

Adaptation of the Career Aspiration Scale to Turkish University Students: Validity and Reliability Studies

Kariyer Umu Ölçeği'nin Türk Üniversite Öğrencilerine Uyarlanması: Geçerlik ve Güvenirlik Çalışması

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Abstract

This research aims to adapt the Career Aspiration Scale-Revised (CAS-R) to undergraduate students in Türkiye. Three studies were conducted for this purpose. In Study I, Confirmatory Factor Analysis (CFA) was performed on data obtained from Study Group I (N=300; 179 women and 121 men; MAGE=21.42) to evaluate the construct validity of the scale. The CFA results confirmed the three-factor structure of the CAS-R-Turkish Form-(CAS-R-TF) (leadership, achievement, and education), consistent with the original scale. In Study II, the Criterion-related validity of the subscales of the CAS-R-TF was determined using data collected from Study Group II (N = 305; MAGE =21.32). Significant and positive correlations were found between the CAS-R-TF subscale scores (leadership, achievement, and education) and the subscale scores of the Career Decision Self-Efficacy Scale-Short Form (CDSSES-SF) and the Achievement Motivation Scale (AMS). Cronbach Alpha internal consistency coefficients for the reliability of Turkish the CAS were calculated as $\alpha=.83$, $.77$, and $.87$ for the leadership, the success, and the education aspiration, respectively. In Study III, CAS-R-TF was applied to Study Group III (N=85) twice with an interval of three weeks. The coefficients of stability for the reliability of the CAS-R-TF were found to be $r = .80$, $.82$, and $.80$ for leadership, achievement, and education aspirations, respectively. The findings indicate that CAS-R-TF is a valid and reliable tool for measuring the career aspirations of undergraduate students in Türkiye. The limitations of the research are stated, and suggestions for future research are presented.

Keywords: Achievement Aspiration, Career Aspiration, Education Aspiration, Leadership Aspiration

Özet

Bu araştırmanın amacı Kariyer Umu Ölçeği-Revize'yi (KUÖ-R) Türkiye'deki üniversite öğrencilerine uyarlamaktır. Bu amaçla üç çalışma gerçekleştirilmiştir. Çalışma I'de, ölçeğin yapı geçerliliğini değerlendirmek amacıyla Çalışma Grubu I'den (N=300; 179 kadın ve 121 erkek; MYAŞ=21.42) elde edilen verilerle Doğrulayıcı Faktör Analizi (DFA) yapılmıştır. DFA sonuçları, Türkçe KUÖ'nün orijinal ölçekle uyumlu olarak üç faktörlü yapısını (liderlik, başarı, eğitim) doğrulamıştır. Çalışma II'de, Çalışma Grubu II'den (N=305; MYAŞ =21.32) toplanan verilerle KUÖ'nün alt ölçeklerinin ölçüt geçerliliği incelenmiştir. KUÖ alt ölçek (liderlik, başarı ve eğitim) puanları ile Kariyer Kararı Öz -Yeterlik Ölçeği-Kısa Form (KKÖYÖ-KF) alt ölçek puanları ve Başarı Motivasyonu Ölçeği (BMÖ) alt ölçek puanları arasında anlamlı ve pozitif korelasyonlar bulunmuştur. Türkçe KUÖ'nün güvenirliliği için Cronbach Alfa iç tutarlılık katsayıları, liderlik, başarı ve eğitim umuları için sırasıyla $\alpha=.83$, $.77$ ve $.87$ olarak hesaplanmıştır. Çalışma III'te, Çalışma Grubu III'e (N=85) KUÖ, 3 hafta ara ile 2 kez uygulandı. Türkçe KUÖ'nün güvenirliliği için kararlılık katsayıları liderlik, başarı ve eğitim umuları için sırasıyla $r=.80$, $.82$ ve $.80$ bulunmuştur. Bulgular, ölçeğin Türkçe formunun Türkiye'deki üniversite öğrencilerinin kariyer umularını ölçmede geçerli ve güvenilir bir ölçme aracı olduğunu göstermiştir.

Anahtar Kelimeler: Kariyer Umusu, Liderlik Umusu, Eğitim Umusu, Başarı Umusu

Rapid technological developments have significantly impacted societal structures, including areas like education, economy and, politics (Luan et al., 2020). In today's global world, technology is transforming the way businesses create value, where, when, and how people work, as well as how we communicate (Cascio & Montealegre,

2016). With globalization, technological changes, and shifts in population dynamics, the business world is becoming increasingly unpredictable and complex (Lent, 2013). These changes have given rise to new areas of employment, which require a variety of skills and educational qualifications (Cascio & Montealegre, 2016). As a result, the labor

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market is undergoing radical transformations, with working conditions becoming more precarious and stressful (Blustein et al., 2016). Career counselors must be well-prepared to help individuals adapt to these evolving conditions and successfully enter the workforce (Lent, 2018).

Understanding the relationship between young people's career aspirations and the realities of employment is crucial for better supporting them in preparing to meet the demands of the changing job market. As Hoff et al. (2022) stated, knowing young people's career aspirations will help guide career counseling interventions in a more targeted manner. For example, understanding their aspirations can help promote industries that may not align with their career goals but offer significant employment opportunities. Similarly, it can provide insights into how different social identities shape career aspirations (Hoff et al., 2022). Career aspirations are a motivating factor for university students during the school-to-work transition process (Baroudi et al., 2018) since they encourage them to strive toward their career goals and exhibit more proactive behaviors (Khan & Sherwani, 2019). Career aspirations can also reflect elements of an individual's self-concept, perceptions of available opportunities, and personal interests and expectations (Rojewski, 2005). Therefore, aspirations influence individuals' career choices, encourage or hinder planning efforts, shape learning experiences, help manage life decisions, and prepare individuals for the challenges of adulthood (Han et al., 2019). Thus, career aspirations facilitate students' transition into the labor market.

Career aspirations are an important concept and a remarkable research topic in career psychological counseling. In the beginning, the concept of career aspiration was used to express an individual's goal to enter specific careers, such as being a doctor or a musician (Farmer, 1985; Harmon, 1984; Nauta et al., 1998). Johnson (1995) defines aspiration as different expressions of occupational goals over time. Rojewski (2005) defines career aspirations as the "expressed career-related goals or choices" an individual sets for themselves. In fact, theories of career development have addressed aspirations from various perspectives (Han et al., 2019). According to Super (1990), self-concept plays a critical role in career development. In fact, aspirations are indicators of the concept of self (Rojewski, 2005; Lee & Rojewski, 2012). Gotfredson (1996) has highlighted the role of aspirations in narrowing down and reaching career options. According to Social Cognitive Career Theory (SCCT, Lent et al., 1994), aspirations are the individual's commitment to engaging in specific activities or producing specific outcomes, influenced by outcome expectations and self-efficacy.

Researchers stated that aspirations predict future career choices (Holland & Whitney, 1968; Burke & Holter, 1988) and even predict career choice closely to the interest inventories (e.g., Schoon & Parsons, 2002).

Additionally, it has been found that aspirations tend to stay consistent during both childhood and adolescence (Rojewski & Yang, 1997). While the significant role of career aspirations in professional development has captured the attention of researchers, there exist challenges in conceptualizing aspirations.

Drawing clear boundaries between career aspirations and related concepts is essential for conceptualizing the term. Career aspiration reflects an individual's preferences under ideal conditions without considering limiting factors such as financial resources, skills, education or abilities. In contrast, occupational expectations refer to the professions that individuals realistically expect to enter, taking into account barriers or other limiting factors (Han et al., 2019). On the other hand, occupational values represent the satisfaction derived from the rewards of an established occupation (Pişkin, 2013). In this regard, values are crucial for understanding the meaning of work and why people engage in it (Rounds & Leuty, 2020). In conclusion, aspirations reflect an individual's ideal preferences, expectations denote their realistic career projections, and values signify the sources of satisfaction obtained from a profession.

Despite the multidimensional nature of aspirations, most studies in the literature have treated career aspirations as a unidimensional construct. In these studies, participants were asked, "If you were free to choose any job, what kind of job would you aspire to pursue for the rest of your life?" (Walls & Gulkus, 1974), requesting them to specify the profession they would prefer without barriers or limitations. Another commonly used method for measuring career aspirations is the prestige score method. This method evaluates occupations based on scores derived from social status, income, and socioeconomic indicators. However, it has certain limitations. It may reflect environmental conditions or the social status attributed to the occupation rather than the individual's personal preferences. The occupational lists may not accurately represent the current labor market (Han et al., 2019). Gray and O'Brien (2007) criticized efforts to measure aspirations for reflecting societal perspectives rather than individual preferences and for failing to assess individuals' personal leadership goals. Johnson (1995) stated that more sensitive measurements are needed to understand the structure of aspirations and their effects on career development. To address this, O'Brien (1996) developed the Career Aspirations Scale (CAS) to assess young women's career aspirations. The scale consists of a leadership subscale, which assesses a woman's aspirations to receive promotions, train others, and become a leader in her field, and an educational aspiration subscale, which evaluates a woman's desire to pursue further education in a specific field. Thus, the CAS enables the measurement of aspirations related to different positions within the same occupation. Addressing individuals' aspirations filled a significant gap that existed during the years it was developed (Han, et al., 2019). The CAS has been utilized in various studies



to measure young women's career aspirations (O'Brien, 1996; O'Brien & Fassinger, 1993). Subsequently, the CAS was revised by adding new items and a new dimension to assess achievement aspirations, resulting in the CAS-R, which includes three factors. Thus, the scale identified people not interested in becoming leaders or receiving advanced education but simply wanting to succeed. Gregor and colleagues replicated a study assessing the validity and reliability of the CAS-R on college men (2019). The findings revealed that the subscales of the CAS-R did not differ by gender.

The current research focused on the measurement of career aspirations. Previous research findings have indicated that undergraduate students' career aspirations are positively related to their career development and career adaptability (Hirschi, 2010; Gadassi et al., 2013). In this context, understanding the structure of career aspirations of Turkish undergraduate students is both important and necessary for them to develop their career plans, as well as for career counselors who provide career guidance to these students. The research in Türkiye indicates that university students experience anxiety related to their future and careers (Durak Batıgun & Atay Kayış, 2014; Gizir, 2005; Güldü & Ersoy-Kart, 2017; Mutlu et al., 2019; Şahin, et al., 2009; Yerin-Güneri et al., 2003). University students seek career counseling services to explore more suitable careers or those with broader employment opportunities, often leading them to reconsider their career choices (Akyol & Bacanlı, 2019; Bacanlı & Salman, 2018). Therefore, measuring the career aspirations of university students and understanding how these aspirations contribute to their career development is important. However, research on career aspirations in Türkiye is still in its beginning (Aktaş, 2018). Aktaş (2018), adapted the CAS-R (Gregor & O'Brien, 2016) to Turkish high school students. Karacan-Özdemir and As (2022) examined the career values and occupational aspirations of adolescents, as well as the career aspirations that their parents had for their children's futures. However, there has been a lack of scale to measure the career aspirations of undergraduate students in Türkiye. Thus, in this study, the CAS-R (Gregor & O'Brien, 2016) is aimed to be adapted to Turkish undergraduate students.

Additionally, in this study, the leadership, achievement, and educational aspirations of Turkish university students were examined according to gender. Career aspirations formed at early ages have been shown to be linked to gender and are known to forecast career success in later years (Powell & Butterfield, 2022). Research has reported mixed findings regarding how career aspirations vary by gender. Some studies (e.g., Howard et al., 2011; Mau & Bikos, 2000; Perry et al. 2009) indicate that women have higher career aspirations than men, while others have found that men have higher career aspirations (Patton & Creed, 2007). Additionally, there are studies that have

found no gender differences in career aspirations (Chang, et al., 2006; Powers ve Wojtkiewicz, 2004). Howard et al. (2011) reported that although girls expect to achieve higher levels of education, they do not find these choices prestigious. They explained this by the devaluation of the professions preferred by women.

This study is expected to make significant contributions both theoretically and practically. Examining the effects of career aspirations on the career development of Turkish university students addresses a critical gap in the literature. The adaptation of the CAS-R-TF will establish a solid foundation for theoretical studies exploring other psychosocial variables associated with career aspirations. Additionally, it provides a reliable tool for identifying the career aspirations of university students in Türkiye and for designing effective intervention programs to enhance career aspirations. The findings are anticipated to supply concrete data for improving career counseling services at universities in Türkiye and for developing educational programs aimed at alleviating students' career-related anxieties. Furthermore, the results may offer valuable insights for educational policymakers in crafting strategies to enhance the employability of university graduates. The study's exploration of gender differences could contribute to refining career counseling services within the scope of gender equality policies and addressing the challenges women face in career planning. Finally, the CAS-R-TF is expected to form a valuable foundation for advanced studies by enabling a deeper examination of the social, cultural, and economic factors that influence career aspirations.

Present Research

This research aims to adapt the Career Aspiration Scale (CAS) for undergraduate students in Türkiye, and this goal was pursued through three studies.

In study 1, CFA was conducted using data from the study group I to evaluate the construct validity of the CAS. The first study group comprised 300 undergraduate students (170 women and 121 men; MAGE =21.42) from various faculties. Data were analyzed using LISREL for CFA and SPSS for descriptive statistics. Fit indices, including CFI, TLI, RMSEA, and SRMR were calculated to evaluate the model's fit.

In study 2, Criterion-Related Validity was assessed using data collected from the study group II (N = 305; MAGE =21.32). Data were analyzed using SPSS, and Pearson correlation coefficients were used to evaluate the strength and direction of the relationships.

In study 3, stability coefficients were calculated on data from the students in the third study group (N= 85). Data analysis was conducted using SPSS.

Study I

Method

Study Group I

Study group I comprised 300 university students from various faculties, including 179 (59.7%) female and 121 (40.3%) male. The participants were enrolled in various academic years, ranging from the first to the fourth year of university. The distribution of participants by year was as follows: 61 (20.3%), 59 (19.7%), 72 (24%), and 108 (36%). The participants' ages ranged from 19 to 27, with a mean age of 21.42 (SD = 1.35).

Measures

The Demographic Questionnaire (DQ)

The DQ, developed by the researchers, includes questions designed to gather demographic information about the participants such as gender, date of birth, department and grade level.

Career Aspiraiton Scale-Revised (CAS-R). The CAS (O'Brien, 1996), developed to assess women's career aspirations, has been revised to also measure women's achievement aspirations (Gregor & O'Brien, 2016). The revised form of the scale consists of 24 items (5 reverse items), 5-point Likert type, and consists of leadership, education, and achievement aspirations subscales. The leadership aspiration subscale encompasses the desire to assume leadership roles and to train and manage others in one's career (e.g., "I hope to become a leader in my career field."). The education aspiration subscale involves the aspiration to achieve advanced education and competence in one's professional life (e.g., "I will always be knowledgeable about recent advances in my field"). The achievement aspiration subscale reflects an individual's hope for recognition, taking on responsibility, and career advancement (e.g., "Being one of the best in my field is not important to me"). The validity and reliability of the CAS-R was tested in a sample of women with bachelor's and master's degrees and the results unveiling a three-dimensional pattern in career aspirations. The correlations among factors ranged from .49 to .70. Test-retest reliability is adequate (leadership = .81, achievement = .68, educational = .81). Cronbach's alpha estimates ranged from .87 to .89 (leadership), .81 to .82 (achievement) and .85 to .90 (educational). The criterion-related validity of the CAS-R was examined by correlating it with The Work Role Salience (WRS; Greenhaus, 1973), The Planning for Career and Family Scale (PLAN; Ganginis Del Pino, et al., 2013), and The Work and Family Orientation Questionnaire (WOFO; Spence and Helmreich, 1983). The correlations between these scales and the CAS-R subscales were found to be consistent with the expected direction, as reported by Gregor and O'Brien (2016).

Translation Process

For the Turkish adaptation of the scale, firstly, the necessary permission was obtained from the responsible author of the article in which the scale was revised. The scale was translated into Turkish by three academicians working in the field of career counseling. Then, the authors compared the translations and picked the best version for each item. In the next stage, the Turkish form was translated back into English by an academician working in the field of English Language and Literature, and it was seen that the original form and the statements were semantically compatible. Finally, the Turkish form was given to 60 university students, and their opinions about its comprehensibility and clarity were obtained. The Turkish form of the scale has been made ready for application.

Procedure

A set of measurement tools was used to collect data for the study. The data were gathered in the classroom by the researcher(s). Participants were briefed on the aim of the study and completed the questions using a paper-and-pencil method. Completing the questions took approximately 40-45 minutes.

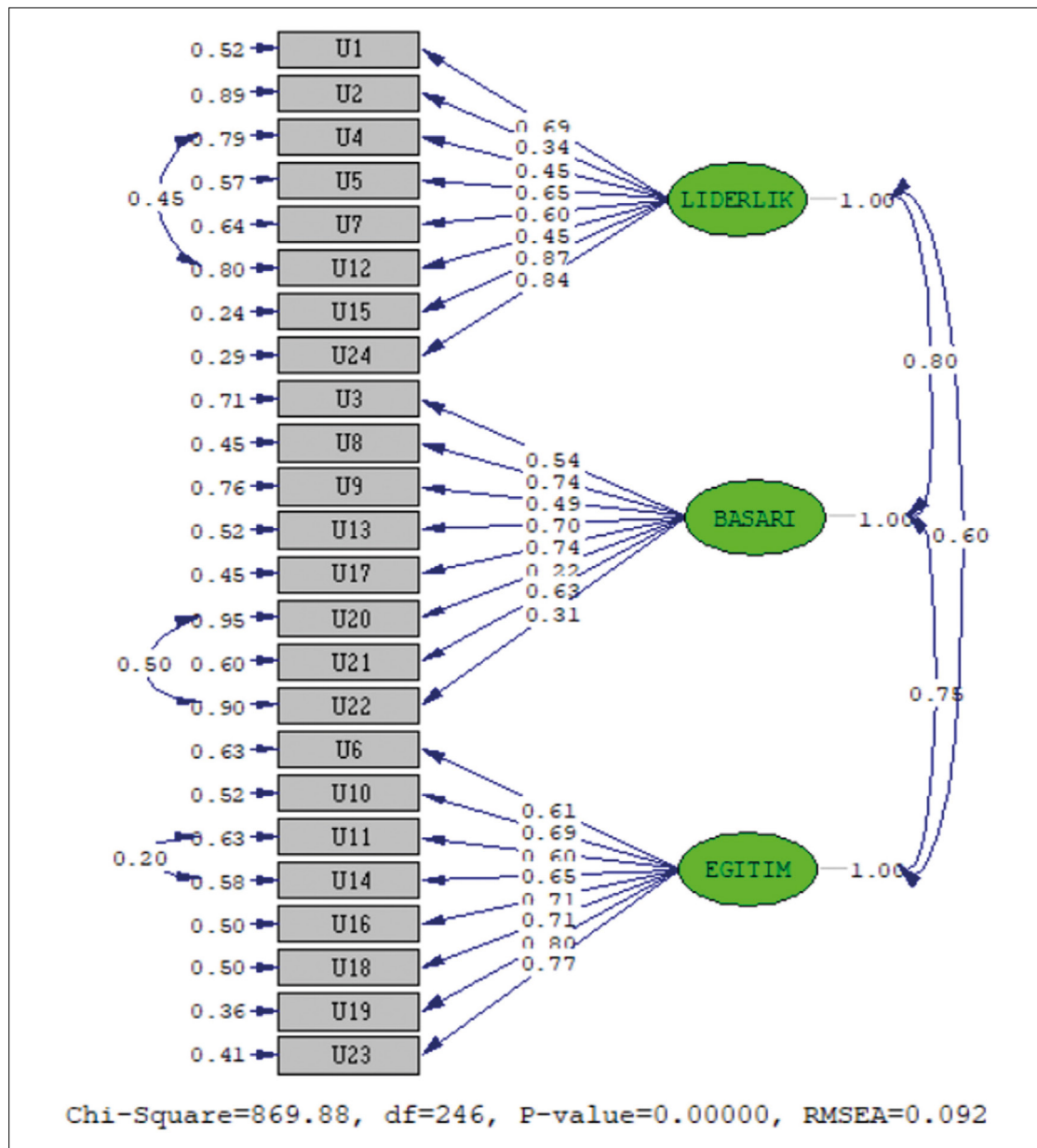
Results

Results of Construction Validity of the CAS-R-TF

CFA was conducted on the study group 1 (n = 300 Turkish university students) data to test factor construction of the CAS-R-TF. The CFA results showed that model fit was the $\chi^2 = 1291,48$; $sd = 249$; $p = 0.00$; $\chi^2 / sd = 5.2$; NFI = .90; CFI = .92; SRMR = 0.093 and RMSEA = 0.11. According to Hu and Bentler (1999), the fact that chi-square value is above 5 and the RMSEA is greater than 10 is outside the acceptable model fit indices. For this reason, modification indices were evaluated in order to improve model fit indices. Considering the closeness of the 4th ("Becoming a leader in my job is not at all important to me.") and 12th ("Attaining leadership status in my career is not that important to me."); 11th ("I will always be knowledgeable about recent advances in my field") and 14th ("I know I will work to remain current regarding knowledge in my field"), 20th ("Achieving in my career is not at all important to me") and 22nd ("Being one of the best in my field is not important to me.") items to each other in terms of significance and high modification indices, the covariances between these items were added to the model and then analyzed again. The model fit indices were $\chi^2 = 869,88$; $sd = 246$; $p = 0.00$; $\chi^2 / sd = 3.5$; NFI = .93; CFI = .95; SRMR=0.087 and RMSEA=0.09 (■ Fig. 1). The fact that chi-square value is below 5 indicates acceptable, that the NFI value is higher than .90 indicates acceptable; that the CFI value is higher than .90 indicates good fit, that SRMR is less than or equal to 0.10 indicates acceptable, and that RMSEA is less than .10 indicates medium fit (Hu and Bentler, 1999).



Figure 1
The CFA Model of the CAS-R-TF



Results of Reliability of the CAS-R-TF

To assess the reliability of the CAS-R-TF, Cronbach's alpha (α) coefficients of the subscales were calculated. Internal consistency coefficients were calculated over the data collected from $n=300$ university students on the study group I. Cronbach's alpha values were found as leadership ($\alpha=.83.3$), achievement ($\alpha=.77.6$) and education ($\alpha=.87.7$). In the original scale development study (Gregor & O'Brien, 2016), Cronbach's alpha values were found as leadership ($\alpha=.87$), success ($\alpha=.81$), and education ($\alpha=.90$). These results indicate that the internal consistency values for the subscales of the scale are generally similar to the values expected in the related literature (Nunnally & Bernstein, 1994).

Comparing career aspirations (leadership, achievement, educational) according to gender

Independent group t-test analysis was applied to the data collected from the study group I ($n=300$, 179 (59.7%) female and 121 (40.3%) male. 61 (20.3%) to examine career aspirations (leadership, achievement, educational) according to gender. The result of the analysis showed significant differences in leadership aspiration between female ($M = 29.8$, $SD = 6.8$) and male ($M = 31.4$, $SD = 6.4$) students; $t(298) = 2.11$, $p = .036$. According to the results, male university students' leadership aspirations scores were higher than female university students' leadership aspirations scores. There was not a significant differences in achievement

aspirations between female ($M = 34$, $SD = 4.7$) and male ($M = 33.2$, $SD = 5.4$) students; $t(234) = -1.23$, $p = .21$. There was not a significant differences in educational aspirations between female ($M = 31.3$, $SD = 5.8$) and male ($M = 31$, $SD = 6.5$) students; $t(237) = -.39$, $p = .69$).

Study II

Method

Study Group II

The second study group consisted of a total of 305 undergraduate from various faculties, 193 (63.3%) female and 112 (36.7%) male. The participants were enrolled in various academic years, ranging from the first to the fourth year of university. The distribution of participants by year was as follows: 60 (19.7%), 64 (21%), 96 (31.5%), and 85 (27.9%). The participants' ages varied between 19 and 27, with an average age of 21.32 ($SD = 1.03$).

Measures

Career Decision Self-Efficacy Scale–Short Form (CDSSES-SF)

The CDSSES-SF originally developed by Betz et al. (1996), was subsequently adapted to Turkish undergraduate students and adolescents by Büyükgoze-Kavas (2014). The Turkish CDSSES-SF consists of 5 subscales and 25 items similar to the original scale. The scale's internal consistency reliability was reported as .92. For the subscales, internal consistency reliability ranged from .61 for occupational

information to .81 for goal selection. The test-retest reliability of the scale was .91. In the present study, the internal consistency reliability for the entire scale was .93, while the reliability for the subscales ranged from .70 for occupational information to .80 for self-appraisal.

Achievement Motivation Scale (AMS)

The original AMS was developed by Krebs et al., (2000). The AMS was adapted undergraduate students in Türkiye by Pamuk (2007). In the factor analysis of AMS, varimax rotation method was used. In the first stage, although there were 4 factors with eigenvalues greater than 1.0, varimax rotation was used because of the 3-factor structure of the original scale. According to results, the Turkish AMS consists of 18 items and 3 subscales (work, mastery and competition) just like the original scale. In the current study, the internal consistency reliability for the scale was .85 and for the subscales were .79 (work), .58 (mastery) and .80 (competition).

Results of Criterion-Related Validity of the CAS-R-TF

In order to provide further validity evidence, the correlations between the CAS-R-TF with the CDSSES-SF and the AMS were investigated on the second study group data (Table 1). A closer look at the relationships of the subscales of CAS-R (leadership, achievement and education) with the subscales of CDSSES-SF (Self-appraisal-SA, Occupational information-OI, Goal selection-GS, Planning-P, Problem Solving-PS) and the subscales of AMS (work, mastery, competition) revealed that there were low to medium correlations.

Table 1
Criterion Validity Analysis of the Career Aspiration Scale-Revised-Turkish Form

		CAS-R-TF										
		AA	LA	EA	SA	OI	GS	P	PS	W	M	C
CAS-R-TF	AA	1										
	LA	.69**	1									
	EA	.63**	.48**	1								
CDSSES-SF	SA	.43**	.34**	.41**	1							
	OI	.38**	.33**	.41**	.69**	1						
	GS	.44**	.30**	.45**	.80**	.67**	1					
	P	.43**	.43**	.42**	.78**	.78**	.72**	1				
AMS	PS	.27**	.31**	.33**	.63**	.59**	.60**	.67**	1			
	W	.45**	.43**	.44**	.52**	.48**	.51**	.49**	.37**	1		
	M	.27**	.26**	.33**	.39**	.39**	.36**	.40**	.32**	.52**	1	
	C	.40**	.37**	.37**	.31**	.32**	.35**	.35**	.28**	.43**	.51**	1
	Aritmetik Ortalama	4.14	3.77	3.88	3.83	3.77	3.76	3.66	3.37	4.05	3.39	3.56
	Standart Sapma	0.66	0.84	0.77	0.70	0.66	0.68	0.71	0.78	0.77	0.60	0.88
Note: CAS-R-TF: Career Aspiration Scale-Revised-Turkish Form, AA: Achievement aspiration, LA: Leadership aspiration, EA: Educational aspiration, CDSSES-SF: Career Decision Self-Efficacy Scale–Short Form, SA: Self-appraisal, OI: Occupational information, GS: Goal selection, P: Planning, PS: Problem Solving, AMS: Achievement Motivation Scale, W: Work, M: Mastery, C: Competition												
*p < .01, **p < .001												



Study 3

Study Group 3

The third study group consisted of 85 Turkish university students. For reliability the stability coefficients of the CAS-R-TF were calculated on the third study group ($n=85$) data. The CAS-R-TF was administered to the students twice with a 20-day interval. Test-retest values were found $r=.80$ for Leadership, $r=.82$ for Achievement, and $r=.80$ for Education.

Discussion

The purpose of this research is to adapt a measurement tool to assess Turkish university students' career aspirations by conducting psychometric analyses of the Turkish form of the CAS-R (Gregor & O'Brien, 2016). In this respect, the construct validity and criterion-related validity of the scale were tested. For the reliability of the scale, Cronbach's alpha (α) internal consistency coefficients and test-retest correlation coefficients were calculated. Additionally, CAS-R-TF scores were compared according to gender.

The chi-square and RMSEA results of CFA assessing the construct validity of the scale were outside the acceptable model fit indices according to Hu and Bentler (1999). Therefore, modification indices were evaluated to improve model fit indices. Considering the high correlations and significant modification indices observed between these item pairs (4th – 12th ; 11th - 14th; 20th - 22nd) the covariances between these items were incorporated into the model and subsequently reanalyzed. This proposed model showed acceptable fit indices (χ^2/df , RMSEA, SRMR, NFI, CFI) (Hu & Bentler, 1999). The 3-subdimensional structure of the Turkish CAS-R was confirmed to be similar to the original CAS-R (Gregor & O'Brien, 2016). These findings suggest that the Career Aspiration Scale-Revised is a valid and reliable tool for evaluating the career aspirations of university students.

The relationship between the CAS-R-TF and AMS was examined for the criterion-related validity. A significant positive correlation was found between all the sub-scales of CAS-R-TF (leadership, achievement, and educational) and all the sub-scales of AMS (work, superiority, and competition). Gregor and O'Brien (2016) found a connection between achievement motivation and the effort put into pursuing career-related activities and goals. Career aspirations and achievement motivation jointly govern goal-directed behaviors and are, therefore, closely related (Rojewski, 2005). Similarly, Kim and Young-Yun (2015) reported a significant relationship between motivation and career aspirations. Bajema et al. (2002) found a link between academic achievement and career aspirations. Moreover, achievement motivation has been linked to leadership aspirations (Gregor & O'Brien, 2015) and career aspirations (Gregor et al., 2019).

The relationship between the CAS-R-TF and CDSES-SF was examined for the criterion-related validity. A positive and significant relation was found between the three sub-scales of CAS-R (leadership, achievement, and educational) and all the sub-scales of the CDSES-SF (SA, OI, GS, P, PS). This result is supported by research findings (Johnsons, 1995; Gottfredson, 2002) indicating that individuals who exhibit limited career self-efficacy struggle to sustain their career aspirations. Additionally, Hartman and Barber (2020) identified that occupational self-efficacy had a favorable effect on individuals' career aspirations, suggesting that higher levels of confidence in one's professional abilities can enhance one's career goals. On the other hand, in their original scale development study, Gray and O'Brien (2007) stated that career aspirations were positively related to multiple-role self-efficacy, occupational self-efficacy, and career decision self-efficacy.

In this study, the leadership, achievement, and educational aspirations of Turkish university students were examined according to gender. Leadership aspirations were found to be high in favor of male university students. The finding that male university students' leadership aspiration is higher than that of female students contradicts the results of Gregor et al. (2019). On the other hand, it supports the results of research that found that men have a high level of leadership aspiration (Hartman and Barber, 2020; Powell & Butterfield, 2003; Singer, 1989; Sheppard, 2018). Indeed, Eagly et al. (1994) found in their meta-analysis studies that men have higher leadership aspirations. However, research on the differentiation of career aspirations by gender has yielded complex results (Powell & Butterfield, 2022). Some researchers, such as Hoobler et al. (2014), have attributed the absence of a direct relationship between gender and managerial aspirations to supervisors' biases, which perceive women's motivation as lower and thus impede their development (Powell & Butterfield, 2022).

While the rate of women in managerial positions was 12.2% in 2012 (TURKSTAT, 2013), it will be 20.7% in 2022 (TURKSTAT, 2023b). Although these data show that the ratio of female managers has increased in the last ten years, it also reveals that the ratio is still higher in favor of men and that the male-dominated perspective continues to dominate. Considering the studies (Davies et al., 2005; Hoyt & Blascovich, 2007) that show that gender judgments reduce women's leadership aspirations, it can be said that the ratio of female manager employment and gender roles negatively affect women's leadership aspirations in the current conditions. Kossek et al. (2017) stated that gender biases hinder women's selection for managerial positions. Netchaeva and colleagues (2022) conducted a meta-analysis examining gender differences in leadership aspirations. According to the findings of this study, the gender difference is more significant among working adults in male-dominated industries than in female-dominated industries.

In addition, it was found that the achievement and educational aspirations did not difference according to gender in this study. This finding supports the results of Gregor et al. (2019) and the research results (Eryenen, 2008), which found that success aspiration did not differ according to gender. However, it does not support studies (Davey & Stoppard, 1993), which suggest that women have lower career aspirations than men and are more likely to endanger their careers for their spouse or family responsibilities. In Türkiye, the enrolment rate of women in higher education increased from 35.4% in 2012 (TURKSTAT, 2013) to 49.2 % in 2022 (TURKSTAT, 2023a). These data show that gender stereotypes are changing in favor of women in the field of education. When assessing the findings concerning gender differentiation within the Turkish CAS-R, it can be asserted that young adult women exhibit confidence in their ability to resist gender norms and attain a harmonious equilibrium between their professional pursuits and familial responsibilities. In the literature, there are opinions that women express higher career aspirations than their male peers, but over time, they circumscribe their aspirations and prefer lower prestigious professions (i.e., Hanson, 1994; Wahl & Blackhurst, 2000). Singer et al. (2005) and Hartman and Barber (2020) stated that career aspirations are mediated by domestic responsibilities and the search for work-life balance rather than reluctance. Accordingly, women prefer to take time off, work part-time, or take a break from work for reasons such as family responsibilities and caring for children or parents, and this affects their careers in a long time. Indeed, marital status is effective in women's employment. In Türkiye, the employment rate of divorced and single women is higher than that of married women (Aksoy et al., 2019). The career barriers women perceived were family reasons, gender, working hours, and marital status (Gndz, 2010). The career barriers faced by women managers in their career development were found to be gender role expectations (role conflict, labeling of professional competencies.), institutional factors (competition, stress, initiation into the men's club), and individual factors (family life cycle) (Baz & Aslan, 2021). Indeed, according to TurkStat (2023b) data, women's labor force participation rate (32.8%) is considerably lower than that of men (70.3%). This situation can be said to show the obstacles in front of the reflection of young women's initially high career aspirations in business life.

When the results of the studies conducted to assess the validity and reliability of the Career Aspiration Scale-Turkish Form are considered comprehensively, it can be concluded that this scale serves as a psychometrically sound measurement tool suitable for evaluating the career aspirations of Turkish university students. It has good psychometric properties to be used in determining university students' leadership, success, and educational aspirations. In theoretical and applied research aiming to measure the career aspirations of Turkish university students, it can be used in career counseling services to enrich the career

development of university students and to cope with their problems related to career development and choice. It is expected to contribute to career counseling intervention areas such as determining individuals' career aspirations, determining career-related exploration activities in the process of structuring their careers, evaluating career options, making career decisions, and working with possible career barriers.

There are some limitations of this study Firstly, this study's data were gathered from a single state university. Future research could benefit from investigating the scale's psychometric properties across diverse groups, including high school students, university students, and working men and women of various ages. Secondly, this study measures individuals' career aspirations at one stage of their lives. Conducting longitudinal studies would offer a more comprehensive understanding of how aspirations change and develop over time. Lastly, in this study, the construct validity of the CAS-R-TF was examined only in Study Group 1. This limitation may affect the generalizability of the findings. Future research should replicate the construct validity analysis with diverse samples to strengthen the scale's applicability and robustness.



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