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Developing a Behavioral Disposition Perception Scale for Determining High School Preferences of 8th Graders

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ABSTRACT

This study sought to develop a valid and reliable measurement tool that measures the perceptions of behavioral dispositions in determining the high school preferences of 8th grade students. The study population consisted of 26,906 eight graders in public and private secondary schools located in the city centres of Aydın and Denizli, Turkey. The sample was selected using the disproportionate cluster sampling method. In this respect, a total of 400 students in the pilot implementation and 700 students in the large sample implementation participated in the implementation in equal numbers in both provinces. In the pilot implementation phase of the research, a three-dimensional trial form consisting of 125 items was administered to the 8th graders, as the sample group. Exploratory factor analysis was employed to ensure the construct validity, and a scale consisting of 45 items and three factors was identified. The sub-dimensions of the scale were named as cognitive, affective, and psychomotor domains. However, the scale was developed in a 5-point Likert type. Referring to the reliability study of the scale, the Cronbach's Alpha coefficient was calculated as.962 in the pilot implementation and as.888 in the large sample implementation. The results revealed that the Behavioral Disposition Perception Scale was a valid and reliable measurement tool in measuring the perceptions of behavioral dispositions of 8th graders in determining their high school preferences.

Key words: Bloom's Revised Taxonomy, Perception of Behavioral Disposition, High School Preference, Validity and Reliability

INTRODUCTION

Humanity has been characterized by movement since its inception. Human beings possess the ability to move, which allows them to satisfy their needs. In this sense, movement is a means of self-expression. Humans have historically sought to fulfil their needs, such as food, water, and shelter. For example, they have built fires to cook food, dug canals to access water, and constructed homes for shelter. Movement is a key component of these attempts to meet basic needs. However, human activity is not limited to mere movement; people also use movement as a form of self-expression.

Expressing oneself does not always happen directly. It is also possible for it to happen indirectly. This might be because people do not know themselves or do not know how to express themselves. In order for a person to express themselves, they also need to know what their actions mean. However, individuals should first be aware of their own abilities so that they can integrate their actions with other people.

Ability refers to the power of a person required to do something. With this power, a person can predict the outcome of the decisions and actions he or she takes for himself or herself. Taken together, a concept that can represent them all emerges. This concept in which movement, self-expression, and ability can all come together is called "behavior."

Behavior is defined as the observable actions or reactions produced by an individual to express themselves. These actions can provide insight into an individual's thoughts, emotions, and personality traits. Yaylacı (2013) suggests that behavior is an activity that enables the observation of people's reactions and the identification of key components in behaviors. In essence, understanding behavior can lead to a better understanding of the individual.

Behavior is a complex phenomenon that involves sociological, physiological, and psychological aspects. From a sociological perspective, Şerif and Şerif (1996) argued that behavior and experience are subjects of social psychology and should not be considered separately. They further contended that people's behaviors make their experiences more comprehensible, and that behavior is inextricably linked to past experiences (p. 5). When viewed from a physiological standpoint, behavior is a reflection of the nervous system's function and human reactions. Thus, the brain, which is regarded as a complex organ responsible for a person's abilities, has been the focus of research (Carlson, 2011, p. 20). From a psychological perspective, Karadal (2018) maintains

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that behavior arises from observing or measuring conscious responses. In summary, behavior revolves around three aspects that are interconnected with each other.

Behavior is a subject of interest in social psychology as it allows for the analysis of individuals. According to Şerif and Şerif (1996), understanding an individual's behavior and experiences requires an examination of various psychological activities they engage in. These activities include perceiving, criticizing, knowing, learning, remembering, thinking, and wanting, and they are constant in their direction. Psychological activities are crucial in both daily life and educational settings. This is especially evident during the process of choosing a school, which is a crucial turning point for students. The first stage of this process takes place when students transition from middle school to secondary education.

It is expected that a student who has reached middle school will make a conscious decision. In this regard, Piaget stated that an adolescent between the ages of 11-15 is in the formal operational stage and logical, idealistic thoughts are prominent during this period (Santrock, 2019). At the same time, interests and abilities begin to emerge in adolescents during this period. It is important for students to be cognizant of their psychological characteristics when choosing a school and to incorporate these traits into their decision-making process. However, students tend to prioritize their exam success more when making their choices. In centralized exam systems conducted in the early 2000s, the aim was to determine whether students achieved the goals that were intended to be taught in the curriculum, and a placement process was carried out accordingly (Coşkun et al., 2020, p. 153). The future consequences of these choices made by students are not considered. The clearest example of this is seen in students' struggles to decide which field they want to pursue towards the end of high school. The choice of high school, which seems to be the foundation of these decisions, is the point where a student's perspective on life begins to take root. It is important to provide support to the student at this point. They should be made aware of which high school is suitable for them. In this regard, school psychologists, who are the right-hand man in schools in psychological terms and help students discover themselves, have a crucial role to play.

Hepkul (2014) revealed that students are often unaware of their own interests and rely on family guidance when making choices. Students who do not receive adequate guidance prior to their selection of a high school typically lack knowledge about their interests and base their choices solely on their academic performance, such as school scores and grade point averages. According to Azili and Tutkun's (2021) study, 8th grade middle school teachers found that the level of difficulty in exam questions for high school entrance exams was aligned with the achievements in secondary school education programs, and the difficulty of skill-based questions was coherent with learning outcomes in the secondary education curriculum. However, they were not coherent with the assessment of high-level behaviors. Additionally, Yayla and Bacanlı (2011) discovered that vigilance and perseverance are powerful predictors of career development in their research on 8th grade students. As a result, guidance services were intended to help students recognize their subconscious dispositions, make informed choices, and ensure their satisfaction with themselves in the future.

Guidance service, which is one of the areas of counselling service, provides assistance in helping students get to know themselves better and choose the educational and career paths that are best for them on the basis of their own interests, skills, values, and other qualities. Çam (2015) claimed that introducing guidance services at an early age can help students cope with challenges they may experience during program transition, school selection, and career planning. Guidance and counselling services, which play a crucial role in the second step of primary education, also manifest themselves in their goals for students. Özcan and Çalışkan (2020) stated that the objectives of the guidance service in the second stage of primary education include recognizing students' characteristics, conducting a comprehensive analysis of career decisions, and relating them to the lessons they have learned. The Basic Law of National Education also includes the statement for the guidance part of the basic principles of Turkish National Education in Article 6 as "Individuals are raised by being directed to various programs or schools in line with their interests, skills, and abilities during their education." (MoNE, 1973, p. 5102).

In a nutshell, career guidance and counselling play an important role in assisting students in making informed school choices. Therefore, expecting a student to be productive in an environment where they have no interest and where they cannot demonstrate their talents is like asking a fish to fly or a bird to swim. It is crucial that every student makes a selection based on their own traits, considering the awareness of the best-fit school. Students are typically expected to have a graduate profile equipped with numerous competencies such as self-actualization, critical thinking, appreciation for knowledge, etc. To ensure that students achieve their full potential in secondary education, it is crucial to provide them with opportunities for self-exploration. This can help them identify their dominant behavior patterns and select a high school that is best suited to their individual needs. Such an approach is warranted as human behavior is largely driven by reactions that seek to maintain internal balance. In this context, there should be a study where students can reflect their inner thoughts and feelings through their behavior, which they cannot express in words. Therefore, the present research attempts to develop a valid and reliable measurement tool to assess eighth-grade students' behavior preferences when choosing a high school. Further, the aim of the study is to determine whether the Behavioral Disposition Perception Scale is a valid and reliable measurement tool in determining the high school preferences of 8th grade students.

METHODOLOGY

To address the research question "What is the validity and reliability of the Behavioral Disposition Perception Scale?", a series of steps were taken to finalize the scale. These steps involved item analysis, exploratory factor analysis, reliability analysis, and scale finalization. Finally, the reporting

process was completed. In brief, a quantitative descriptive survey model that reached a large audience was employed in the study.

Population and Sample

The population of the study comprised 26,906 eighth-grade students from public and private secondary schools located in the city centres of Aydın and Denizli during the 2021-2022 academic year. The sample was selected using the disproportionate cluster sampling method, and the sample size was determined using the formula developed by Ali Balcı. A total of 400 students were included in the sample, with 200 students from Aydın and 200 from Denizli, which was considered sufficient to represent the population. The sample size was obtained from the following formula:

$$n = \frac{\frac{t^2 . \ (PQ)}{d^2}}{1 + \frac{1}{N} \ . \frac{t^2 . \ (PQ)}{d^2}}$$

N= Population size
n= Sample size
d= Degrees of freedom
t= Table value of confidence level
PQ= (.50).(.50) =.25 sample size percentage for maximum sample size" (Adapted from Balcı, as cited in Süral, 2008, p. 60).

Data Collection Tools

The Behavioral Disposition Perception Scale used in the study to determine high school preferences was developed by considering the 8th grade students› course achievements, knowledge, and experiences, as well as the literature review. The initial scale was developed by focusing on the behavioral domains of the acquisitions, and a three-sub-dimensional scale was designed based on the Revised Cognitive Domain of Bloom's Taxonomy. The opinions of four experts with PhD degrees and associate professorships in Curriculum and Instruction were also considered, and the necessary revisions were made. The first implementation of the scale consisted of 125 items, and it was a 5-point Likert-type scale with response options including "Strongly Disagree, Disagree, Little Agree, Agree, and Strongly Agree." Students were instructed to choose only one option. After removing irrelevant items and conducting necessary controls, the reliability and validity coefficients of the scale and sub-dimensions were calculated, and the final version of the scale was reduced to 39 items. The behavior classification and the number of items for the Behavioral Disposition Scale are presented in the Table 1.

The Behavioral Disposition Perception Scale is scored on a 1 to 5 ranking system and does not include any negative comments. Table 2 displays the distribution of the lowest and highest scores for the sub-dimensions and overall scale of the Behavioral Disposition Perception Scale.

The lowest possible score that can be obtained from the Behavioral Disposition Perception Scale is 13 in the cognitive sub-dimension, 11 in the affective sub-dimension, and 15 in the psychomotor sub-dimension. The highest possible score is 65 in the cognitive sub-dimension, 55 in the affective sub-dimension, and 75 in the psychomotor sub-dimension. The lowest possible score for the overall scale is 39, while the highest possible score is 195. Table 3 presents the order of behavioral domains corresponding to high schools, ranked from the most dominant to the least dominant area, based on the values obtained from the scale.

Table 1. The distribution of behavioral disposition perception scale by classification of behaviors and number of items

Classification of Behaviors	Number of Items	Total Number of Items
Cognitive Domain	13	39
Affective Domain	11	
Psychomotor Domain	15	

Example Items Related to the Scale

In this section, some sample items from the Behavioral Disposition Perception Scale are showcased. These items have been provided, with one representing each sub-dimension. Information related to the sub-dimensions of the example items is provided in Table 4 below.

Data Analysis

The data analysis process began with transcribing the students' responses to the draft scale into a computer. Subsequently, scores were computed for individual items and for the overall scale. To establish the construct validity of the scale, exploratory factor analysis (EFA) was conducted. The suitability of the data for sample measurement and factor analysis was then evaluated using the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test. Lastly, an anti-image correlation matrix analysis was performed to confirm the appropriateness of the data for factor analysis. Figure 1 illustrates the entire process of scale development.

Prior to this process, the flow showing the scale development stage in Figure 2 was followed. Data analyses were performed in tandem with the flow.

Validity and Reliability of the Scale

Prior to analysing the validity of the Behavioral Disposition Perception Scale, an anti-image correlation matrix was calculated and presented in Table 5.

Prior to analysing the validity of the Behavioral Disposition Perception Scale, an anti-image correlation matrix was calculated and presented in Table 5. Based on the matrix, all items had a value above 0.70, which is considered appropriate for factor analysis (Can, 2019). Consequently, items that met this criterion were included in the factor analysis, and those that did not were excluded. As shown in Table 5, the diagonal values of the anti-image correlation matrix ranged from.72 (A30/Affective Item 30) to.91 (C22/Cognitive Item 22, P20/ Psychomotor Item 20, P29/Psychomotor Item 29).

Table 2. The lowest and highest scores distribution of behavioral disposition perception scale by sub-dimensions and total scale

Sub-dimensions	The Classification of Scale Items by Sub-dimensions	The Lowest Score	The Highest Score
Cognitive	1, 6, 9, 10, 14, 17, 20, 23, 26, 29, 31, 34, 37	13	65
Affective	2, 4, 7, 11, 12, 15, 18, 21, 24, 27, 32,	11	55
Psychomotor	3, 5, 8, 13, 16, 19, 22, 25, 28, 30, 33, 35, 36, 38, 39	15	75
Total		39	195

Table 3. Order of the behavioral domains corresponding to the high schools

Type of High School	Behavioral Domains		
	The Most Dominant →	The Least Dominant	
1.Anatolian High School	Cognitive	Affective	Psychomotor
2.Science High School	Cognitive	Psychomotor	Affective
3.Social Sciences High School	Cognitive		
4.İmam Hatip High School	Affective		
5.Vocational and Technical Anatolian High School	Psychomotor		
6.Fine Arts High School	Affective	Psychomotor	
7.Sports High School	Psychomotor	Affective	

Table 4. Example Items Related to the Behavioral Disposition Perception Scale

Sub-dimensions	Item scale number	Items
Cognitive	9	I read a text following grammar rules.
Affective	7	I appreciate the steps taken towards independence.
Psychomotor	16	I can quickly disassemble and reassemble electronic devices.

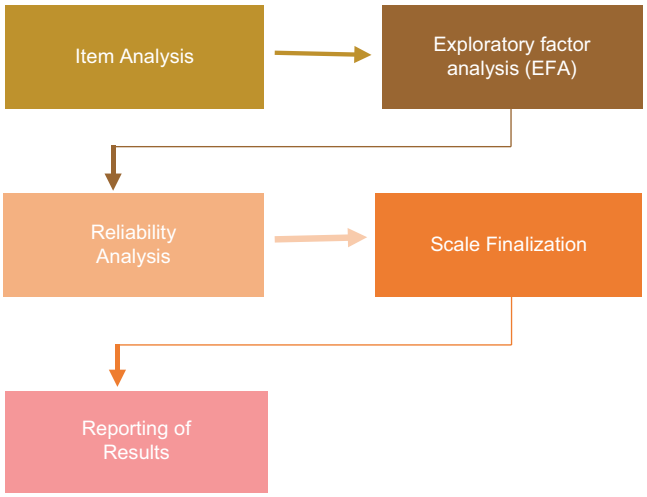

Figure 1. Data analysis process in scale development

While Büyüköztürk (2020) suggests that the Kaiser-Mayer-Olkin (KMO) coefficient test, which evaluates the suitability of data for factor analysis and measures sampling adequacy, should be above.60, Can (2019) argues that values below 0.5 require larger samples to ensure sufficient relevance, values between 0.5 and 0.7 are adequate, and values of 0.7 and above are considered good. In this study, the KMO value was 0.853, indicating that the data were suitable for factor analysis and the sampling adequacy was good. Thus, the sampling adequacy was found above the expected value and in the good adequacy value range. Furthermore, the results of Bartlett's test revealed a significant chi-square statistic ($x^2 = 7074.470$, $p < .01$), indicating that the data matrix was appropriate for factor analysis. A high level of correlation between the variables was also detected.

Subsequently, a scree plot was utilized to visualize the eigenvalues for factor analysis of the scale items. As demonstrated in Figure 3, there was a break after the 2nd factor, and the eigenvalue was below 1 after the 3rd factor. Therefore, based on the scree plot, a 3-factor structure was determined to be the best fit for the data.

Prior to the graph, a Varimax rotation was conducted, and only factor loadings above 0.33 were considered. Any item with a factor loading below 0.33 should be removed from the scale as it indicates that the item is suppressed (Can, 2019). In addition to that, there should be no overlap between the items. In the case of overlap, it is checked whether the factor loading values between the items are less than 0.10. If there is a relationship between the factors and it is found to be less than 0.10, this item should be removed from the scale (Can, 2019; Süral, 2017). Considering all these conditions, the necessary items were removed from the scale.

In fact, the effect of factors can be seen at the graph. While the first factor indicated a high accelerated decline, the second and third factors showed a less accelerated decline compared to the first factor. This was also seen when the first factor explained 54.2% of the variance before the rotation. As a result, the scale was gathered under 3 factors. The factor eigenvalue table of the Behavioral Disposition Perception Scale was also employed to determine the scale factor number. In the meanwhile, the eigenvalue of the

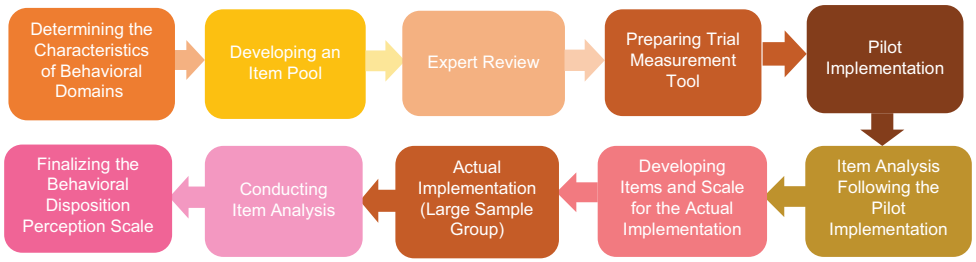

Figure 2. Steps in the scale development

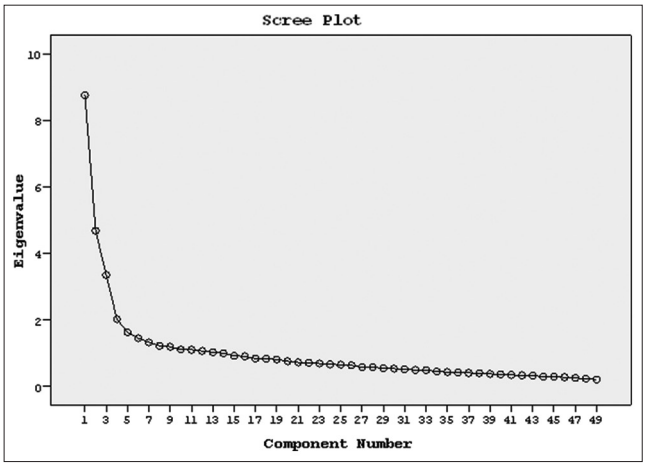

Figure 3. Scree plot of eigenvalues from exploratory factor analysis of the Behavioral Disposition Perception Scale

factors should be greater than 1.00 (Süral, 2017). In brief, the observed eigenvalues of the factors are provided in Table 6.

Based on the factor analysis results presented in Table 6, it is evident that the eigenvalues of the three factors exceed 1.00, thereby confirming that the Behavioral Disposition Scale comprises three factors. Additionally, the table shows the variance values of the three factors, which reflect the variance ratios explained by the eigenvalues of the factors (sub-dimensions). Specifically, the eigenvalue of the cognitive sub-dimension was 13.343, and it explained 29.565% of the variance; the affective sub-dimension had an eigenvalue of 9.565,which accounted for 17.433% of the variance; and the psychomotor sub-dimension had an eigenvalue of 7.646, explaining 7.202% of the variance. Therefore, the cumulative variance explained by these three sub-dimensions was calculated to be 54.2%. Notably, as suggested by Büyüköztürk (2020), the BDPS has three factors, and the total variance explained is over 30%, implying that the intended structure is appropriately and effectively measured.

The factor loads of the Behavioral Disposition Perception Scale, which indicates the relationship of the items with the factors, are provided in Table 7. From Table 7, it is seen that there are only factor load values above 0.33 and there is no low factor load. However, the first factor was named as cognitive, the second factor was named as affective and the third factor was named as psychomotor. The first factor of the scale, the "cognitive" sub-dimension, consists of 13 items (items 1, 6, 9, 10, 14, 17, 20, 23, 26, 29, 31, 34 and 37, as expressed in A1); The second factor, the "affective" sub-dimension, consists of 11 items (items 2, 4, 7, 11, 12, 15, 18, 21, 24, 27 and 32, as expressed in A1); The third factor, the "psychomotor" sub-dimension, consists of 15 items (items 3, 5, 8, 13, 16, 19, 22, 25, 28, 30, 33, 35, 36, 38 and 39, as expressed in A1).

In an effort to examine the relationship between the score of each item in the Behavioral Disposition Perception Scale and the overall score, the item-total correlation was analyzed. In this context, the item-total correlations of each item in the scale and the correlation values of the sub-dimensions in which the items were collected are outlined in Table 8.

Examining the correlation results in Table 8, the item correlation sum for the 39-item scale ranged from .235 to .507. Within the sub-dimensions of the scale, the correlation values were between .377 and .640 in the cognitive domain, between .366 and .535 in the affective domain, and between .410 and .675 in the psychomotor domain. Notably, the lowest item was item 21 (r = .235) in the affective sub-dimension, while the highest item among the item-total correlations was item 22 (r = .507) in the psychomotor sub-dimension. These correlations indicate that the items of the scale are significantly related both in terms of item correlations and sub-dimensions.

Upon interpreting the correlation value ranges in Table 8, it is observed that the item-total correlations for each item are .20 or higher. In terms of the correlations of the same items with their own factors, the result was found to be .30 or higher. Therefore, it can be concluded that the relationship between each item and the total item scores was relatively low, while the correlation level of each item with its own factor was medium. Ideally, the correlation coefficient for each item should be .30 or higher, but a value of .20 or higher can also be considered acceptable. Büyüköztürk (2020) stated that it is also appropriate to make an inference based on whether the results of a calculated correlation coefficient are significant or not, in the event that the coefficient is very low or very high. As a result of this inference, it is a fact that a coefficient with a very low correlation level is likely to be significant, and a coefficient with a high correlation level may be found to be insignificant.

The results of the Behavioral Disposition Scale indicate a low level of correlation between each item and the overall score, but a moderately significant relationship between the items and their own factors. Correlation coefficients falling within the range of 0.00-0.30 are considered low, those between 0.30-0.70 are moderate, and those between 0.70-1.00 are high (Büyüköztürk, 2020). Therefore, there is no item that reduces the internal consistency of the scale, and it can

Table 5. Anti-image correlation matrix of behavioral disposition perception scale

	C1	C2	C8	C9	C15	C17	C18	C19	C20	C22	C28	C38	C41	A1	A2	A3	A9	A10	A12	A16
C1	82																			
C2		80																		
C8			79																	
C9				80																
C15					87															
C17						85														
C18							81													
C19								82												
C20									85											
C22										91										
C28											73									
C38												80								
C41													82							
A1														86						
A2															81					
A3																82				
A9																	84			
A10																		85		
A12																			88	
A16																				87
A17																				
A21																				
A30																				
A40																				
P1																				
P2																				
P8																				
P10																				
P11																				
P17																				
P20																				

(*Contd...*)

Table 5. (*Continued*)

	C1	C2	C8	C9	C15	C17	C18	C19	C20	C22	C28	C38	C41	A1	A2	A3	A9	A10	A12	A16
P21																				
P24																				
P25																				
P26																				
P29																				
P32																				
P33																				
P34																				

	A17	A21	A30	A40	P1	P2	P8	P10	P11	P17	P20	P21	P24	P25	P26	P29	P32	P33	P34	
C1																				
C2																				
C8																				
C9																				
C15																				
C17																				
C18																				
C19																				
C20																				
C22																				
C28																				
C38																				
C41																				
A1																				
A2																				
A3																				
A9																				
A10																				
A12																				
A16																				
A17	79																			
A21		87																		

(*Contd...*)

Table 5. (*Continued*)

	C1	C2	C8	C9	C15	C17	C18	C19	C20	C22	C28	C38	C41	A1	A2	A3	A9	A10	A12	A16
A30			72																	
A40				85																
P1					81															
P2						86														
P8							86													
P10								86												
P11									85											
P17										82										
P20											91									
P21												82								
P24													89							
P25														89						
P26															88					
P29																91				
P32																	86			
P33																		81		
P34																			86	

Table 6. Eigenvalues of the factors belonging to behavioral disposition perception scale

Factors	Initial Eigenvalues			Extraction Sums of Squared Loadings			Descriptive Statistics		
	Total	Explained variance (%)	The Cumulative Explained Variance	Total	Explained variance (%)	The Cumulative Explained Variance	Mean	Standard Deviation	Reliability Coefficients (α)
1. Cognitive	13.343	29.565	29.565	13.343	29.565	29.565	19.445	6.213	0.911
2. Affective	9.565	17.433	46.998	9.565	17.433	46.998	10.078	3.878	0.886
3. Psychomotor	7.646	7.202	54.200	7.646	7.202	54.200	6.454	1.998	0.879

effectively measure the intended feature while also demonstrating construct validity.

In addition to that, a correlation was calculated to determine at what level or amount of relationship exists between the sub-factors, on which the items of the Behavioral Disposition Perception Scale were collected, and the total scale, as well as to obtain information about the direction between the items and the factors. To make this calculation, the Pearson correlation coefficient between the overall scale and its factors was used. In order to calculate the Pearson correlation coefficient, it is necessary that the two continuous variables exhibit a normal distribution (Büyüköztürk, 2020). After it was determined that this condition was met, Table 9 was obtained.

The present study investigated the relationship Upon interpreting the correlation value ranges in Table 8, it is observed that the item-total correlations for each item are. 20 or higher. In terms of the correlations of the same items with their own factors, the result was found to be .30 or higher. Therefore, it can be concluded that the relationship between each item and the total item scores was relatively low, while the correlation level of each item with its own factor was medium. Ideally, the correlation coefficient for each item should be .30 or higher, but a value of .20 or higher can also be considered acceptable. Büyüköztürk (2020) stated that it is also appropriate to make an inference based on whether the results of a calculated correlation (r = .722) was observed between the cognitive sub-dimension (factor 1) and the overall scale, and a high correlation (r= .861) was found between the affective sub-dimension (factor 2) and the overall scale. Additionally, a high level of correlation (r = .829) was observed between the psychomotor sub-dimension (factor 3) and the overall scale, indicating a high level of construct validity. Therefore, these results support the accuracy of the KMO and Bartlett's tests.

Cronbach's alpha coefficients were computed to assess the reliability of the 39-item Behavioral Disposition Perception Scale, both for the total scale and its sub-dimensions. Table 10 presents the resulting coefficients.

Based on the pilot implementation's Cronbach's alpha results, the cognitive sub-dimension of the scale was found to have a reliability coefficient of α= .908, the affective sub-dimension had a coefficient of α= .901, and the psychomotor sub-dimension had a coefficient of α= .927. The reliability coefficient of the entire Behavioral Disposition Perception Scale was reported to be α= .962.

Given the Cronbach's Alpha results of the large sample implementation values, it was concluded that the reliability of the cognitive sub-dimension of the scale was α= .911; the reliability of the affective sub-dimension was α= .886, and the reliability of the psychomotor sub-dimension was α= .879. The overall reliability of the Behavioral Disposition Perception Scale was found to be = .888. A reliability coefficient of.70 or higher is considered sufficient for reliability in psychological tests (Büyüköztürk, 2020). It is also claimed that the closer a value is to +1, the more reliable it is in terms of the scale's reliability (Can, 2019). It is seen that the values in the pilot and large sample implementations meet these conditions, indicating that the Behavioral Disposition Perception Scale (BDPS) is a reliable measurement tool.

RESULT AND SUGGESTIONS

In the present study, the validity and reliability levels of the Behavioral Disposition Perception Scale, which was developed to identify the high school preferences of 8th grade students, were calculated. The opinions of four experts were taken for the content validity of the Behavioral Disposition Perception Scale, which was designed based on the Revised Cognitive Domain of Bloom's Taxonomy. To ensure validity of the data obtained following the pilot implementation, the anti-image correlation matrix was calculated, and the matrix diagonal values were reached. As a result of the exploratory factor analysis performed for the construct validity of the scale, the value of x^2 was found through the KMO and Bartlett's tests. Additionally, as a result of a rapid decrease in the first factor and a less accelerated decrease in the second and third factors compared to the first factor in the eigenvalue line graph used for item analysis of the scale, the scale was categorized under three factors, namely cognitive, affective, and psychomotor. Furthermore, the eigenvalue of the cognitive, affective, and psychomotor sub-dimensions of the scale was identified. The total variance explained by the sub-dimensions and the variances of the sub-dimensions were also calculated.

In the study, it was observed that the factor loadings of the Behavioral Disposition Perception Scale met the required criteria. The scale consists of 39 items in total, 13 items in the cognitive sub-dimension (items 1, 6, 9, 10, 14, 17, 20, 23, 26, 29, 31, 34, and 37), 11 items in the affective

Table 7. Sub-factors and factor loads of items according to the exploratory factor analysis of the behavioral disposition perception scale

	Items		*F1* Cognitive	*F2* Affective	*F3* Psychomotor
	P1*	**A1****			
	17	23	0.653		
	1	1	0.647		
	15	6	0.641		
	22	31	0.613		
	2	14	0.564		
Cognitive	8	17	0.548		
	19	9	0.544		
	20	29	0.539		
	9	20	0.513		
	28	10	0.507		
	41	37	0.503		
	38	34	0.490		
	18	26	0.479		
	1	4		0.402	
	30	21		0.392	
	10	15		0.376	
	16	18		0.757	
Affective	12	11		0.753	
	9	2		0.690	
	17	24		0.672	
	21	27		0.632	
	40	32		0.585	
	2	12		0.489	
	3	7		0.410	
	2	25			0.681
	33	38			0.664
	25	22			0.641
	34	39			0.640
	20	13			0.625
	11	28			0.589
	17	30			0.573
Psychomotor	8	5			0.565
	10	8			0.536
	29	36			0.495
	24	33			0.493
	21	16			0.478
	26	35			0.469
	1	3			0.467
	32	19			0.454

*P1: Item Numbers in Pilot Implementation

**A1: Item numbers in Actual Implementation (Large Sample Implementation)

Table 8. Correlation values between the total items and sub-dimensions of the behavioral disposition perception scale

	Items (A1*)	Item Total Correlation	Cognitive	Affective	Psychomotor
	23	0.403	0.640		
	1	0.276	0.495		
	6	0.420	0.586		
	31	0.440	0.617		
Cognitive	14	0.280	0.511		
	17	0.293	0.566		
	9	0.389	0.553		
	29	0.406	0.552		
	20	0.356	0.458		
	10	0.247	0.377		
	37	0.319	0.536		
	34	0.339	0.488		
	26	0.256	0.527		
	4	0.398		0.489	
	21	0.235		0.424	
	15	0.376		0.504	
	18	0.302		0.454	
	11	0.393		0.491	
Affective	2	0.400		0.437	
	24	0.267		0.366	
	27	0.411		0.535	
	32	0.349		0.492	
	12	0.369		0.462	
	7	0.401		0.483	
	25	0.474			0.668
	38	0.373			0.546
	22	0.507			0.675
	39	0.456			0.605
	13	0.474			0.634
	28	0.391			0.516
	30	0.471			0.530
	5	0.396			0.506
Psychomotor	8	0.290			0.454
	36	0.410			0.433
	33	0.388			0.566
	16	0.310			0.410
	35	0.383			0.539
	3	0.273			0.468
	19	0.331			0.460

*A1: Item numbers in Actual Implementation (Large Sample Implementation)

sub-dimension (items 2, 4, 7, 11, 12, 15, 18, 21, 24, 27, and 32), and 15 items in the psychomotor sub-dimension (items 3, 5, 8, 13, 16, 19, 22, 25, 28, 30, 33, 35, 36, 38, and 39).

Additionally, value ranges for the item correlation sum of the 39-item scale were obtained in the study. The value ranges of the cognitive, affective, and psychomotor sub-dimensions of the scale were identified, and a significant level of relationship between the scale items and item correlations and sub-dimensions was found. Meanwhile, the relationship level of each item of the Behavioral Disposition Scale with the total of items was low, while the level of relationship with its own factors was calculated as medium. Following the Pearson correlation coefficient test performed, it was concluded that there was a positive significant relationship between the factors belonging to the scale and the overall scale of the factors. Furthermore, a moderate correlation

Table 9. Inter-factor correlation values of the behavioral disposition perception scale

Factors	Factor 1	Factor 2	Factor 3	Total
Cognitive (Factor 1)	*			
Affective (Factor 2)	0.578	*		
Psychomotor (Factor 3)	0.291	0.597	*	
Total	0.722	0.861	0.829	*

*The significance level is taken as $p<0.01$

Table 10. Cronbach's alpha coefficients of the sub-dimensions of the behavioral disposition scale in pilot and large sample implementations

Sub- dimensions	Cronbach's Alpha Coefficients	
	Pilot Implementation (N=400)	Large Sample Implementation (N=700)
Cognitive (Factor 1)	0.908	0.911
Affective (Factor 2)	0.901	0.886
Psychomotor (Factor 3)	0.927	0.879
Total	0.962	0.888

was found between the first factor cognitive and the second factor affective sub-dimensions, a low level correlation between the first factor cognitive and the third factor psychomotor sub-dimensions, and a moderate relationship between the second factor affective and the third factor psychomotor sub-dimensions.

Cronbach's Alpha coefficients were calculated for the reliability analysis of the scale. Upon completion of all these analyses, it was observed that the Behavioral Disposition Scale was a valid and reliable measurement tool consisting of a total of 39 items, including 13 cognitive, 11 affective, and 15 psychomotor items, and three sub-dimensions.

Choosing a career path is a critical decision that students make, and it often starts with selecting the right high school. To help students cope with professional uncertainty and make informed choices, it is essential to guide them in selecting a high school that aligns with their behavioral dispositions. High schools have unique traits and environments, and understanding a student's behavioral tendencies can help them select a school where they are more likely to succeed. To aid in this process, the Behavioral Disposition Perception Scale has been developed to help students identify their behavioral dispositions and the type of high school that would suit them best. Ultimately, this scale can help school counsellors gauge their counseling techniques to navigate students. In addition, teachers and school counsellors can use it to develop learning styles among students according to their behavioral tendencies before the high school entrance exam. Educational and individual guidance services can be provided to students with low levels of behavioral disposition perception. If these services fail to yield positive results, the school counsellor can conduct psychological counselling with the individual. Thus, the scale can provide teachers and school counsellors with fresh insights into students' behavioral dispositions. However, it is important to note that the scale should only be used as a tool to provide guidance, and students should not be categorized or labelled based solely on the scale's results.

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