influenced by cultural norms and marginalization experiences in the acculturation process (Kim & Choi, 2019; Lewis et al., 2018). Many undergraduate students take into account the expectations shaped according to their ethnicity and gender when deciding on the job they will do after graduation, the profession they will choose and the career alternatives they will eliminate (Leong, Hardin, & Gupta, 2010). For these reasons, carefully examining the factors affecting the career decisions of university students who grow up in Turkey, which is considered to be a collectivist culture and progresses towards becoming an individualist culture as time passes, and completing the acculturation process in this country, and making intercultural comparisons will help overcome the limitations in the related literature. Considering this gap in literature, it can be recommended to translate the CII into different languages and to conduct validity and reliability studies of the scale in various countries and cultures where these languages are spoken. Based on Leong and Hartung's (2000) suggestion, this data collection tool can be administered in diverse cultures, and a cross-cultural comparison of the factors shaping the career decisions of university students can be made.

Both domestic and international university students frequently experience career indecision and have difficulties through career development and planning process (Bacanlı & Salman, 2018; Grier-Reed & Skaar, 2010). These cumulative experiences and challenges add to an increasing sense of career decision, resulting in a phenomenon that causes mental health concerns among university students (Parola & Marcionetti, 2022). Given the problems and requirements that university students confront, there is an acknowledged need for career development interventions to be implemented. These interventions are intended to reduce the level of career indecision and career stress, increase career adaptability, and career exploration and improve the acquisition of school-to-work transition skills. The CII can be used to evaluate the effectiveness of these career development interventions, which aim to raise individuals' career search levels, improve their career adaptability, and impart career planning skills. One of the essential parts of career development is having knowledge and awareness of individual and contextual characteristics (Atuahene, 2021; Freeman et al., 2017; Yaghi & Alabed, 2021). Before implementing career development interventions, students' career development needs and problems can be identified through this measurement tool. Activities can be designed to enable university students to get to know themselves and contextual factors more closely in the areas they need to. Finally, in future research, the CII can be used as a pre-test and post-test by researchers and practicing career counselors.

The findings of this study show that the scale can be used to determine the factors that shape the career decisions and direct the career development of university students studying in Turkey. However, it is important to consider the limitations of the study while evaluating this result. The first limitation of the study is that the sample consists only of university students. Given that studies examining the factors affecting individuals' career development in Turkey are mostly conducted with the participation of high school students (e.g., Akbaş & Okutan, 2020; Aygün, 2020; Akpınar & Kuloğlu, 2023), it is recommended to examine the psychometric properties of the Career Influence Inventory in studies involving high school students as participants. With the increase in the number of such studies, the validity and reliability of this data collection tool for individuals in different developmental stages, such as pre-adolescence, adolescence, and adulthood, can be evaluated more comprehensively. University students, according to di Fabio et al. (2014), had higher levels of developmental career indecision than high school students. There is a necessity for research aiming

to adapt the CII, particularly for high school students, as well as a complete evaluation of its psychometric properties. Conducting studies on the appropriateness of the scale for different age groups can also expand its area of use and address an important need.

University students studying at a state university in Turkey participated in this study, in which the Career Influence Inventory was adapted to Turkish. The validity and reliability of this data collection tool were tested through the study conducted on this group. Given this limitation of the study, it can be recommended to increase the sample size and repeat this study on university students with diverse cultural orientations. In addition, this study did not conduct a descriptive study on the factors affecting the career decisions of university students. Based on the validity and reliability findings obtained within the scope of this study, studies that aim to reveal various factors (personality, chance, geographical location, ethnicity, etc.) that can predict the career decisions of university students and/or affect their career development can be designed.

In conclusion, the findings obtained in this study indicate that the Turkish version of the Career Influence Inventory is a valid and reliable measurement tool that can be used in studies examining the career development of university students and can be included in practices that support the career development of university students.

Declarations

Conflict of Interest

No potential conflicts of interest were disclosed by the author(s) with respect to the research, authorship, or publication of this article.

Ethics Approval

The formal ethics approval was granted by the Social and Human Sciences Research and Publication Ethics Committee of Necmettin Erbakan University. We conducted the study in accordance with the Helsinki Declaration in 1975.

Funding

No specific grant was given to this research by funding organizations in the public, commercial, or not-for-profit sectors.

Research and Publication Ethics Statement

The study was approved by the research team's university ethics committee of the Middle East Technical University (Approval Number/ID: 2016-EGT-080). Hereby, we as the authors consciously assure that for the manuscript "Adaptation and validation of career influence inventory in Turkish context." the following is fulfilled:

- This material is the authors' own original work, which has not been previously published elsewhere.
- The paper reflects the authors' own research and analysis in a truthful and complete manner.
- The results are appropriately placed in the context of prior and existing research.
- All sources used are properly disclosed.

REFERENCES

Akbaş, M. G., & Okutan, E. (2020). Lise öğrencilerinin kariyer kaygısına yönelik alan araştırması: Antalya ili örneği [Career anxiety in high school students: A case study]. *Gençlik Araştırmaları Dergisi, 8*(20), 158-187. https://dergipark.org.tr/tr/pub/genclikarastirmalari/issue/55138/644186

Akpınar, E. N., & Kuloğlu, A. (2023). Lise öğrencilerinin kariyer kararı yetkinliğinin demografik değişkenlere göre analizi [Analysis of high school students' perceptions of career decision empowerment according to demographic variables]. *Elektronik Sosyal Bilimler Dergisi, 22*(87), 1367-1378. https://doi.org/10.17755/esosder.1297779

Akyol, E. Y., & Bacanlı, F. (2019). Building a solution-focused career counselling strategy for career indecision. *Australian Journal of Career Development, 28*(1), 73–79. https://doi.org/10.1177/1038416218779623

Anghel, E., & Gati, I. (2021). The associations between career decision-making difficulties and negative emotional states. *Journal of Career Development, 48*(4), 537–551. https://doi.org/10.1177/0894845319884119

Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist, 55*(5), 469–480. https://doi.org/10.1037/0003-066X.55.5.469

Arslan, Ü., & Bayraktar-Uyar, B. (2020). Do career decidedness and career distress influence psychological and subjective wellbeing? The mediating role of mindfulness. *International Journal of Contemporary Educational Research, 7*(2), 271-280. https://doi.org/10.33200/ijcer.783328

Aslan, Y., & Koçak, O. (2023). How do family influence on career choices and perceived social support affect students' life satisfaction in Turkey? The role of vocational outcome expectations as mediator. *International Journal for Educational and Vocational Guidance*, 1-18. https://doi.org/10.1007/s10775-023-09602-1

Atuahene, F. (2021). An analysis of major and career decision-making difficulties of exploratory college students in a Mid-Atlantic University. *SN Social Sciences, 1*(80), 1-22. https://doi.org/10.1007/s43545-021-00082-0

Aygün, M. (2020). Spor lisesi ve düz lise öğrencilerinin kariyer kaygısı ve bilinçli farkındalıklarının incelenmesi [Analysis of career anxiety and mindful attention awareness of sports high school and general high school students]. *Beden Eğitimi ve Spor Bilimleri Dergisi, 22*(4), 90-100. https://dergipark.org.tr/tr/pub/ataunibesyo/issue/59137/799834

Bacanlı, F., & Salman, N. (2018, October, 25-27). *Career psychological counseling based on three-stage career decision making model: Case study*. 20th International Psychological Counseling and Guidance Congress. Samsun. https://2018.pdrkongreleri.org

Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of Social and Clinical Psychology, 4*(3), 359-373. https://doi.org/10.1521/jscp.1986.4.3.359

Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Multifaceted impact of self-efficacy beliefs on academic functioning. *Child Development, 67*(3), 1206-1222. https://doi.org/10.2307/1131888

Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine, 25*(24), 3186-3191. https://doi.org/10.1097/00007632-200012150-00014

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*(2), 238-246. https://doi.org/10.1037/0033-2909.107.2.238

Blustein, D. L. (2019). *The importance of work in an age of uncertainty: The eroding work experience in America*. Oxford University Press.

Boomsma, A. (1985). Nonconvergence, improper solutions, and starting values in LISREL maximum likelihood estimation. *Psychometrika, 50*(2), 229-242. https://doi.org/10.1007/BF02294248

Borsa, J. C., Damásio, B. F., & Bandeira, D. R. (2012). Cross-cultural adaptation and validation of psychological instruments: Some considerations. *Paidéia (Ribeirão Preto), 22*(53), 423-432. https://doi.org/10.1590/S0103-863X2012000300014

Brown, D. (2016). *Career information, career counseling, and career development*. Pearson Publishing.

Cheung, R., & Arnold, J. (2014). The impact of career exploration on career development among Hong Kong Chinese university students. *Journal of College Student Development, 55*(7), 732-748. https://doi.org/10.1353/CSD.2014.0067

Chinyamurindi, W. T., Hlatywayo, C. K., Mhlanga, T. S., Marange, C. S., & Everson, T. C., (2021). Career decision-making amongst high school learners: A descriptive-exploratory study from South Africa. *Cypriot Journal of Educational Sciences. 16*(1) 129-147. https://doi.org/10.18844/cjes.v16i1.5516

Chronister, K.M., Harley, E., Aranda, C.L, Barr, L., & Luginbuhl, P. (2012). Community-based career counseling for women survivors of intimate partner violence: A collaborative partnership. *Journal of Career Development, 39*(6), 515-539. https://doi.org/10.1177/0894845311401618

Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment Research and Evaluation, 10* (7), 1–9. https://doi.org/10.7275/jyj1-4868

Creed, P. A., Fallon, T., & Hood, M. (2009). The relationship between career adaptability, person and situation variables, and career concerns in young adults. *Journal of Vocational Behavior, 74*(2), 219-229. https://doi.org/10.1016/j.jvb.2008.12.004

Damaske, S. (2011). A "major career woman"? How women develop early expectations about work. *Gender & Society*, 25(4), 409-430. https://doi.org/10.1177/0891243211412050

Desjarlais, R., Eisenberg, L., Good, B., & Kleinman, A. (1995). *World mental health: Problems and priorities in low-income countries*. Oxford University Press.

Di Fabio, A., Palazzeschi, L., Levin, N., & Gati, I. (2014). The role of personality in the career decision making difficulties of Italian young adults. *Journal of Career Assessment, 23*(2), 281-293. https://doi.org/10.1177/1069072714535031

Dugger, S. M. (2016). *Foundations of career counseling: A case-based approach*. Pearson Publishing.

Feldman, D. C. (2003). The antecedents and consequences of early career indecision among young adults. *Human Resource Management Review, 13*(3), 499-531. https://doi.org/10.1016/S1053-4822(03)00048-2

Fernández, D. P., Ryan, M. K., & Begeny, C. T. (2023). Gender expectations, socioeconomic inequalities and definitions of career success: A qualitative study with university students. *Plos One, 18*(2), 1-27. https://doi.org/10.1371/journal.pone.0281967

Fisher, T. A., & Griggs, M. B. (1995). Factors that influence the career development of African American and Latino youth. *Journal of Vocational Education Research, 20*(2), 57-74. http://hdl.voced.edu.au/10707/112386

Fisher, T. A., & Stafford, M. E. (1999). Reliability and validity of the Career Influence Inventory: A pilot study. *Journal of Career Assessment, 7*(2), 187-202. https://doi.org/10.1177/106907279900700207

Freeman, V. F., Lenz, J. G., & Reardon, R. C. (2017). Career course impact on college students' career decision and affective states. *VISTAS Online, 32*(1), 1-14. https://www.counseling.org/docs/default-source/vistas/article_3289ce2bf16116603abcacff0000bee5e7.pdf?sfvrsn=17d84b2c_4

Garcia, P. R. J. M., Restubog, S. L. D., Bordia, P., Bordia, S., & Roxas, R. E. O. (2015). Career optimism: The roles of contextual support and career decision making self-efficacy. *Journal of Vocational Behavior, 88* (1), 10-18. https://doi.org/10.1016/j.jvb.2015.02.004

Gati I., Ryzhik T.,& Vertsberger D. (2013). Preparing young veterans for civilian life: The effects of a workshop on career decision-making difficulties and self-efficacy. *Journal of Vocational Behavior, 83*(3), 373–385. https://doi.org/10.1016/j.jvb.2013.06.001

Gati, I., Krausz, M., & Osipow, S. H. (1996). A taxonomy of difficulties in career decision making. *Journal of Counseling Psychology, 43*(4), 510-526. https://doi.org/10.1037/0022-0167.43.4.510

George, D., & Mallery, M. (2016). *Using SPSS for Windows step by step: A simple guide and reference*. Allyn & Bacon

Grier-Reed, T. L., & Skaar, N. R. (2010). An outcome study of career decision self-efficacy and indecision in an undergraduate constructivist career course. *The Career Development Quarterly, 59*(1), 42-53. https://doi.org/10.1002/j.2161-0045.2010.tb00129.x

Griffin, A. M., Sulkowski, M. L., Bámaca-Colbert, M. Y., & Cleveland, H. H. (2019). Daily social and affective lives of homeless youth: What is the role of teacher and peer social support?. *Journal of school psychology, 77*, 110-123. https://doi.org/10.1016/j.jsp.2019.09.004

Grygo, M. (2006). *An examination of selected factors influencing the career decisions of aboriginal university students* [MA thesis]. University of Lethbridge.

Guan Y., Wang Z., Gong Q., Cai Z., Xu S. L., Xiang Q., Wang Y., Chen S. X., Hu H., & Tian L. (2018). Parents' career values, adaptability, career-specific parenting behaviors and undergraduates' career adaptability. *The Counseling Psychologist, 46*(7), 922–946. https://doi.org/10.1177/0011000018808215

Hair, J. F., Hult G. T. M., Ringle C. M., & Sarstedt M. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications.

Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010). *Multivariate Data Analysis* (7 th ed.). Pearson Publishing.

Hambleton, R. K. (2005). Issues, designs, and technical guidelines for adapting tests into multiple languages and cultures. In R. K. Hambleton, P. F. Merenda, & C. D. Spielberger (Eds.), *Adapting educational and psychological tests for cross-cultural assessment* (pp. 3-38). Lawrence Erlbaum Associates.

Han, H., & Rojewski, J. W. (2015). Gender-specific models of work-bound Korean adolescents' social supports and career adaptability on subsequent job satisfaction. *Journal of Career Development, 42*(2), 149-164. https://doi.org/10.1177/0894845314545786

Hlad'o P., Kvaskova L., Jezek S., Hirschi A., & Macek P. (2020). Career adaptability and social support of vocational students leaving upper secondary school. *Journal of Career Assessment, 28*(3), 478–495. https://doi.org/10.1177/1069072719884299

Hom, P.W., Lee, T.W., Shaw, J.D., & Hausknecht, J.P. (2017). One hundred years of employee turnover theory and research. *Journal of Applied Psychology, 12* (3), 530-545. https://doi.org/10.1037/apl0000103

Hu, L., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: sensitivity to underparameterized model misspecification. *Psychological Methods, 3*(4), 424-453. https://doi.org/10.1037/1082-989X.3.4.424

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6,* 1-55. https://doi.org/10.1080/10705519909540118

Işık, E. (2013). Perceived social support and locus of control as the predictors of vocational outcome expectations. *Educational Sciences: Theory and Practice, 13*(3), 1426–1430. https://archive.org/details/ERIC_EJ1017701

Işık, E., Yeğin, F., Koyuncu, S., Eser, A., Çömlekciler, F., & Yıldırım, K. (2018). Validation of the Career Adapt-Abilities Scale–Short Form across different age groups in the Turkish context. *International Journal for Educational and Vocational Guidance, 18*(3), 297-314. https://doi.org/10.1007/s10775-018-9362-9

Jemini-Gashi, L., Duraku, Z. H., & Kelmendi, K. (2019). Associations between social support, career self-efficacy, and career indecision among youth. *Current Psychology, 40,* 4691–4697. https://doi.org/10.1007/s12144-019-00402-x

Jöreskog K., & Sörbom D. (1999). *Lisrel 8: structural equation modeling with The SIMPLIS command language.* Scientific Software International.

Kalafat, T. (2019). Algılanan Kariyer Engelleri (AKE) Ölçeği'nin Türk Kültürüne Uyarlama Çalışması [The adaptation study of Perceived Career Barriers Scale (PCBS) for Turkish culture]. *Kariyer Psikolojik Danışmanlığı Dergisi, 2*(2), 103-124. https://dergipark.org.tr/tr/pub/kpdd/issue/51379/601252

Kelly, K. R., & Lee, W. C. (2002). Mapping the domain of career decision problems. *Journal of Vocational Behavior, 61*(2), 302-326. https://doi.org/10.1006/jvbe.2001.1858

Khasawneh, S. (2010). Factors influencing the career planning and development of university students in Jordan. *Australian Journal of Career Development, 19*(2), 41-48. https://doi.org/10.1177/103841621001900206

Kim, J., & Smith, C. K. (2021). Traumatic experiences and female university students' career adaptability. *The Career Development Quarterly, 69*(3), 263-277. https://doi.org/10.1002/cdq.12272

Kim, M. S., & Yun, S. Y. (2015). A study on the nursing student with academic self-efficacy, motivation and career aspiration. *Indian Journal of Science and Technology, 8,* 226-230. https://doi.org/10.17485/ijst/2015/v8iS1/58764

Kim, Y. H., & Choi, N. Y. (2019). Career decision self-efficacy of Asian American students: The role of curiosity and ethnic identity. *The Career Development Quarterly, 67*(1), 32-46. https://doi.org/10.1002/cdq.12161

Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). The Guilford Press.

Komarraju, M., & Dial, C. (2014). Academic identity, self-efficacy, and self-esteem predict self-determined motivation and goals. *Learning and Individual Differences, 32,* 1-8. https://doi.org/10.1016/j.lindif.2014.02.004

Korkmaz, O. & Kırdök, O. (2018). Kariyer hedefi geribildirim ölçeğinin (KHGÖ) Türkçeye uyarlanması: geçerlik ve güvenirlik çalışması [Adaptation of career goal feedback scale to Turkish: Validity and reliability study]. *Kuramsal Eğitimbilim Dergisi, 12*(2), 494-510. https://doi.org/10.30831/akukeg.443315

Korkut-Owen, F., Demirtas-Zorbaz, S., & Mutlu, T. (2015a). *The career sailboat model as a tool for the guidance counsellor.* The National Centre for Guidance in Education (NCGE).

Korkut-Owen, F., Mutlu, T., Arıcı-Şahin, F., & Demirtaş-Zorbaz, S. (2015b). *The career sailboat model: Workbook for those looking for a suitable harbor.* Anı Press.

Lancaster, B. P., Rudolph, C. E., Perkins, T. S., & Patten, T. G. (1999). The reliability and validity of the career decision difficulties questionnaire. *Journal of Career Assessment, 7*(4), 393-413. https://doi.org/10.1177/106907279900700405

Lee, S., Jung, J., Baek, S., & Lee, S. (2022). The relationship between career decision-making self-efficacy, career preparation behaviour and career decision difficulties among South Korean college students. *Sustainability, 14*(21), 1-16. https://doi.org/10.3390/su142114384

Leong, F. T. L., Hardin, E. E., & Gupta, A. (2010). A cultural formulation approach to career assessment and career counseling with Asian American clients. *Journal of Career Development, 37,* 465–486. https://doi.org/10.1177/0894845310363808

Leong, F. T., & Hartung, P. J. (2000). Cross-cultural career assessment: Review and prospects for the new millennium. *Journal of Career Assessment, 8*(4), 391-401. https://doi.org/10.1177/106907270000800408

Lewis, J. A., Raque-Bogdan, T. L., Lee, S., & Rao, M. A. (2018). Examining the role of ethnic identity and meaning in life on career decision-making. *Journal of Career Development, 45*, 68–82. https://doi.org/10.1177/0894845317696803

Li, X., Hou, Z. J., & Jia, Y. (2015). The influence of social comparison on career decision making: Vocational identity as a moderator and regret as a mediator. *Journal of Vocational Behavior, 86*, 10-19. https://doi.org/10.1016/j.jvb.2014.10.003

Lipshits-Braziler, Y., Gati, I., & Tatar, M. (2017). Strategies for coping with career indecision: Convergent, divergent, and incremental validity. *Journal of Career Assessment, 25*(2), 183–202. https://doi.org/10.1177/1069072715620608

Liu, Y., Croft, J. B., Chapman, D. P., Perry G. S., Greenlund, K. J., Zhao, G., & Edwards, V. J. (2013). Relationship between adverse childhood experiences and unemployment among adults from five US states. *Social Psychiatry and Psychiatric Epidemiology, 48*, 357–369. https://doi.org/10.1007/s00127-012-0554-1

Macakova, V., & Wood, C. (2022). The relationship between academic achievement, self-efficacy, implicit theories and basic psychological needs satisfaction among university students. *Studies in Higher Education, 47*(2), 259-269. https://doi.org/10.1080/03075079.2020.1739017

Malhotra N. K., & Dash S. (2011). *Marketing research and applied orientation*. Pearson Publishing.

Marcionetti J., & Rossier J. (2016). The mediating impact of parental support on the relationship between personality and career indecision in adolescents. *Journal of Career Assessment, 25(4)*, 601–615. https://doi.org/10.1177/1069072716652890

Marcionetti, J. (2014). Factors affecting teenagers' career indecision in southern Switzerland. *Procedia-Social and Behavioral Sciences*, 112, 158-166. https://doi.org/10.1016/j.sbspro.2014.01.1151

McIlveen, P. (2015). My Career Chapter and the Career Systems Interview. In M. McMahon, & M. Watson (Eds), *Career assessment: Qualitative approaches* (pp. 123–128). Sense Publishers.

McIlveen, P., McGregor-Bayne, H., Alcock, A., & Hjertum, E. (2003). Evaluation of a semi-structured career assessment interview derived from Systems Theory Framework. *Australian Journal of Career Development, 12* (3), 33–41. https://doi.org/10.1177/103841620301200306

McMahon, M. (2020). The Systems Theory Framework and career development in a Covid-19 context. *Indian Journal of Career and Livelihood Planning*, 9(1), 3-12. https://jivacareer.org/wp-content/uploads/2022/12/2-M-McMahon.pdf

McMahon, M., Watson, M., & Patton, W. (2013). *The My System of Career Influences MSCI (Adult).* Australian Academic Press.

McMahon, M., & Patton, W. (2018). Systemic thinking in career development theory: Contributions of the systems theory framework. *British Journal of Guidance & Counselling*, 46(2), 229–240. https://doi.org/10.1080/03069885.2018.1428941

Miller, A. D., & Rottinghaus, P. J. (2014). Career indecision, meaning in life, and anxiety: An existential framework. *Journal of Career Assessment, 22*(2), 233-247. https://doi.org/10.1177/1069072713493763

Murphy, K. A., Blustein, D. L., Bohlig, A. J., & Platt, M. G. (2010). The college-to-career transition: An exploration of emerging adulthood. *Journal of Counseling & Development, 88*(2), 174–181. https://doi.org/10.1002/j.1556-6678.2010.tb00006.x

Mutlu, T. (2018). *The relationships among career influences, career exploration, and career indecision: A test of Systems Theory Framework* [PhD dissertation]. Middle East Technical University.

Niles, S. G., & Harris-Bowlsby, J. (2017). *Career development interventions* (5th ed.). Pearson Publishing.

Nunnally, J. C. (1978). An overview of psychological measurement. In B. B. Wolman (Eds.), *Clinical diagnosis of mental disorders: A handbook* (pp. 97-146). Springer.

Parola, A., & Marcionetti, J. (2022). Career decision-making difficulties and life satisfaction: The role of career-related parental behaviors and career adaptability. *Journal of Career Development*, 49(4), 831-845. https://doi.org/10.1177/0894845321995

Patton, W., & McMahon, M. (2006). The systems theory framework of career development and counseling: Connecting theory and practice. *International Journal for the Advancement of Counselling, 28*(2), 153-166. https://doi.org/10.1007/s10447-005-9010-1

Polat, F. B. (2022). Kariyer stresinin ve kariyer kararlılığının psikolojik iyi oluş üzerindeki etkisi [The effect of career stress and career decidedness on psychological well-being]. *Anadolu Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 23(2), 62-80. https://doi.org/10.53443/anadoluibfd.1112084

Prescod, D.J., & Zeligman, M. (2018). Career adaptability for trauma survivors: The moderating role of posttraumatic growth. *The Career Development Quarterly, 66,* 107-120. https://doi.org/10.1002/cdq.12126

Ranta, M., Dietrich, J., & Salmela-Aro, K. (2014). Career and romantic relationship goals and concerns during emerging adulthood. *Emerging Adulthood, 2*(1), 17- 26. https://doi.org/10.1177/21676968135158

Raque-Bogdan, T. L., Klingaman, E. A., Martin, H. M., & Lucas, M. S. (2013). Career-related parent support and career barriers: An investigation of contextual variables. *The Career Development Quarterly, 61*(4), 339-353. https://doi.org/10.1002/j.2161-0045.2013.00060.x

Rodriguez, S. J. (2009). *The relationship between satisfaction with social support and career thoughts in college student-athletes* [PhD dissertation]. Florida State University.

Rogers, M. E., Creed, P. A., & Glendon, A. I. (2008). The role of personality in adolescent career planning and exploration: A social cognitive perspective. *Journal of Vocational Behavior*, 73, 132–142. https://doi.org/10.1016/j.jvb.2008.02.002

Rossier, J., & Duarte, M. E. (2019). Testing and assessment in an international context: Cross-and multi-cultural issues. In J. Athanasou, & H. Perera (Eds.). *International handbook of career guidance* (2nd ed.) (pp. 613–637). Springer.

Şahin, E. E., & Gülşen, F. U. (2022). The mediating role of self-leadership in the relationship between basic psychological needs satisfaction, academic self-efficacy and career adaptability of Turkish undergraduates when life satisfaction is controlled. *Personality and Individual Differences*, *195*, 1-8. https://doi.org/10.1016/j.paid.2022.111709

Şahin, S., Özaydın, S., & Siyez, D. M. (2019). Yetişkin Kariyer Endişeleri Ölçeği Kısa Formu: Türkçe'ye uyarlama, geçerlik ve güvenilirlik çalışması [Adaptation of the Adult Career Concerns Inventory-Short Form into Turkish: A validity and reliability study]. *Kariyer Psikolojik Danışmanlığı Dergisi, 2*(2), 166-193. https://dergipark.org.tr/tr/pub/kpdd/issue/51379/623567

Savickas, M. L. (2015). *Life-design counseling manual*. http://vocopher.com/LifeDesign/LifeDesign.pdf

Schelmetic, T. (2013). *Where are America's women engineers?* https://www.thomasnet.com/insights/where-are-america-s-women-engineers/

Schumacher, R. E., & Lomax, R. G. (2010). *A beginners guide to structural equation modeling: SEM*. Lawrence Erlbaum Associates.

Sevilla, M. P., & Snodgrass Rangel, V. (2023). Gender differences in STEM career development in postsecondary vocational-technical education. A social cognitive career theory Test. *Journal of Career Development*, *50*(2), 255-272. https://doi.org/10.1177/0894845322108697

Simmons, A. N. (2008). A reliable sounding board: Parent involvement in students' academic and career decision making. *NACADA Journal, 28*(2), 33-43. https://doi.org/10.12930/0271-9517-28.2.33

Slaten, C. D., & Baskin, T. W. (2014). Examining the impact of peer and family belongingness on the career decision making difficulties of young adults: A path analytic approach. *Journal of Career Assessment*, *22*(1), 59-74. https://doi.org/10.1177/1069072713487857

Sultana, A., & Islam, S. (2019). Who influenced me more? A comparative study of the factors that affect career decision of undergraduate students in Bangladesh. *AIUB Journal of Business and Economics, 16* (1), 120-138. https://ajbe.aiub.edu/index.php/ajbe/article/view/39

Tabachnick, B.G., & Fidell, L.S. (2013). *Using Multivariate Statistics* (6th ed.). Allyn and Bacon.

Tu, M. C., & Okazaki, S. (2021). What is career success? A new Asian American psychology of working. *American Psychologist*, *76*(4), 673. https://doi.org/10.1037/amp0000807

Ulaş, Ö., & Kızıldağ, S. (2018). Kariyer Engelleri Ölçeği'nin (KEÖ) geliştirilmesi [Development of Career Barriers Inventory]. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 34 (1), 182-196. https://doi.org/10.16986/HUJE.2018037395

Ulaş-Kılıç, Ö., & Peila-Shuster, J. J. (2023). A test of the Career Construction Theory Model of adaptation with Turkish final year undergraduate students. *Journal of Career Development*, *50*(4), 844-859. https://doi.org/10.1177/08948453221129

Ullman, J. B. (2001). Structural equation modeling. In B. G. Tabachnick & L. S. Fidell (Eds.), *Using multivariate statistics* (4th ed.), (pp. 653–771). Allyn & Bacon.

Wang, S., Mei, M., Xie, Y., Zhao, Y., & Yang, F. (2021). Proactive personality as a predictor of career adaptability and career growth potential: a view from conservation of resources theory. *Frontiers in Psychology*, *12*, 699461. https://doi.org/10.3389/fpsyg.2021.699461

Wen, Y., Chen, H., Li, K., & Gu, X. (2020). The challenges of life design counseling in the times of the coronavirus pandemic (COVID-19). *Frontiers Psychology*, *11* (1235). 1-5. https://doi.org/10.3389/fpsyg.2020.01235

Wilcox, G., & Nordstokke, D. (2019). Predictors of university student satisfaction with life, academic self-efficacy, and achievement in the first year. *Canadian Journal of Higher Education*, *49*(1), 104-124. https://doi.org/10.47678/cjhe.v49i1.188230

Wood, C., & Hays, D. G. (2013). *A counselor's guide to career assessment instruments*. National Career Development Association.

Wright, S. L., Perrone-McGovern, K. M., Boo, J. N., & White, A. V. (2014). Influential factors in academic and career self-efficacy: Attachment, supports, and career barriers. *Journal of Counseling and Development*, *92*(1), 36-46. https://doi.org/10.1002/j.1556-6676.2014.00128.x

Xu, H., Hou, Z. J., & Tracey, T. J. (2014). Relation of environmental and self-career exploration with career decision making difficulties in Chinese students. *Journal of Career Assessment*, *22*(4), 654-665. https://doi.org/10.1177/1069072713515

Yaghi, A., & Bates, R. (2020). The role of supervisor and peer support in training transfer in institutions of higher education. *International Journal of Training and Development*, *24* (2), 89-104. https://doi.org/10.1111/ijtd.12173

Yaghi, A., & Alabed, N. (2021). Career decision-making difficulties among university students: does employment status matter?. *Higher Education, Skills and Work-Based Learning*, *11*(5), 1143-1159. https://doi.org/10.1108/HESWBL-07-2020-0149

Yerin-Güneri, O., Owen, D. W., Tanrıkulu, İ, Dolunay-Cuğ, F., & Büyükgöze-Kavas, A. (2016). Examining career development needs of faculty of education students. *Journal of Theory and Practice in Education*, 12(1), 178–193. https://dergipark.org.tr/tr/pub/eku/issue/26699/280885

Zeligman, M., Prescod, D. J., & Haynes-Thoby, L. (2020). The relationship between trauma symptoms, developmental work personality, and vocational identity. *Journal of Counselor Preparation and Supervision*, *13*(5), 1-20. http://dx.doi.org/10.7729/131.1323

Zhang, J., Yuen, M., & Chen, G. (2021). Career-related parental support, vocational identity, and career adaptability: Interrelationships and gender Differences. *The Career Development Quarterly*, *69*(2), 130-144. https://doi.org/10.1002/cdq.12254