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Development of the Career Transition to Higher Education Scale

Osman SÖNER[1], Olcay YILMAZ[2]

[1]*İstanbul Sabahattin Zaim University, Faculty of Education, İstanbul, Türkiye* 0000-0001-9741-5357

[2]*TED University, Faculty of Education, Ankara, Türkiye* *0000-0003-4740-3782*

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ABSTRACT

The aim of this study was to develop a novel assessment tool utilizing Schlossberg's 4S model (Situation, Self, Support, and Strategies), with a specific focus on assessing the career transition of high school senior students to university. The study group consisted of high school students from five different high schools. The pilot and trial administration involved a total of 85 individuals; the exploratory factor analysis included an additional 1099 participants, and the confirmatory factor analysis collected data from 273 individuals. The reliability and validity approaches employed, such as expert opinions, exploratory and confirmatory factor analysis, test-retest administration, item discrimination, internal consistency findings, and model fit indices, all demonstrated satisfactory values, indicating that the scale is valid and reliable. The factor analysis research reveals that the scale comprises three distinct dimensions: situation, self, and support, with a total of 23 items. However, the dimension of strategies is needed to demonstrate an adequate fit for this research's specific demographics. This assessment instrument is anticipated to substantially impact the field of education by enhancing the ability of school counselors and teachers to intervene more effectively in students' career planning efforts.

Keywords:
Career transition, scale development, career guidance

1. Introduction

For many young people, the transition from high school to university is pivotal. Depending on their performance on the university entrance examination, they will be granted access to specialized training in the field they want to pursue. Young individuals who embark on rigorous exam preparation encounter many challenges, particularly about adaptation. In contemporary cultures characterized by structural unemployment, transitory types of employment are dominant, providing progressively precarious conditions, reduced security, and diminished social entitlements (Monteiro et al., 2015). As stated by Young et al. (2011), throughout the 20th century, the notion of a protracted transition to adulthood or a gradual maturation process transformed. The appearance of a prolonged transition period can be attributed to several social and economic factors, including the expansion of formal education systems and the subsequent accommodation of more significant numbers of individuals for extended durations. Vocational counseling, particularly when it comes to the transition from formal education to the workforce, provides a plethora of theoretical interpretations and explanations, prompting numerous lines of inquiry (e.g., Savickas, 1999; Swanson & Fouad, 1999).

In many aspects, the transition to higher education is critical for the individual. A transition was defined by Lazarus and Folkman (1984) as a transaction that takes place between an individual and their surroundings. Distinct types and degrees of stress are consistently observed among individuals and groups, even though substantial numbers of people are affected by particular environmental demands and pressures. Individuals vary in their susceptibility and sensitivity to specific events and their interpretations and responses. In light

[1]Corresponding author's address: İstanbul Sabahattin Zaim University, Faculty of Education, İstanbul, Türkiye
e-mail: osman.soner@izu.edu.tr
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of the fact that the transition process may exert varying impacts on individuals with distinct attributes, it is imperative that its assessment be contingent upon cultural features and developmental phases. Individuals may have employed diverse strategies throughout events and each culture to help them adjust to the transition they were experiencing. In the same way, Moos and Tsu (1976) outlined two stages to the process of transition: an acute phase characterized by the allocation of effort towards lessening the consequences of stress, and a reorganization phase entailing the confrontation and acceptance of the novel reality. During the acute phase, one may disregard emotions in favor of focusing on pragmatic concerns. The reorganization phase entails a progressive restoration of regular operations.

Various models exist regarding how individuals manage transitions or crises (Fouad & Bynner, 2008; Haynie, 2011; Schneider, 2009; Zikic, 2009). The objective of each of these ideas is progression and adaptation by navigating the stages of the transition. Everyone is in agreement that individuals will respond uniquely to their approach to them. The individual's capacity to effectively manage the transition, their perceptions of the transition, and their resources and limitations are considered to be determinants of successful outcomes (Goodman et al., 2006).

Career transitions significantly impact many aspects of an individual's life, as understood. Bloch and Richmond (1998) assert that transitions have an impact on all aspects of an individual's being, including their mental, physical, and emotional states. Transitions, including life roles and self-image, influence numerous facets of an individual. Consequently, in order to effect change, it is frequently necessary to relinquish a portion of ourselves or something we hold dear. Those undergoing transition experience changes in their roles, relationships, and routines (Schlossberg, 2011). Schlossberg's (1981) model of human adaptation to transitions posits that an individual's capacity to adapt during this particular transition is additionally contingent upon their perception of the transition. As a consequence of the prevailing unfavorable economic climate, young individuals, particularly in southern European nations, are encountering heightened challenges. Probably, their ability to adapt to the transition from higher education to the workforce is being increasingly negatively impacted; a perspective of role loss (e.g., they are no longer considered students, but there is no immediate substitute role) or both. Undoubtedly, an association exists between the degree of uncertainty and elevated levels of tension induced by the adverse consequence. For many individuals, the transition to higher education is an anticipated one. Despite this, it appears that young people require significant psychological support during this period of transition. Expected transitions refer to important changes in roles or gains that are expected to take place throughout the duration of an individual's life cycle (Pearlin & Lieberman, 1979). Determining the support needed by individuals during the transition from high school to university may be crucial in this context.

In order to assess the degree to which individuals perceive themselves as having successfully completed career transitions, some efforts are needed. One of them, the Career Transitions Inventory, was developed by Heppner, Multon, and Johnston in 1994. The readiness, confidence, control, perceived support, and decision independence dimensions are assessed by its five subscales (Heppner, 1998). Readiness pertains to an individual's level of motivation regarding the transition of careers. Confidence refers to an individual's perception of their capability to execute a transition successfully. The concept of control describes the degree to which individuals perceive themselves as having the ability to determine their course of action. Perceived support relates to how much individuals receive support from their family and peers. The concept of decision independence pertains to the degree to which individuals arrive at their own decisions without taking into account the desires and requirements of others. The correlation between particular variables—namely neuroticism and openness to experience—and Career Transitions Inventory scores (Heppner, Fuller, & Multon, 1998) establishes a foundation for deliberation and investigation into these matters.

Schlossberg introduced an additional framework or concept for evaluating transitions in 1981. All individuals employ diverse coping mechanisms, possess varying degrees of support networks, have a distinct personal perspective on the world, and experience unique circumstances. In some individuals' situations, Self, Support, and Strategies are utilized qualitatively to comprehend transitions. Also, personal and demographic attributes—including socioeconomic status, gender, ethnicity/culture, age and life stage, and state of health—directly impact an individual's outlook and evaluation of life. Such a study of transitions that integrates individual and societal perspectives demonstrates the value and significance of an integrated approach. This investigation elucidates the distinctions meant to be described when we state that research outcomes differ

according to social class, gender, and age. Individuals residing in various sectors of the social system experience distinct circumstances, possess unique resources, and are consequently impacted by distinct occurrences (Goodman et al., 2006). As a result, measurement instruments that can ascertain career transition components in accordance with individual characteristics are needed. An examination of the pertinent literature revealed that, to our knowledge, no measurement instrument exists to assess the transition from high school to university.

Approximately one million students graduate high school annually in Türkiye and make preparations for entry to universities. Assisting these high school graduates as they make the necessary preparations for the university environment will result in a more salubrious transition, safeguarding and enhancing the individual's mental well-being. Individuals encounter challenges during transition processes due to their limited resources, which encompass situational, personal, social, and coping aspects, as posited by Schlossberg (2011). Transitions affect every individual in some fashion, and they alter our lives, roles, behaviors, and assumptions. The impact of each transition is more significant than the quantity of transitions that occur. Comprehending the change, assessing its impact on clients, and identifying the potential utility of this information in the clients' lives are all of the utmost importance (Schlossberg, 2011). In brief, Scholessberg categorized the continuous transitions in the life process based on the characteristics of the transition under consideration and assessed this process in terms of distinct stages. Additionally, she applied this framework to clarify career transitions that had distinct attributes during various stages of human existence. By utilizing the Career Transition to Higher Education Scale (YÖGÖ: Yükseköğretime Geçiş Ölçeği), which was developed in accordance with this methodology, it will be simpler to pinpoint areas in which students encounter challenges during the transition from high school to university. By following this approach, the literature will substantiate the gathering of empirical data regarding the challenges faced by students during the transition from high school to university. Moreover, this will establish a scientific foundation for the development of prevention and reinforcement programs by school counselors specifically designed for these populations.

Consistent with the justifications above, the objective of this study is to construct an instrument for assessment (Career Transition to Higher Education Scale) that is founded upon Schlossberg's transition model. The following are the research questions that direct the search:

- What is the structure of the Career Transition to Higher Education Scale, which measures transition components to higher education?
- What is the validity and reliability of the Career Transition to Higher Education Scale?

1.1. Schlossberg's Transition Theory

Schlossberg (1981) defines transition as a stage in which an individual perceives changes occurring in their environment and consequently adjusts their behavior and relationships accordingly. The researcher argues that three fundamental factors determine how individuals acclimate to any significant change. The factors to be considered include the individual's perception of the transition (such as its timeliness or prematureness, degree of gradualness or suddenness, permanence or uncertainty), the features of the pre-and post-transition period (including the involvement of diverse support systems and groups), individual characteristics (including psychosocial competencies), and gender role definitions.

Schlossberg, Waters, and Goodman (1995) state three types of transitions. These are anticipated, unanticipated, and transitions that were expected but did not occur. Anticipated transitions occur in response to foreseeable life occurrences, including marriage, employment, the arrival of one's first child, and retirement. Unanticipated transitions refer to the changes an individual undergoes due to an unforeseen occurrence during their lifetime. Typically, crises arise amid such transitions. These are transitions encountered in the professional environment as a result of circumstances such as unemployment, illness-related resignations, unanticipated fatalities in one's immediate vicinity, exposure to natural calamities (e.g., earthquakes), or job termination. Transitions that were expected but not realized transpire as a result of events that were anticipated to occur but failed to do so for alternative reasons. Individuals who are unprepared for circumstances such as an unborn child despite their desire or an unfruitful marriage undergo a transition associated with this unrealized circumstance.

Once an individual starts transitioning from a state of relative stillness to a state of movement, their response to this change will differ according to how they assess it. Schlossberg (1981) asserts that a transition is deemed acceptable alone if the individual undergoing it perceives it as a transition. The impact of a transition on an individual is directly proportional to the extent to which they alter their roles, routines, assumptions, and relationships. To understand a transition, its type, content, and effects must be considered. The ability of an individual to cope during a transition is influenced by four main sets of factors (Goodman et al., 2006): The Situation, Self, Support, and Strategies. The factors that make up the model can be summarized as follows (Goodman et. al., 2006; Pendleton, 2007);

Situation. Refers to the act of identifying the event and its underlying variables that precipitate the transition. The circumstances encompassing the transition situation, including its temporal occurrence, origin, potential consequences, and stress level, are assessed as components of the situation factor. Additionally, the circumstance factor considers the individual's current stage of the transition process, their perception of the transition, and whether or not they anticipate or desire it. It also assesses the timing of the transition and whether or not it is voluntary or mandatory. Furthermore, the analysis of the occurrence induces the change and its constituent elements. These variables include timing, source, role transition, duration, prior experiences, and tension associated with the transition that constitutes the triggering event. During this phase, the circumstances surrounding the transition are disclosed, including the event that sparked the change, the time it occurred, the identity or origin of the source of the event, whether a role change is necessary, whether a comparable situation has been encountered previously, and the level of stress induced by the event. Graduating from university, which signifies the culmination of one's academic journey and the beginning of the transition into the professional realm, is a transitional circumstance.

Self. Encompasses psychological resources and demographic attributes, including but not limited to age, origin, and gender. People may react differently to similar circumstances due to their unique characteristics. To possess the ability to discern coping resources through an analysis of an individual's demographic, socioeconomic, health, culture/race/ethnicity, gender role, age attributes, and psychological attributes. When employing the illustration above for evaluation purposes, elements such as the graduating individual's readiness level, self-awareness of interests and abilities, and personality traits when embarking on his initial foray into the realm of business serve to convey the individual throughout the transition process. It also pertains to the individual's personal attributes, internal strength, and resources that enable them to manage the circumstances. For example, what are the strengths and weaknesses of the individual? Is anyone else familiar with a comparable transitional experience?

Support. It functions as an encouragement mechanism for individuals amidst the challenges they face. It is conceptualized as assistance provided by various environmental sources, including family, the social environment, and organizations. This environment includes professional associations, family, colleagues, and managers (associations, professional associations, etc.). The provision of support is indispensable in enabling people to navigate transitions successfully. The significance of support systems in facilitating the utilization of psychological resources by individuals during times of transition is highlighted. Additionally, it entails the exploration of support resources that can assist the person in adjusting to the changes that occur during the transition period. The individual's social milieu, family, and friendships are investigated, with an emphasis on the efficacy of these support resources. Having an environment that facilitates the establishment of new connections and obtaining material or moral support from family and friends are essential components of this process.

Strategies. After the acquired data related to the transition has been perceived, assessed, and validated in light of the three factors above, it is articulated as the procedure of uncovering coping mechanisms for change. The strategies consist of the assessment of all the gathered data and the formulation of coping mechanisms. In conclusion, it is the process of devising strategies that enable an individual undergoing the transition to professional life to effectively manage the challenges associated with job searching and the interviews and examinations that are part of the job placement process. In brief, Scholessberg categorized the continuous transitions in the life process based on the attributes of the transition under consideration and assessed this process in terms of distinct stages. Additionally, he applied this framework to elucidate career transitions that had distinct attributes during various stages of human existence.

Following the process of determining the strategy, the individual may proceed with various actions. These may include reassessing the significance of the transition situation (returning to the initial stages of the 4S cycle), seeking fresh insights and information, undergoing further developmental training, or adopting a neutral stance and refraining from action (Heppner et al., 1998).

2. Methodology

2.1.Research Model

This study aimed to develop a quantitative measure for evaluating the career transition process that occurs when high school seniors enter college. Heppner, Wambold, and Kivlighan (2008) suggested that researchers follow a series of steps to create scales. These steps include: (1) defining the conceptual frameworks and structures to be evaluated, (2) conducting a thorough review of relevant scholarly literature, (3) developing and refining a pool of items, (4) assessing the quality of the content, (5) conducting a pre-test, selecting samples, and collecting data, (6) using factor analysis, (7) determining the final items, and (8) examining the scale's psychometric properties. The scale development in this study followed a parallel path, starting with the creation of items based on Schlossberg's (1981) 4S theory. However, according to scholarly consensus, the strategies component of this study needs to be founded as a valid dimension of Turkish culture. The analyses that included the three remaining dimensions were conducted.

2.2. Research Sample

The study group comprised high school students from five distinct high schools within the municipality of Istanbul throughout the 2022-2023 academic year. The study gathered data from multiple groups to conduct confirmatory and exploratory factor analysis. The data were acquired using two distinct sampling methodologies. Initially, the criterion sampling method was employed. The researcher devises the criterion sampling method based on the specific objectives of the research (Büyüköztürk et al., 2023). This study established two criteria: (1) experiencing a desire to transition from high school to university, and (2) not encountering any obstacles in graduating from high school. These criteria were chosen in alignment with the research objectives. This issue arose primarily due to individuals experiencing difficulties in completing their graduation, as they prioritize attaining their degree above adequately preparing for the move to university. The maximum diversity sampling method was employed to select participants in order to obtain data from various school types, taking into account the gender and school type of the pupils (Büyüköztürk et al., 2023). The study group size was established based on the principle of "at least five times the number of items" (Tavşancıl, 2014). A total of 85 individuals underwent the pilot and trial administration of the scale. A total of 517 women (47%) and 582 men (53%) were included in the data collection for the exploratory factor analysis of the scale. Out of the total number of people, 340 (31%) are enrolled in vocational high schools, 270 (25%) are enrolled in imam hatip project schools, and 489 (44%) are enrolled in Anatolian high schools. Subsequently, additional data was gathered to conduct a confirmatory factor analysis. Out of the collected data, 273 individuals (44.2%) were female and 345 (55.8%) were male. Of these individuals, 198 (32%) attended vocational high schools, 178 (29%) attended Imam Hatip Project schools, and 242 (39%) attended Anatolian high schools.

2.3. Data Collection Tools and Procedure

The researchers used the "Demographic Information Form" and "Career Transition to Higher Education Scale" that they had prepared.

Demographic Information Form: The form, devised by the researchers, has inquiries regarding gender, institutional classification, and intention to transition to high school.

Career Transition to Higher Education Scale: The researchers constructed an item pool consisting of 36 items that represent relevant constructs. A questionnaire was created to assess the appropriateness and accuracy of the items, and it was distributed to three experts who had previously done studies on this topic. Subsequently, a linguist rectified the inaccuracies in the items. A pool of 36 items was generated after receiving expert opinions and conducting a trial administration. The designated scale consisted of a seven-point Likert scale, ranging from "1) strongly disagree" to "7) strongly agree". A factor analysis study has demonstrated that the scale is composed of three distinct dimensions: situation, self, and support. The final version of the scale comprises a

total of 23 items. The scale items were renumbered as follows: the first through ninth items belong to the situation sub-dimension; the tenth through seventeenth items belong to the self factor; and finally, the eighteenth through twenty-third items belong to the support sub-dimension. A higher score indicates that the individual is better equipped for the career transition to university.

2.4. Data Analysis

The research utilized SPSS 25.0 to conduct descriptive statistical analyses and correlation analyses. Additionally, structural equation modeling was performed using the AMOS 20.0 software. The data set's integrity was meticulously scrutinized throughout this procedure regarding any missing or outlier values. Before performing the data analysis, the assumptions were thoroughly examined (Creswell & Creswell, 2017). Content and structural validity were the primary considerations during the data analysis approach. To ensure validity, the opinions of experts were sought, and five items were subsequently revised accordingly (Büyüköztürk, 2023). The data collected from the initial study group was utilized for exploratory factor analysis (EFA), where eigenvalue statistics and scatter plots were examined to ascertain the appropriate number of factors. Subsequently, an analysis was conducted to evaluate characteristics like explained variance amounts, item-factor loadings, and item discrimination levels. Confirmatory factor analysis (CFA) was performed on the second data set, considering fit indices and graphs. In order to assess the reliability of the scale, Cronbach's alpha coefficients were computed for both the overall scale and every single dimension. Additionally, test-retest reliability was examined using Pearson correlation analysis, as described by Büyüköztürk (2023) and Creswell & Creswell (2017).

2.5. Ethical

This study was conducted in accordance with the principles of the Declaration of Helsinki and was approved by the University Human Research Ethics Committee. Approval Decision No. 26.05.2022-16502.

Data collection commenced upon the completion of ethical approvals and the requisite legal authorizations. The Istanbul Governorship and the Istanbul Provincial Directorate of National Education have granted and authorized these licenses. At the onset of the study, participants were provided with comprehensive information regarding the nature of the study, privacy policy, and conditions of participation. The method for sharing participants' data is optional, and contact information is given to them if they require access to the research findings.

3. Findings and Discussion

3.1. Factor Analysis and Findings Related to Structure Validity

The compliance of the scale for the proposed structure was determined through expert analysis of 36 items, resulting in the development of a trial version. During the initial phase, a pilot study was done with 85 participants to get input on the clarity of the items. Based on this feedback, revisions were made to improve the clarity of the items. Subsequently, data was gathered from a sample of 1126 senior high school students who were in the process of transitioning to university. The purpose of this data collection was to assess the appropriateness of the scale for factor analysis. Before data analysis, outliers were examined, and data from 27 participants were eliminated. In addition, skewness and kurtosis evaluations were conducted, and the values falling within the range of -1 and +1 indicated that the data had a normal distribution (Büyüköztürk et al., 2023). Subsequently, confirmatory factor analysis was conducted, and in this particular context, new data was gathered from an additional sample of 642 individuals. Of the collected data, 24 values were identified as extreme and eliminated from the analysis. Consequently, confirmatory factor analysis was performed with a total of 618 data points.

The Kaiser-Meyer-Olkin (KMO) value was computed to be .921. The result exceeds the required threshold of 0.60 recommended by Tabachnick and Fidel (2001) for factor analysis and comes close to the desirable level of 0.90 as defined by Sencan (2005) and Sharma (1996). Furthermore, it was indicated that the Bartlett test yielded significant results (X^2 = 8643.272, p = 0.000), highlighting that these statistical values confirm the appropriateness of the data structure for factor analysis. Utilizing eigenvalues is crucial for investigating the factor structure of the scale. If a factor's eigenvalue exceeds 1, it is considered significant and included in the

scale's factor structure. Table 1 displays the eigenvalues of the factors derived via factor analysis and the corresponding amount of variance they account for.

According to the data provided in Table 1, the first factor of the scale accounts for 19.058% of the variance, with an eigenvalue of 4.383. The second factor accounts for 17.532% of the total variance, with an eigenvalue of 4.032. Lastly, the third factor accounts for 10.974% of the variance, with an eigenvalue of 2.254. The cumulative variance contributed by these factors was computed to be 47.564%. In the social sciences field, achieving high variance rates can be challenging, particularly when considering complex multi-factor systems. Typically, a variance ranging from 40% to 60% is considered satisfactory. According to the research conducted by Cokluk, Sekercioglu, and Buyukozturk (2010) and Tavşancıl (2014), the optimal range for variance amounts in the social sciences is between 40% and 60%. This study has achieved a total explained variance of 48%, which falls within this acceptable range.

Table 1. *Variance Explained By Dimensions of Career Transition to Higher Education Scale*

Dimension	Eigenvalue	Variance Explained	Cumulative Variance
1	4.383	19.058	19.058
2	4.032	17.532	36.591
3	2.254	10.974	47.564

Figure 1 presents a visual representation of the component structure using scree plot analysis, a method used to determine the number of factors in a scale. Osborne and Costello (2005) assert that the scree plot primarily reveals three primary components that align with the natural tendency or breaking points of the scale's factor structure.

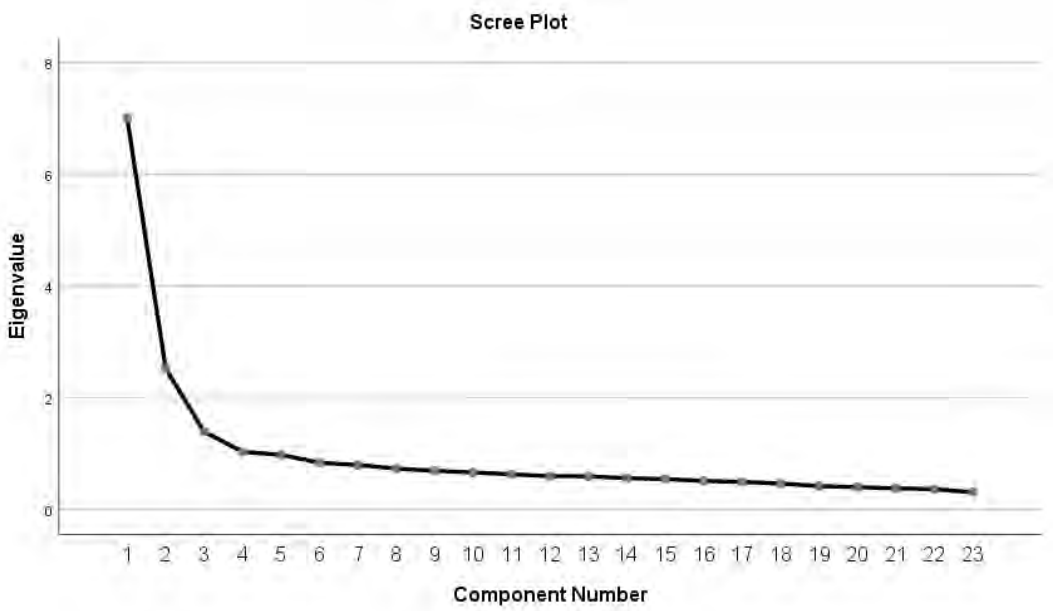

Figure 1. *Scree Plot Graph of Career Transition to Higher Education Scale*

To extensively evaluate the factor structure of the scale, we not only employed the methods indicated earlier but also analyzed the associations between the items and factors using the item-factor loadings presented in Table 2. The minimum value used for the item-factor loading was set at .32, per the recommendation of Tabachnick and Fidel (2001). When the correlation values are below .20, excluding the corresponding item from the scale is advisable. The item should be revised if the correlation value falls between .20 and .30. An item can be considered satisfactory if its correlation value is between .30 and .40. If the correlation value is .40 or higher, it indicates that the item possesses highly distinctive characteristics. These ratings are consistent with the information presented in Erkuş's research in 2016.

The item-factor loadings indicate a strong link between the variables, as the lowest value recorded was .404. The Career Transition to Higher Education Scale has been determined to have a three-factor structure. Table 2 displays the items associated with each component and their corresponding item-factor loading values. Upon doing factor analysis, it was revealed that the Career Transition to Higher Education Scale, originally

consisting of 36 items, was reduced to 23 items by removing items with overlapping content. Comrey and Lee (1992) classified item-factor loadings as excellent (.71), very good (.63), good (.55), moderate (.45), and bad (.32). Based on the analysis in Table 2, the item-factor loading values of the first factor, which consists of nine items, range from .717 to .559. The second factor, composed of eight items, ranges from .764 to .548. The third factor, comprising six items, has values ranging from .751 to .407.

Table 2. *Item-Factor Loading Values of Career Transition to Higher Education Scale*

Prev. Item	Final Item	Item	Factors		
			1	2	3
32	1	During the university preparation process, I motivate myself by thinking about the future.	.717		
34	2	I will have a good life at the university.	.692		
30	3	I can benefit from the experiences I have gained in university life.	.676		
33	4	I can cope with the stress I will experience when going to university.	.646		
28	5	I do not allow the problems I experience during the university preparation process to distract me.	.645		
26	6	I am aware of the positive qualities that I can use at university.	.619		
20	7	I make and implement plans that will make my transition to university easier.	.602		
21	8	I control the transition from high school to college.	.595		
36	9	I can get support from other people to solve a problem I will encounter at university.	.559		
6	10	I am mature enough for university life.		.764	
5	11	I can easily adapt to being a university student.		.753	
8	12	While preparing for university, I can realize my shortcomings and strengthen them.		.699	
16	13	I can come up with different solutions to the problems I'll encounter while preparing for university.		.637	
7	14	I can cope with the adverse events I may encounter when starting university.		.612	
4	15	I can study effectively for the university entrance exam.		.606	
13	16	I will start university on schedule.		.559	
18	17	I have clear expectations about university life.		.548	
27	18	I will need more support from my family when I go to university.			.751
25	19	The transition from high school to university is happening against my will.			.738
24	20	When I encounter a problem while preparing for university, I expect it to resolve itself.			.668
31	21	When I move to university, I will need more support from my high school friends.			.613
29	22	I would need help studying at a university in another city.			.607
11	23	Other than my family and friends, no one supports me in the transition from high school to university.			.407

Based on these findings, the researchers clarified the structure of the Career Transition to Higher Education Scale, assigned names to the factors based on their contents, and thoroughly analyzed the relationships between each factor or dimension in Table 3.

Table 3. *Correlational Relationships of the Components*

	1	2	3
1. Situation	1		
2. Self	,679**	1	
3. Support	,069*	,062*	1

**p<.01, *p<.05

As seen in Table 3, a positive correlation was found between the situation and self factors, which are among the sub-dimensions of the career transition scale to higher education of high school senior students (r= 0.679, p<0.01), and a moderate positive correlation was found with the support factor (r= 0.069, p. <0.05). As a result, it was concluded that there was a moderate but statistically significant relationship (r=.062, p<.05) between the situational and support components.

3.2. Item Discrimination Findings

During this phase, the primary emphasis was on the item discrimination index, which measures how items effectively differentiate between individuals. The index presented here indicates the degree to which the components contribute to the uniqueness of the structure they are measuring, with values ranging from -1 to +1. The relevant index examines the difference in mean scores between the bottom 27% and the top 27% of the participants and assesses the extent of this difference (Büyüköztürk et al., 2023). Initially, the cumulative scores from the scale were computed, followed by their arrangement in ascending order. According to this ranking, 594 individuals were chosen, comprising both the highest and lowest-scoring participants. This selection was made by considering the 27% threshold, resulting in 297 individuals in each group. An independent t-test assessed the differences between the upper and lower groups. The results indicated statistical significance for all items (p = 0.000). This approach was likewise implemented for every sub-dimension of the scale. Upon analyzing the item discrimination values in Table 4, it was found that there were significant results for both the overall scale and its sub-dimensions.

Table 4. *T-Test Results for Item Discrimination Values*

Item No		N	Mean	Ss	Sd	t	p
KG4	Lower	297	3,3165	1,65244	592	20.224	.000
	Upper	297	5,7306	1,22537			
KG5	Lower	297	3,6465	1,96582	592	22.104	.000
	Upper	297	6,3771	0,81739			
KG6	Lower	297	4,0034	2,03599	592	20.547	.000
	Upper	297	6,5556	0,66101			
KG7	Lower	297	3,4276	1,76173	592	15.850	.000
	Upper	297	5,5825	1,54464			
KG8	Lower	297	3,6566	1,74465	592	21.954	.000
	Upper	297	6,1818	0,94114			
KG11	Lower	297	3,9529	2,09998	592	8.491	.000
	Upper	297	5,4175	2,10391			
KG13	Lower	297	3,5286	1,73011	592	18.732	.000
	Upper	297	5,8956	1,32257			
KG16	Lower	297	3,5758	1,62596	592	22.381	.000
	Upper	297	6,0404	0,97868			
KG18	Lower	297	3,4377	1,67564	592	20.878	.000
	Upper	297	5,9360	1,20217			
KG20	Lower	297	3,2559	1,66091	592	422.957	.000
	Upper	297	5,8956	1,08080			
KG21	Lower	297	3,2862	1,59462	592	23.915	.000
	Upper	297	5,9899	1,11950			
KG24	Lower	297	4,4680	1,74172	592	8.922	.000
	Upper	297	5,7071	1,64143			
KG25	Lower	297	4,5690	1,81848	592	14.203	.000
	Upper	297	6,4175	1,31292			
KG26	Lower	297	3,2727	1,63875	592	22.293	.000
	Upper	297	5,9226	1,22918			
KG27	Lower	297	4,5690	1,79605	592	12.861	.000
	Upper	297	6,2828	1,43112			
KG28	Lower	297	3,2256	1,57674	592	17.348	.000
	Upper	297	5,4579	1,55933			
KG29	Lower	297	4,1414	1,94525	592	9.487	.000
	Upper	297	5,6229	1,85975			
KG30	Lower	297	3,7845	1,71855	592	23.277	.000
	Upper	297	6,3737	0,84931			

KG31	Lower	297	4,2963	1,81949	592	7.749	.000
	Upper	297	5,4478	1,80225			
KG32	Lower	297	3,6902	1,74129	592	21.690	.000
	Upper	297	6,2896	1,11060			
KG33	Lower	297	3,4949	1,66871	592	16.745	.000
	Upper	297	5,6330	1,43437			
KG34	Lower	297	3,6061	1,73683	592	23.925	.000
	Upper	297	6,3737	0,97868			
KG36	Lower	297	3,6599	1,80151	592	15.615	.000
	Upper	297	5,7239	1,39420			

3.3. Internal Consistency Findings

To ensure the reliability of the measurement tool, internal consistency coefficients were determined for the Career Transition to Higher Education Scale and its dimensions. Cronbach's Alpha internal consistency coefficients are given in Table 5.

Table 5. *Reliability of Career Transition to Higher Education Scale and Its Dimensions*

Dimensions	Number of Items	Cronbach's Alpha
Situation	9	.862
Self	8	.855
Support	6	.706

Cronbach's alpha values of the sub-dimensions of the Higher Education Career Transition Scale were found to be .862 for the situation sub-dimension, .855 for the self sub-dimension, and the Cronbach's alpha values of the dimensions were .862 for the situation sub-dimension. .706 for the support subsize. It has been stated by various researchers (Kaplan & Saccuzzo, 1989; Nunnally & Berstein, 1994) that the internal consistency coefficient of a test should be between .70 and .80. Considering these values, it can be considered that the internal consistency coefficients of the Higher Education Career Transition Scale are sufficient.

3.4. Test-Retest Reliability Findings

By administering the same scale to the same individuals at different points in time, test-retest reliability assesses the consistency of a measurement tool (Büyüköztürk et al., 2023). The final version of the Career Transition to Higher Education Scale, which includes 23 items and three sub-dimensions, was administered to 62 participants with a three-week interval between each administration. The correlation between the two administrations has been determined, and the results are presented in Table 6.

Table 6. *Test-Retest Findings*

Administrations	Correlation Test	
Career Transition to Higher Education Scale	r*	p
Situation $_1$ and Situation $_2$	.800	.000
Self $_1$ and Self $_2$	.861	.000
Support $_1$ and Support $_2$	.878	.000

* Subvalues 1 and 2 in the table refer to the 1st and 2nd administrations.

Upon examination of Table 6, significant correlations were observed between successive administrations. The information obtained led to the conclusion that the scale's reliability and dimensions remain consistent throughout time.

3.5. Confirmatory Factor Analysis Findings

The Confirmatory Factor Analysis (CFA) approach was utilized to validate the three-factor structure of the Career Transition to Higher Education Scale. The objective of CFA is to reveal the associations between the variables identified by EFA and the specific items that fall within these factors (Çelik and Yılmaz, 2016). Throughout this analytical procedure, multiple fit indices were evaluated to assess the degree to which the model aligned with the data. The model's fit was evaluated using several statistical measures, including $\chi 2$/sd, GFI, AGFI, SRMR, RMSEA, and CFI values. The evaluation limits of these indices are determined based on the intervals recommended by the cited sources (Baumgartner & Homburg, 1996; Browne & Cudeck, 1993;

Fabrigar et al., 1999; Hu & Bentler, 1998; Kline, 2011; Marsh et al., 2006; Schermelleh-Engel et al., 2006; Schumacker & Lomax, 2010; Wang & Wang, 2012; Yılmaz & Çelik, 2016).

Table 7. *Model Fit Indice Values*

Indice	Acceptable Fit Value	Good Fit	Calculated Value	Conclusion
CMIN/DF	$2<\chi^2/sd\leq3$	$0\leq\chi^2/sd\leq2$	2.643	Acceptable Fit
GFI	.90≤GFI<.95	.95≤GFI≤1.00	.920	Acceptable Fit
AGFI	.85≤AGFI<.90	.90≤AGFI≤1.00	.902	Good Fit
SRMR	.05≤SRMR≤.08	0≤SRMR<.05	.047	Good Fit
CFI	.95≤.CFI<.97	.97≤CFI≤1.00	.917	Acceptable Fit
RMSEA	.05<RMSEA ≤.08	0≤RMSEA≤.05	.05	Good Fit

According to the criteria above, it appears acceptable to validate the three-factor structure of the scale. The model fit was assessed by calculating the chi-square/degrees of freedom ratio using CFA when testing the structure derived from EFA. The ratio yielded a value of 2.643, falling within an acceptable range. Among the residual-based fit indices, it was found that the GFI value indicated a good fit at .920, while the AGFI value also indicated a good fit at .902, along with an SRMR value of .047. The CFI value, a fit indicator derived from the independent model, showed an acceptable fit level of .917. Similarly, the RMSEA value, based on the root mean square error of approximation, demonstrated a satisfactory fit of .05.

These findings validate the three-factor structure of the scale using the sample data. Figure 2 provides a comprehensive display of the goodness-of-fit indices produced from the confirmatory factor analysis (CFA) and the path diagram and parameter estimations.

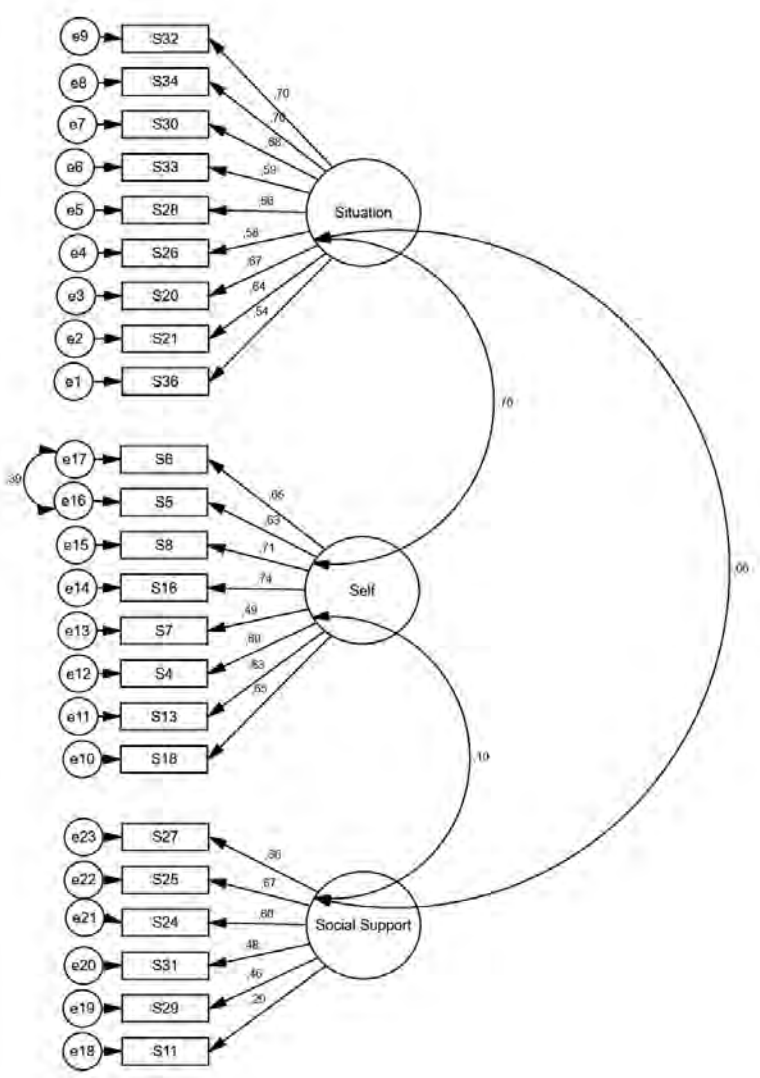

Figure 2. *Path Diagram and Parameter Estimates*

The observed results indicated none of the standardized path parameter values for the latent variables exceeded one. As a result, they ranged from 0.29 to 0.74. Furthermore, the $\chi 2$ / df ratio, which assesses the adequacy of the model, was computed as 2.643, and this value was accepted as satisfactory at the significance level ($p < 0.01$). The results indicated that the model had no significant errors and that the scale components accurately represented the latent variables (Cokluk et al., 2010). Upon examination of the modification indices, it was noted that some observed variables were shown to have associations with different latent variables in the proposed model. It has been reported that implementing just one of these suggestions results in the readings falling into an acceptable range.

4. Discussion and Conclusion

This study aimed to create a novel assessment instrument based on Schlossberg's (1981) 4S model, specifically designed to evaluate the career transition of high school senior students to university. Initially, the research focused on analyzing the existing body of literature regarding career choices made by individuals throughout the transition period to university. Research in this area has consistently shown that survey methods are the preferred approach (Bacanlı, 2005; Büyükgöze-Kavas, 2012; Çakır, 2004). Nevertheless, it is important to highlight the lack of extensive study into the determinants that influence the career decisions made by high school seniors as they move into university. To address this inadequacy, the idea was to create a measurement instrument to assess the level of competence students perceive in their career choices. This tool will also incorporate criteria to comprehend their requirements and expectations during this process. Within this framework, the intention is to assess several elements, including students' academic accomplishments, interests, abilities, and professional aspirations, alongside external influences such as familial expectations, economic circumstances, and the impact of the social milieu. This comprehensive measurement tool aims to empower students to make professional decisions with greater awareness and enhance the effectiveness of their career planning. Furthermore, it is expected that this assessment instrument will significantly improve education by enabling school counselors and teachers to intervene more efficiently in students' career-planning endeavors. These parts of the study are anticipated to have a substantial impact and serve as an essential resource for future research.

Furthermore, this study possesses several apparent constraints. The sample's homogeneous composition may have prompted concerns about the theoretical foundation of the measurement instrument. The absence of the strategies dimension in Schlossberg's theory within this assessment tool may be attributed to its inherent limitations. Besides, the sheer number of participants who were residents of a metropolitan center could have affected the factors that influenced career transition dynamics.

This study devised a reliable and accurate assessment instrument to evaluate the career transition components of high school senior students as they move to university. Psychological counselors and educators can utilize this measurement instrument proficiently to comprehend and manage the challenges students encounter in their career preparation. The scale facilitates students in assessing themselves and making well-informed choices in their career planning. Additionally, it empowers teachers to offer students more focused and individualized assistance during this process. Furthermore, the utilization of this measurement method might aid in the advancement and tailoring of career guidance programs. For instance, gathering data on students' self-efficacy views, interests, and abilities might facilitate the development of educational courses and career counseling services that are more impactful. Moreover, the data acquired on this scale can assist universities and other academic institutions in delivering career services that more effectively meet the needs and demands of students. Furthermore, besides utilizing this measuring instrument, it is crucial to implement supplementary strategies to facilitate career transition processes.

Given the circumstances, it would be advisable to enhance the career guidance and counseling services offered in schools and promote internship and job shadowing programs to provide students with practical exposure to the real world. Furthermore, arranging regularly scheduled meetings and workshops is possible to enhance interaction among students, families, and the school. Given that this study establishes a solid basis for investigating career transition processes and enhances understanding in this area, future studies that utilize this measurement tool and apply it to larger sample sizes and diverse cultural contexts have the potential to improve the reliability and validity of the scale. Furthermore, it is crucial to regularly update and enhance the assessment instrument, ensuring that it aligns with evolving approaches and requirements for career

transition processes. Following this approach, the assessment instrument will continue to be a potent and current resource for comprehending and assisting students in their career transitions.

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