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Development of the Learned Helplessness Tendency Scale for Secondary School Students: Validity and Reliability Studies

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Abstract: The concept of learned helplessness is related to the learning process. This situation which is hard to dealt with can lead to motivational, cognitive and emotional changes and may leave irremediable traces. Therefore, measuring this construct especially in youngsters is thought to be important. That's why the Learned Helplessness Tendency Scale was developed. 30 items were developed on the basis of Causal Attribution Theory. Item pool was presented to the expert group. In order to provide data-based evidence of validity and reliability, data were collected from secondary school students. EFA group consists of 299 observations while the CFA consists of 210. As a result of the explanatory and confirmatory factor analyzes, a 3-factor structure consisting of 14 items was accepted. For criterion validity study, its correlation with the Beck Hopelessness Inventory was examined. All validity studies show that the developed scale produces valid results. Composite reliability coefficient proved that the scale produced reliable results. The Learned Helplessness Tendency Scale produces valid and reliable scores for secondary school students. The developed Learned Helplessness Tendency Scale is thought to be used to determine the learned helplessness levels of secondary school students.

Keywords: Learned helplessness, causal attributions, scale development, validity, reliability

Ortaokul Öğrencileri için Öğrenilmiş Çaresizlik Eğilimi Ölçeğinin Geliştirilmesi: Geçerlik ve Güvenirlik Çalışmaları

Öz: Öğrenilmiş çaresizlik kavramı öğrenme süreciyle ilişkilidir. Başa çıkılması oldukça zor olan bu durum bireyde güdüsel, bilişsel ve heyecansal değişmelere yol açabilir ve yaşamında onarılamaz izler bırakabilir. Bireyin yaşamında olumsuz izler bırakan bu psikolojik özelliğin küçük yaş gruplarında ölçülmesi, gerekli önlemlerin alınması açısından oldukça önemlidir. Bu nedenle Öğrenilmiş Çaresizlik Eğilimi Ölçeği geliştirme çalışması gerçekleştirilmiştir. Nedensel Yükleme Kuramı doğrultusunda yazılan 30 maddenin genel özel, içsel dışsal ve değişebilir değişmez yüklemelere uygun olmasına dikkat edilmiştir. Geliştirilen 30 madde uzman görüşüne sunulmuştur. Veriye dayalı geçerlik ve güvenirlik kanıtlarının sunulabilmesi için ortaokul öğrencilerinden iki ayrı oturumda veri toplanmıştır. İlk grup 299; ikinci grup ise 210 öğrenciden oluşmuştur. İlk gruptan toplanan verilerle açımlayıcı faktör analizi; ikinci gruptan toplanan verilerle doğrulayıcı faktör analizi çalışması yapılmıştır. Açımlayıcı ve doğrulayıcı faktör analizleri sonucunda 14 maddeden oluşan 3 faktörlü yapı kabul edilmiştir. Ölçeğin ölçüt geçerliği çalışması için Beck Umutsuzluk Ölçeği ile korelasyonu incelenmiştir. Tüm geçerlik çalışmaları, ölçeğin geçerli sonuçlar ürettiğini ortaya

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koymuştur. Öğrenilmiş Çaresizlik Eğilimi Ölçeği'nin birleşik güvenirlik katsayısı ölçeğin güvenilir sonuçlar ortaya koyduğunu göstermiştir. Geliştirilen ölçeğin ortaokul öğrencilerinin öğrenilmiş çaresizlik düzeylerini belirlemede kullanılabilineceği düşünülmektedir.

Anahtar kelimeler: Öğrenilmiş çaresizlik, nedensel yükleme, ölçek geliştirme, geçerlik, güvenirlik

Introduction

Learned helplessness is a concept that began to be studied in the 1960s. This concept, introduced by Seligman and Maeier (1967), is related to an organism learning that it cannot change the outcome with its behavior as a result of being exposed to events out of its control. The organism continues this learning also in situations where there is a possibility of control (Hiroto & Seligman, 1975; Overmier & Seligman 1967).

According to Seligman and Maier (1967), the most basic element that leads to learned helplessness is uncontrollability. When an organism breaks the relationship between the behavior it shows and the result it expects from the behavior, organism learns the uncontrollability. It believes that the results cannot be controlled anymore by the behaviors. The outcome gets independent from behavior. Although it can control the outcome with its behavior, it does not show the behavior that will lead it to change the outcome because it has learned the uncontrollability of the outcome.

Learned helplessness leads to three deficiencies in individuals. These are called motivational deficit, cognitive deficit and emotional deficit. Hovardaoğlu (1986) calls these deficiencies motivational, cognitive and emotional changes. That the individual does not even try to control the events s/he can control after the helplessness s/he has experienced, and that he or she is unwilling and uninterested to do so is a motivational deficiency stemming from learned helplessness. In such a case, the individual has little motivation to achieve the desired result with the behavior s/he can perform. Cognitive deficit is the inability of the individual to grasp the relationship between his/her behavior and the result of the behavior. The individual who develops learned helplessness cannot understand, for example, why s/he gets a high score on an exam in spite of the fact that it is the result of his/her own work. As the relation between studying and being successful is weak for the individual, it is very difficult for the individual to repair and re-establish this relation. Another area damaged by learned helplessness is the emotional area. When learned helplessness becomes chronic and untreated, it causes psychological disorders such as anxiety and depression. This concept, which was put forward to explain depression in individuals, has been associated with the individual's perception of uncontrollability, affecting his whole life and experiencing depression (Seligman, 1975). Causal attributions were added to the theory that was developed and revised in the following years. It has been stated that the causes attributed to the uncontrollability play a role in whether the individual who learned about the uncontrolled result experiences learned helplessness or not. This theory is known as causal attribution theory in the literature.

Causal Attribution Theory

While all of the experimental studies on learned helplessness on animals showed similar results in the 1980s, there were some contradictions in the studies on students. Some students who discovered the relationship between behavior and outcome in these experiments did not feel

helpless and tried harder to keep up with their friends. Some students, however, showed learned helplessness under the same experimental conditions (Aydın, 1985).

Abramsan et al. (1978) stated that there may be individual differences in learned helplessness based on these experiments. They argued that these differences vary according to the causes of failure and attributions to the failure. According to their theory, the main factor determining whether an individual will experience learned helplessness is the causal attributions that the individual makes for the cause that renders him/her unable to control the outcome (Aydın, 1985). In other words, the causal attributions that an organism makes for failure determine whether it will show helplessness in similar environments (Hovardaoğlu, 1986). At this point, three types of attributions are foregrounded for the individuals to experience learned helplessness (Abramson, et al., 1978). The individual may attribute the inability to control the outcome with her/his behavior to internal or external causes. In attribution to internal causes, the individual with learned helplessness attributes the negativity (not being able to control the outcome) to his/her own inadequacy, while the individual without a history of learned helplessness attributes the cause of the failure to external reasons. Another attribution style is stable and unstable causes. In this form of attribution, the individual who experiences learned helplessness attributes his/her failure to unchangeable causes. Since the causes will not change, neither will the outcome (behavior has no control over the outcome). The third form of attribution is characterized by being global and specific. Accordingly, if the student attributes failure to global factors, s/he thinks that his/her failure will affect everything, while attributing it on specific factors causes him/her to think that this failure is context specific (Peterson & Seligman, 1984).

The differences in these attributions show why individuals under the same conditions have different experiences with learned helplessness. While the internal, stable, and global attributions count for adverse events; for positive events, external, unstable, and specific attributions create an expectation of failure in the individual's mind, reinforcing this expectation (Abramsan et al., 1978; Abramsan et al., 1980). The individuals attributing positive outcomes (such as being successful) to external, unstable, and specific causes, and attributing negative consequences (such as failure) to internal, stable and global causes are more inclined to show learned helplessness (Abramsan et al., 1989). There have been many studies to measure learned helplessness, which has a very important place in human life, both individually, socially and cognitively.

Early Studies on Learned Helplessness

The first studies in which learned helplessness was observed, developed and measured were experimental studies. In first study with dogs, researchers divided dogs with similar characteristics into three groups and placed them in similar experimental setups. In the experiment consisting of two stages, dogs were first given "training" and then their learning was "tested" (Buldik, 2002). In training, which is the first stage of the experiment, dogs were exposed to electricity at the same intensity but under different conditions. When the test phase was completed, the dogs in all three groups were placed in a setup where all conditions were equal and electric current was given to all dogs. Researchers observed that the dogs that had experienced learned helplessness during the training phase made no effort to get rid of the electric current.

A similar study with humans deals with the same task assigned to a college student without a history of helplessness and a college student who has been exposed to discrimination and bullying that he cannot ignore in her life. The student, who has no experience of helplessness, successfully completed the task given to him with difficulty at first, but by learning over time. The student who

was exposed to discrimination and bullying spent longer than the other student to complete the task, learned more slowly, and experienced motivational and cognitive breaks in the process (Aydın, 1985 cited from Düzgün & Hayalioğlu, 2006).

The last of the experiments to cite here was carried out with mice. Two mice, with and without experience of escaping from shock, have been observed to quickly learn how to escape the shock they are exposed to. However, when the conditions for the termination of the shock change, the mouse with the inability to escape from the shock has tried to escape from the electric current sometimes while sometimes waited for the shock to end. The examples were not limited to these animals. In the following time, similar experiments were carried out and similar results were observed with fish, cats, baby mice, birds, etc. (Hulse et al., 1980). Organisms that have not experienced helplessness have always continued to seek ways to get out of the uncomfortable situation they are in by their own efforts. The situation is different with organisms with a history of helplessness. These organisms have learned that their actions (behaviors) cannot save them or change the outcome.

Measuring Learned Helplessness

Considering the important role of learned helplessness in the lives of individuals, it is inevitable to carry out studies to measure it. A literature review was conducted for a scale that can be used to determine the learned helplessness of students, but few scales were found to have been developed for the age group in the scope of this study. When the scales focusing on causal attributions in children were examined (Kaslow & Alloy, 1984; Kaslow & Nolen-Hoeksema, 199), it was seen that these scales were out of date. One of the reasons why these scales are not preferred is they are very aged. Also, when the items of the scales were examined, it was seen that many items included both school, family and out-of-school contexts. With this study, the aim is to develop a scale for the helplessness of the students in the context of the school environment where their formal learning takes place. For these reasons, the scales mentioned above were not preferred. The second scale found was developed by Fincham et al. (1989) in the United States as a teacher checklist, and adapted to Italian students by Sorrenti et al. (2014). This scale wasn't used because it was prepared as a checklist, the date of its development is obsolete, and it lacked information about which age group was taken as a reference in its development, its adaptation study was carried out with a limited number of students, and the number of items excluded from the scale were a quite a lot. Another scale that can be used in the age group of interest was developed by Quinless and Nelson (1988). The reliability studies of the 14-item scale were carried out in a narrow group (n=24). The reason why this scale was not preferred is that it has been a long time since it was developed and a revision study has not been carried out on it, to our knowledge. Cizkowicz (2021) developed Short School Helplessness Scale in Poland context. When the scale is examined, it states that the items were centered around three dimensions which are cognitive, motivational and emotional aspects. Scale consists of 15 items focused on school context. Both composite reliability and Cronbach's Alpha coefficients produced satisfactory results ranging from 0.71 to 0.94. Both construct validity and criterion validity studies revealed valid measurement results. When the items are evaluated, they are found to be measures of students' feelings regarding the school lives. The link with the attribution theory is found to be weak. Therefore, this scale is not preferred.

There are scales developed or adapted to measure learned helplessness in Turkish context. The original form of the Learned Helplessness Scale developed by Pestonjee and Reddy (1988) was adapted by Karapınar, Camgöz and Tayfur (2014). This scale is developed and adapted for the

adult group; however, no validity evidence was reported for the scale. Biber and Başer (2014) developed the Learned Helplessness Scale in Mathematics, based on the causal attribution theory, for university students. When the psychometric properties of the scale were examined, it was seen that it produces valid and reliable results. The development study of another scale measuring learned helplessness in mathematics was conducted with 8th grade students by Uysal Koğ and Başer (2011). No evidence was found regarding the validity of the scale; reliability studies show that reliable scores are obtained. The most frequently used Learned Helplessness Scale in Turkish is adapted by Aydın (1985) (cited from Tan, 2015). This scale has been used widely for psychology / clinic psychology (Öğütçü-Zeman et al., 2019; Tabakçı, 2018; Yarapsanlı, 2011) and psychological guidance (Düzgün & Hayalioğlu, 2006; Furat, 2009; Gençtarih, 2018; Ulusoy & Duy, 2013). For the validity study of the scale, content validity, concordance validity and construct validity studies were carried out. At this point, it has been reported that the scale produces valid and reliable results for secondary school students (as cited in Avcı, 2008). Another scale adapted to Turkish culture to measure learned helplessness was developed by Lester (1998) and adapted by Gençöz, Vatan, and Lester (2006) for university students. Validity evidences has not been observed yet; however, reliability evidence shows that the scale achieves reliable results. Another adaptation study to measure the learned helplessness of individuals in emerging adulthood was carried out by Boysan (2006) from the work of Quinless and Nelson (1988). When the adaptation study is examined, it can be said that valid and reliable results of the scale have been revealed as a result of various validity and reliability studies. One last scale measuring learned helplessness found in the literature was developed by Tayfur (2011). It was stated that the scale, which was reported to be composed of the foreign scales, produced valid and reliable results. The scale aims to measure adults' learned helplessness behaviors.

When the national literature is examined, it is seen that studies measuring learned helplessness are concentrated in the emerging adult group. Two scales were found that can be used to measure the learned helplessness of secondary school students. One of these scales focused on learned helplessness related to a course (mathematics course). The other scale has stimuli that can be used in clinical studies. It includes the student's experiences of learned helplessness related to school life, as well as situations in their daily lives. Considering the effect of learned helplessness on students' cognitive performance, it is important to measure this construct in an educational context in younger age groups; however, a scale that measures this construct in this context was not found.

When the studies in the literature are examined, it is seen that the learned helplessness experienced by the students will have many reflections in their physical, cognitive, educational, social and professional life. An individual who thinks that s/he will always fail no matter what s/he does, that the positive events s/he experiences are caused by his environment and that s/he is not in control of many areas of his life, will often be observed to be inadequate in many areas, never trying as much as necessary. These conditions are also directly related to the motivational, cognitive and emotional deficits discussed above. Hence, development of a better scale, especially for younger age groups, will be helpful for the development of many remedial measures to be taken to help young people lead a healthy and self-confident life. In this direction, the aim of this study is to develop a measurement tool that can be used to determine the learned helplessness tendencies of secondary school students in the school environment where they spend most of their lives.

Method

Study Group

Maximum sampling pattern was used in the selection of the study group. A region where students are heterogeneous in terms of both socioeconomic and learned helplessness experiences was selected. As the literature highlights the relationship between socioeconomic status and learned helplessness (Evans & Cassells, 2013), a socioeconomically heterogeneous group is considered to create a group which consists of students with various learned helplessness levels. The Learned Helplessness Tendency Scale with 30 item was carried out on students studying at 5th, 6th, 7th and 8th grades of secondary schools in the Mamak district of Ankara before explanatory factor analysis. Data were collected from two similar groups for EFA and CFA analysis as well as reliability studies. The grade levels of the students is given in Table 1.

Table 1

Grade Levels for EFA and CFA groups of Learned Helplessness Tendency Scale

Grade Level	EFA Group	CFA Group
	N	N
5th	67	49
6th	67	46
7th	74	52
8th	91	63
Total	299	210

When Table 1 is examined, it can be said that the number of observations based on the grade levels for both groups is approximately similar. The demographic characteristics of the students could not be collected due to the fact that the study was conducted during the epidemic and most students did not want to provide their demographic features. Data collection within the scope of the study was possible upon the approval of the Social Sciences Sub-Ethics Committee of Ankara University with the decision no. 3/54 dated 30/03/2020.

Data Collection Tools

In this study, two different scales were used, namely the "Learned Helplessness Tendency Scale" and the "Beck Hopelessness Scale". Beck Hopelessness Scale was used for criterion validity. The motives for choosing this scale are explained below.

Learned Helplessness Tendency Scale

The Learned Helplessness Tendency Scale introduced in this study consists of 14 items having global or specific, stable or unstable, and internal or external attributions in accordance with the causal attribution theory. To clarify these attributions, all three are explained based on the causal attribution theory developed by Abramson et al. (1980). The individual may attribute the inability to control the outcome with his/her behavior to internal or external causes. In attribution to internal causes, the individual attributes the negativity (inability to control the outcome) to his/her own inadequacy. For example, the internal attribution of a child who fails at mathematics course and has learned helplessness is that I cannot learn mathematics while the attribution style of the child who does not experience learned helplessness is external and my teacher explains the lesson very poorly. Another style is stable and unstable attributions. Here, the individual

experiencing learned helplessness attributes his/her failure to unstable causes. Because the causes will not change, neither will the effect (behavior has no control over the effect/result). S/he attributes the positive results s/he has experienced to stable causes. A different form of attribution is global and specific. Accordingly, if the student attributes failure to global factors, s/he thinks that his/her failure will affect everything; attribution the failure to specific factors causes to think this failure is context specific. In summary, internal factors indicate the situations related to the individual himself, while external factors are the environment, environment or friends of the individual. While the student's stable attributions indicate that his/her experiences will be with him/her throughout his/her life, unstable attributions emphasize that this experience is one-time. Global attributions say that the situation will affect everything, while specific references say that it is a more context-specific experience.

While 1,3,5,7,8,9 in the CFA form are in the category of internal or external causal attributions, items 10, 11, 12, 13 and 14 are included in the dimension of stable or unstable causal attributions, and items 2, 4 and 6 are included in global or specific causal attributions.

Scoring the Scale. In negative cases, internal, stable and global causes are 1 point; in positive cases, external, unstable and specific causes are 1 point. Accordingly, +1 is given for option b in items 4, 8 and 13; in case of other items, +1 point is given for option a. There is no reversely scored item in the scale. A total score is derived from the scale based on the findings of the second order CFA results. A high total score indicates a high tendency for learned helplessness.

Development of the Scale. In the scale development process, theoretical readings were carried out. The item writing process was carried out in accordance with the causal attribution theory. According to the causal attribution theory, it is important to which events an individual attributes positive or negative causes. Individuals with learned helplessness tendency attribute negative experiences to internal, stable and global causes, while attributing positive experiences to external, unstable and specific causes. The items were developed by the researchers. The item structure used is the item structure used by Seligman et al. (1978). In each item, the student is given a positive or negative situation. The student is asked to choose the possible cause of these situations among two options. The students who show learned helplessness tendency are expected to attribute positive events to external, unstable and specific causes; while attributing negative events to internal, stable and global causes. Total of 30 items were generated; 10 for internal/external causes; 10 for global/specific causes and 10 for stable/unstable causes.

For expert opinion, the items prepared were sent to an expert who has completed his undergraduate education in psychology and were writing his master's thesis in the field of educational psychology. In addition, the expert form was sent to two academicians who gave lectures on learned helplessness. First of all, the experts were asked for their opinions about the suitability of the situation in the question stem for the student age group. In addition, feedback was requested for the compatibility and clarity of the causal attributions in the options with the theory. If both experts agreed to the exclusion of the item, that item was excluded from the draft. If experts provide feedback, such as causal references in some items were not clear, and that some items had more than one causal reference, those items were revised. For these items, either the cases or causal attributions were rewritten and sent back to the experts. Experts have then confirmed the relevance of the cases and attributions. Later, a language expert and a measurement and evaluation specialist revised through the draft scale investigating the fluency of the text, appropriateness of the

vocabulary choice with the age group, item format, instruction etc. Final draft form was constructed based on the final feedback of experts.

The draft scale was applied to a group of elementary school students in order to determine the factor structure. In order to verify the factor structure determined by EFA, another group of data was collected from another but similar group consisting of secondary school students. The results are reported in the findings section.

Beck Hopelessness Scale

In this study, Beck Hopelessness Scale was used to in order to provide evidence for the criterion validity of the developed scale. Based on the results of principal component analysis, the original study of Beck Hopelessness Scale revealed that this construct has three dimension named feelings about the future, loss of motivation and future expectations. For the Turkish sample, validity and reliability studies were conducted by Seber et al. (1993) and Durak and Palabıyıkoğlu (1994). The adapted scale showed a similar pattern in terms of dimensions (Durak & Palabıyıkoğlu, 1994). However, the dimensions of items changed in Turkish sample. Researchers named dimensions as emotions and expectations for future, loss of motivation and hope. Criterion validation study was conducted with Beck Hopeless scale. The correlation was found to be 0.69 with Beck Depression Scale. Cronbach Alpha coefficients for dimension was 0.78 for emotions and expectations for future; 0.72 for loss of motivation and 0.72 for hope. Seber et al. (1993) used construct validity and criterion validity for validation studies; internal consistency and item total score correlation for reliability purposes. The scale was applied to the opposite groups which are normal people and diagnosed people. A statistically significant results was achieved between groups ($t=12.49$; $p<0.001$). Criterion validation with Beck Depression Scale and Rosenberg Self Esteem Scale was studied. The results were 0.65 and 0.56 respectively. The reliability of total score is 0.86 and item total score correlation ranged from 0.076 to 0.76.

Validity and reliability studies for the CFA group of this study showed that the construct hopelessness was confirmed (χ^2/sd =1.30; p = 0.001; RMSEA =0.04; CFI =0.97; TLI =0.96) KR 20 reliability coefficient was found to be 0.94. It was concluded that the scores obtained from the Beck Hopelessness Scale was valid and reliable for this research.

When the literature is examined, it can be seen that learned helplessness is often associated with depression. At this point, the ideal situation would be to conduct the criterion validity study of the developed scale with a depression scale. However, due to the statements describing self-harm in the depression scales, ethics committee approval could not be obtained for these scales. For this reason, criterion validity was worked through the hopelessness construct associated with depression.

Analysis of Data

Preparing the Data for Analysis (EFA)

The data set was analyzed for missing data with Little MCAR test using SPSS. Results indicated no bias in the missing data (χ^2=91,544; sd=117; p=0.961). Missing data was removed from the data set as its rate was below 5%.

Preparing the Data for Analysis (CFA)

In order to determine whether the Learned Helplessness Tendency Scale was confirmed, missing data analysis was performed based on the CFA data (Little MCAR test results are

χ^2=53.749; sd=65; p=0.839). No bias was found. Missing data rate is below 5%. Outliers were detected. This situation was taken into consideration in determination of the estimation method in confirmatory factor analysis.

The analysis was started after examining the descriptive statistics. Standardized z scores ranged between +/- 3 indicating normal distribution of total score. Skewness and kurtosis values revealed to be lower than the cut offs determined by Kline (2011), which are lower than 3 for skewness and lower than 10 for kurtosis; indicating total score holds normal distribution. In scale development studies, the structure that is aimed to be measured and defined theoretically should be supported by empirical evidence. This is called a validity study (DeVellis, 2014). In this study, too, exploratory factor analysis to reveal the learned helplessness tendency structure, confirmatory factor analysis to confirm, and criterion validity study were performed. For the reliability estimations of the Learned Helplessness Tendency scale, composite reliability and item-total test scores (biserial correlation) were examined.

Explanatory Factor Analysis

Explanatory factor analysis was performed with the MPLUS program based on the tetrachoric correlation matrix. Weighted Least Square Mean and Variance Adjusted (WLSMV), one of the factor analysis methods, was used as factor extraction technique. WLSMV does not make any assumptions about distribution in categorical and ordinal data and is seen as one of the best options to use (Brown, 2006; Finney & DiStefano, 2006; Proitsi et al., 2009). Geomin rotation technique, one of the oblique rotation methods, was used as the rotation method. Tabachnick and Fidell (2007) were taken into consideration while deciding the rotation process. According to Tabachnick and Fidell (2007), the data set should be analyzed with the predicted number of dimensions and with one of the oblique rotation methods. If the relations between the factors are 0.32 and above, oblique methods should be continued, otherwise orthogonal methods should be used. As stated in the literature, there are relations between the dimensions in social sciences (Bandalos & Finney, 2010; Floyd & Widamann, 1995; Preacher & Maccallum, 2003). For this reason, the nature of the causal attribution theory on which the scale was developed was taken into account and the oblique rotation technique was used. Bandalos (2018) stated that this choice is correct because if the factors are uncorrelated, the oblique rotation results will be the same as the orthogonal rotation results. Based on these discussions, Geomin rotation method was used in this study as it is the most used method in oblique rotations methods. In this study, Barlett's test of sphericity is significant [$\chi^2_{(435)}$=1332.559, p=0.001] and the Kaiser-Meyer-Olkin measure is found to be (KMO= 0.770) 'middling' in Kaiser's term (Kaiser, 1974). Field (2000) stated that the data set that produces a KMO value below 0.50 should not be used in factor analysis because a factor cannot be produced with that data set. The data set herein complies with the relevant assumptions.

Confirmatory Factor Analysis

Since MPLUS employs the WLSMV method in the estimation of binary scored data, this analysis process is conducted through this method.

Criterion Validity Study

It was planned to use a depression scale on the basis of attribution theory literature (Nolen-Hoeksema et al., 1986; Seligman et al., 1984; Thompson et al., 1998) to provide evidence for the criterion validation of the scale. However, when the depression scales were examined, it was seen that none of them were in a position to obtain the necessary ethical permissions for secondary

school students. The scales include expressions such as death, self-injury, harming others etc. Therefore, another construct that is proven to be related with the depression and learned helplessness was sought. Hopelessness was preferred within this context; because, hopelessness is proven to be a component of depression (Grinker et al., 1961) and to be related with each other (Büyükşahin-Sevinç & Gündoğdu, 2015). At this point, Beck Hopelessness Scale was used for criterion validity study. The relationship between the two scale scores was examined with the Pearson Product Moments Correlation Coefficient. Normal distribution of the data from Hopelessness Scale was investigated through standardized z scores and skewness and kurtosis of the data. Standardized z score ranged between +/- 3 indicating normal distribution. Skewness and kurtosis values revealed to be lower than the cut offs determined by Kline (2011), which are lower than 3 for skewness and lower than 10 for kurtosis. When the histogram and q-q plots were studied, normal distribution can also be seen (Appendix-2). Analyzes were made with the SPSS program.

Study of Measurement Invariance

Measurement invariance is a statistical feature showing that the latent construct measured with items works unbiasedly for subgroups of the sample (Meredith & Millsap, 1992). In this study, the alignment method, one of the approximate measurement invariance techniques, was used. To conduct this analysis, data was collected from another group of students (a third group). Group consisted of 72 female students (48%) and 78 male students (52%). The analysis was carried out using the Mplus program. Gender was used as the criteria variable.

Reliability Study

Firstly, the Mcdonald's Omega reliability coefficient was calculated in order to analyze the reliability estimations of the total score and the subscale scores. As another method, item-total test score with biserial correlations were also examined.

Process

After obtaining the necessary permission to collect data, the data collection process was carried out by the researchers via face to face. The students in the schools were first informed. In order to get permission from their parents, an information form was sent to their parents explaining the purpose of the study and the scale. Ethics Committee and application permissions of the study were also obtained.

Findings

Findings Regarding the Validity of the Scale

Explanatory Factor Analysis Results

While examining the items, standard factor loadings and factor structure were examined together. First of all, the items that were not loaded on any factor, and then the items with low factor loading were removed from the scale. The overlaps between the factors were reviewed.

As a result of the analysis, it was accepted that the scale had a 3-factor structure. The items in the factors were named as global-specific, internal-external and stable-unstable in accordance with the causal attribution theory. The factor loadings of the items in the dimensions and the total score correlations of the items are given in Table 2.

Table 2

Factor Loading and Explained Variances from Explanatory Factor Analysis

Attributions	Items	Factor Loadings	Explained Variance (%)
Internal/external causal attributions	2	0.63	20
	6	0.57	
	11	0.70	
	13	0.58	
	14	0.79	
	15	0.93	
Stable/unstable causal attributions	16	0.54	17
	18	0.38	
	24	0.71	
	27	0.45	
	30	0.65	
Global/specific causal attributions	3	0.73	13
	7	0.36	
	12	0.82	
Total			50

When the factor loadings given in Table 2 are examined, the lowest factor load is 0.36; the highest factor load is observed to be 0.93. The cut off for a good factor loading is accepted to be higher than 0.32 as suggested by Tabachnick and Fidell (2001). Based on this value, all factor loadings are above the acceptable value. The internal/external causal attributions sub-dimension consists of 6 items, while it is 5 items for the stable/unstable causal attributions, and 3 items for the global/specific causal attributions. The total variance explained by the 14-item scale is 50%. Considering the item examples, a sample item for the global-specific attribution dimension is as follows:

2. Your classmates respect you so much.

a. They do so because they are happy on that day.

b. They do so because you treat them with respect.

A sample item for internal-external attribution dimension:

1. You get the highest score in exam.

a. You get the highest score because you are lucky.

b. You get the highest score because you work hard.

A sample item for stable-unstable attribution dimension:

14. You failed the exam your teacher made.

a. You fail at all the exams your teacher makes.

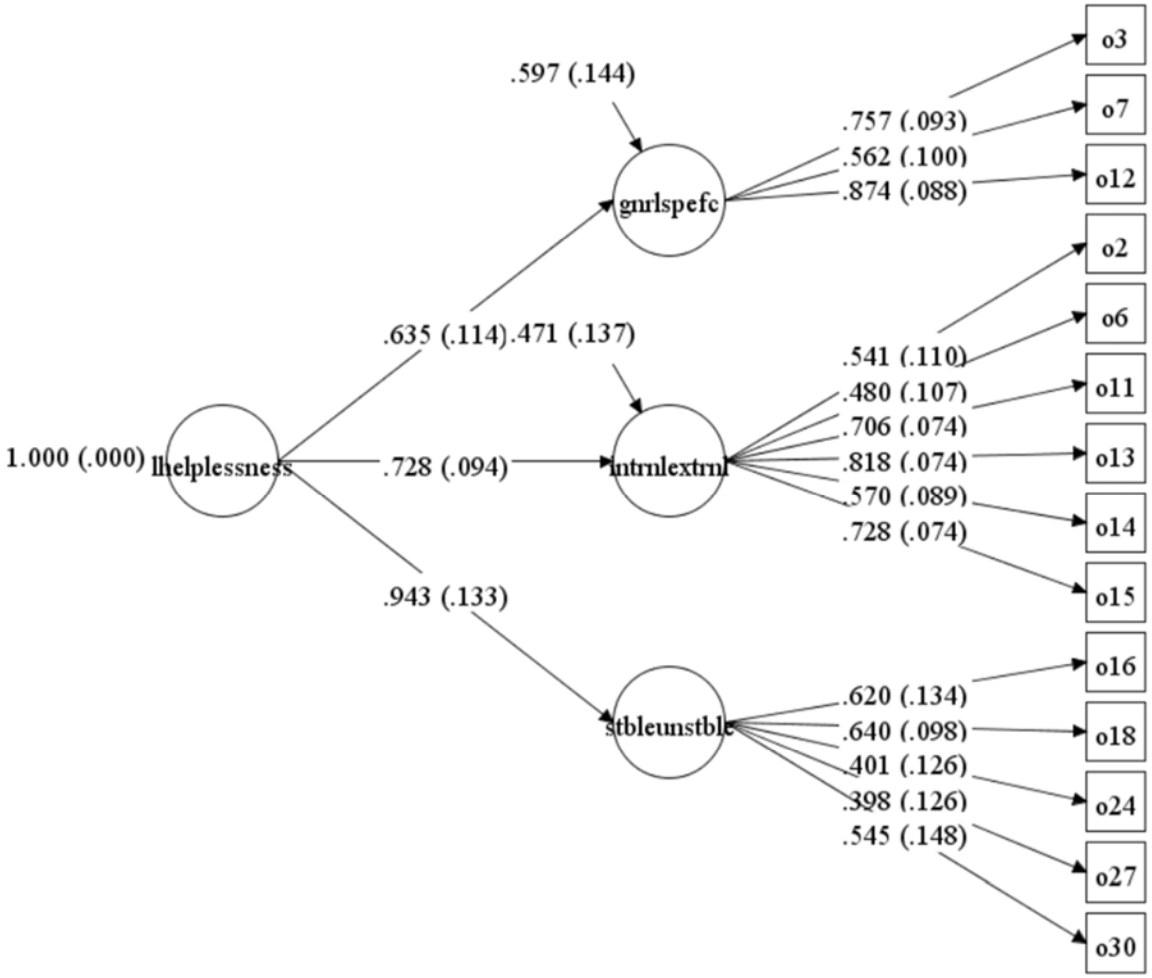
b. You have failed at all the exams your teacher has made lately.

Confirmatory Factor Analysis Results

The validation of the developed scale was done by confirmatory factor analysis. The path diagram is given in figure 1.

Figure 1

Confirmatory Factor Analysis Diagram for Learned Helplessness Tendency Scale (standardized path coefficients with standardized errors)



When the model is examined, it is seen that all standardized path coefficients are statistically significant. Parenthesis presents the standardized errors. All path coefficients are above 0.40 (when .398 is round down to .40). Literature stands for the idea that factor loading may be lower to 0.32 on the condition that the model fit indices and the reliability coefficient presents good fit/high reliability (Comrey & Lee, 1992; Stevens, 1992). In these terms, all factor loadings are equal or above the acceptable cut off. Considering the model fit indices (χ^2/sd= 93.955/74; p=0.058; RMSEA=0.036; CFI =0.95; TLI =0.94) (Brown, 2006; Hooper et al., 2008; Kline, 2011; Schermelleh-Engel et al., 2003), it was concluded that the proposed model was confirmed. Although the Tucker Lewis Index (TLI) is just below the 0.95 limit, it was stated in the literature

that the values above 0.90 are an indicator of good model-data fit (Kline, 2011). It was concluded that the 14-item learned helplessness tendencies scale, which was formed according to the theoretical and practical bases, was confirmed. A second order model was accepted to provide proof that a unidimensional construct is revealed as it was proposed by Abramsan et.al (1980). Additionally, a total score can be obtained is presented.

Criterion Validity Study of the Learned Helplessness Tendency Scale

The Beck Hopelessness Scale was used to study the criterion validity of the scale. A moderate correlation was obtained between Beck Hopelessness Scale and Learned Helplessness Tendency Scale scores (r=0.55; p=0.001). The criterion validity of the developed learned helplessness tendency scale is moderate.

Measurement Invariance Results

The alignment measurement invariance results for examining whether or not the scores obtained from the learned helplessness tendency scale create a bias was investigated based on the gender. The reason for choosing variable gender is due to the fact that learned helplessness is not a gender specific behavior. Therefore, any bias based on gender should be examined. The results are given in Table 3.

Table 3

Measurement Invariance Results for Learned Helplessness Scale

Groups	Intercepts			Factor Loadings		
	Dif.	S.E.	p	Dif.	S.E.	p
$(G2\text{-}G1)_{M1}$	-0.012	0.017	0.476	0.077	0.059	0.191
$(G2\text{-}G1)_{M2}$	-0.007	0.007	0.328	-0.013	0.042	0.750
$(G2\text{-}G1)_{M3}$	-0.020	0.057	0.726	0.000	0.025	0.985
$(G2\text{-}G1)_{M4}$	-0.003	0.011	0.780	0.062	0.061	0.309
$(G2\text{-}G1)_{M5}$	0.089	0.076	0.239	-0.012	0.047	0.804
$(G2\text{-}G1)_{M6}$	0.021	0.034	0.541	0.001	0.014	0.926
$(G2\text{-}G1)_{M7}$	0.014	0.024	0.571	0.096	0.061	0.114
$(G2\text{-}G1)_{M8}$	-0.009	0.020	0.637	-0.010	0.031	0.754
$(G2\text{-}G1)_{M9}$	0.024	0.051	0.637	-0.005	0.033	0.866
$(G2\text{-}G1)_{M10}$	-0.008	0.019	0.663	-0.002	0.012	0.842
$(G2\text{-}G1)_{M11}$	0.022	0.044	0.626	0.049	0.094	0.602
$(G2\text{-}G1)_{M12}$	0.100	0.036	0.006	-0.043	0.090	0.632
$(G2\text{-}G1)_{M13}$	0.001	0.008	0.948	-0.107	0.079	0.174
$(G2\text{-}G1)_{M14}$	-0.010	0.024	0.662	0.030	0.090	0.741

When the measurement invariance results given in Table 3 are examined, it is seen that the developed measurement tool provides the invariance of factor loadings for gender subgroups. In this case, the developed scale satisfies structural and metric invariance. Looking at the strong invariance examining the differentiation of the cutoff values between the groups, it is seen that the 12th item differs between the groups. The reason behind this invariance might be due to the responsibility students feel for their homework. Male students might have considered the situation given in the item as something usual in their daily lives while female students are less likely to feel secure and complete when they are not finished with their homework. How they see the situation and how they feel when they experience it may be the cause of this invariance.

Findings Related to the Reliability of the Scale

For the reliability study of the developed scale, the Mcdonald's omega reliability coefficients of the subscales and total scale score were calculated. Reliability coefficients are presented in Table 4.

Table 4

Reliability of the Learned Helplessness Tendency Scale

Scale and Sub-dimensions	EFA Group	CFA Group
Total Score	0.91	0.89
Internal-external attributions	0.86	0.78
Stable-unstable attributions	0.69	0.63
Global-specific attributions	0.69	0.78

When Table 4 is examined, it is seen that the reliability of the total learned helplessness scale score is high for both applications. The reliability of the subscales is relatively low. Table 5 displays item-total score correlations (biserial correlation).

Table 5

Item-total score correlations of Learned Helplessness Tendency Scale

Sub-dimensions	Item numbers at EFA Group	Item numbers at CFA Group	Item Total Score Correlation
Internal-external causal attributions	2	1	0.43
	6	3	0.33
	11	5	0.58
	13	7	0.51
	14	8	0.45
	15	9	0.58
Stable-unstable causal attributions	16	10	0.25
	18	11	0.39
	24	12	0.35
	27	13	0.38
	30	14	0.39
Global-specific causal attributions	3	2	0.37
	7	4	0.33
	12	6	0.33

According to the item-total correlations presented in Table 5, the lowest correlation was 0.25; the highest correlation is 0.58. Correlations of 0.30 and above are recommended in the literature (Brown, 2015). At this point, the fact that there is only one item below 0.30 and that the other items are higher than the criterion specified in the literature indicates that the items have an acceptable relationship with the measured construct. The reason behind this low correlation is thought to be due to the estimation method used and the sample size. Literature state that WLSMV performance is related to the sample size (Kılıç, Uysal & Atar, 2020).

Discussion and Conclusion

Learned helplessness is a psychological trait that began to be studied in the mid-20th century. This form of learning, which arises from the unrelatedness between the behavior and the result of the behavior influence individuals' social, physical, educational life, and learning in many fields. When the studies on the measurement of this feature are examined, there is a limited number of scales to measure this feature. It is seen that the scales are generally developed for adolescents and adults (Karapınar et al., 2014; Uysal Koğ & Başer, 2011). Determining learned helplessness experience at a late age may cause to heal it later in individuals' lives. On the other hand, identifying the learned helplessness experience at early ages would contribute to take preventive cautions and help those youngsters with a history of leaned helplessness. Therefore, in this study, the aim was to develop a measurement tool that will provide information about the learned helplessness tendencies of secondary school students.

Evidences of validity of the scale was obtained from analyzes based on exploratory factor analysis, confirmatory factor analysis and criterion validity studies. As a result of the exploratory factor analysis, the 14 items in the scale are categorized as global-specific causal attributions, internal-external attributions, and stable-unstable causal attributions. When the items that do not cluster in any dimension are examined, it is easily seen that the causal attributions of these items cannot be clearly differentiated from each other.

For example, the fifth item that is excluded from the analysis process is as follows:

M5. Your teacher rewarded you for something you did.

a. You are rewarded for doing some things well.

b. Your teacher rewarded you for liking what I have done.

Here, rewarding a fifth grader for something he has done is considered too abstract for him to react properly. The expression "for something you did" in this sentence may have been insufficient for the student about what he was rewarded for and to determine which option is suitable for him. The item was written in accordance with the internal-external reference according to the causal attribution theory. It is expected that the student who has a tendency towards learned helplessness will attribute a positive situation to an external cause. In the context of this item, the external factor is the teacher. If the student has a tendency towards learned helplessness, s/he will attribute the reason for this positive situation to the teacher (external), not to himself/herself (internal). However, it can be seen that there is not only internal-external attribution in the item, but also global-specific attribution. Therefore, it is thought that the item wouldn't work.

Another item that was not loaded on any factor during the analysis process and that did not contribute to the variance was item 29. The item is as follows:

M29. Your teacher asked a question and you gave the wrong answer.

a. When asked a question, you get excited and give the wrong answer.

b. Normally you're not excited, but that day you got very excited and gave the wrong answer.

The item is written under stable-unstable attributions in accordance with the causal attribution theory. Individuals who tend to show learned helplessness are required to attribute the stable attributions in this item. However, the item is also suitable for global-specific causal

attributions. The item is therefore considered not to work. It can be said that the causal attributions of the other non-working items that are not included here were not clear, too.

The results of confirmatory factor analysis empirically proved that the model was validated. For the criterion validity study, the relationship between the Beck Hopelessness Scale and the developed scale was examined. A positive and moderate correlation was obtained between Beck Hopelessness Scale and Learned Helplessness Tendency Scale scores. The results of the study conducted by Boysan (2020) also support this relationship. According to the findings of the study by Boysan, a correlation of 0.43 was found between the Learned Helplessness Tendency Scale scores and the Beck Hopelessness Scale scores. Accordingly, the criterion validity of the developed Learned Helplessness Tendency Scale is moderate.

Reliability estimation of the scale was calculated with composite reliability. Cronbach Alpha, which is widely used, was not preferred because it was not suitable for the binary structure of the data. According to the composite reliability results, the reliability calculated for the total scale score is high. Although the reliability coefficients calculated for the sub-dimensions are relatively low, there are also above the cut off. At this point, it was concluded that the low number of items in the subscales was the main reason for the low reliability. However, when other learned helplessness scales developed in the literature are examined, it can be seen that there is a generally low reliability situation (Nolen-Hoeksema et al., 1986; 1992; Panak & Garber, 1992; Peterson et al., 1982; Seligman et al., 1984). As the final proof of validity of the scale, measurement invariance study was conducted. In the measurement invariance study, the structural and metric invariance of the scale were provided and it was observed that strong invariance could not be achieved. Accordingly, the scores obtained from the scale and subscales are comparable on the basis of groups. However, item 12 is not suitable for comparison between subgroups. The use of the total score in the Learned Helplessness Tendency Scale is recommended. This is because the structure cannot be measured with a single causal loading from sub-dimension. Therefore, the high reliability estimation of the total score of the scale is satisfactory in the context of this study. In estimating reliability, item-total test scores correlations were also examined via biserial correlation. Item-total score correlation gives information about the internal consistency of the scale. Item-total test score correlations are above the recommended 0.30 cited in the literature. The only correlation below the suggested value is 0.25. The correlations obtained, by taking into account the fact that this correlation is significant and close to the cut-off point, were interpreted as an indicator of the internal consistency of the scale. The coefficients obtained show that the subscales and the total scale score have sufficient reliability.

This study has some limitations. First of all, students should accept the hypothetical situations presented to them as real. Although students were given situations that they might encounter in the context of school, it was seen that they were sometimes inadequate in imagining situations they have not experienced. Despite this limitation, the developed scale is a valid and reliable tool that can be used to measure the learned helplessness tendency in the relevant age group.

When we look at the tools measuring learned helplessness in similar and different age groups in the literature, it can be seen that parallel processes are followed with this study. Peterson et al. (1982) analyzed the items they developed to measure learned helplessness in their studies. They described a six-dimensional construct in which those items were measured in accordance with causal attribution theory, including both positive and negative events. Quinless and Nelson

(1988) reported that the 3-dimensions of the 5-dimensional scale they developed to measure learned helplessness comply with the causal attribution theory in terms of content. The 15-item scale developed by Cizkowicz (2021), on the other hand, was built on three components of learned helplessness. Cizkowicz developed a scale to measure learned helplessness in the dimension of emotional, motivational and cognitive deficits. When the scales developed in the literature for different age groups and based on different theories are examined, it is easily seen that the most widely used scales were developed in accordance with the causal attribution theory.

Recommendations

It can be concluded that developing such a scale based on the attribution theory has contributed to both the national literature and measuring the construct itself using the theory on national level. With this study, having a wide scope, construct and criterion validity, a scale has been developed, producing valid and reliable results.

The main weakness of the study is related to the criterion validity. Depression, which has been proven to be positively and strongly related to learned helplessness, could not be measured in this study due to ethical concerns. Researchers who will use the Learned Helplessness Tendency Scale, the development process of which was reported in this study, are recommended to use a valid and reliable tool to measure depression in a similar group, by obtaining the necessary permissions, and to examine its relationship with the Learned Helplessness Tendency Scale.

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Statement of Contribution Rate: The authors of the study contributed equally to all processes of the study.

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APPENDIX

Appendix-1: Learned Helplessness Tendency Scale (Turkish Version)

Öğrenilmiş Çaresizlik Eğilimi Ölçeği

Değerli Öğrenci,

Bu ölçek, sizlerin okul yaşamınızda karşılaştığınız eğitim durumlarıyla ilgili düşünce biçimlerinizi belirlemek için hazırlanmıştır. Ölçeğin her maddesinde bir durum ve altında bu duruma neden olabilecek iki seçenek verilmiştir. Önce verilen durumu dikkatli okuyunuz. Daha sonra sizin açınızdan bu iki seçenekten hangisi bu duruma neden olmuş olabilir bunu düşününüz. Seçiminizi a ya da b harfini yuvarlak içine alarak belirleyiniz.

Verilen durumun bir doğrusu ya da yanlışı yoktur. Önemli olan işaretlediğiniz seçeneğin sizin gerçek düşüncenizi yansıtmasıdır. Bazı maddelerde her iki seçenek de size uygun görünmemiş olabilir. Böyle durumlarda iki seçenek arasından size en uygun olanını işaretleyiniz.

Lütfen tüm ifadeleri eksiksiz yanıtlayınız. Doğru ve gerçekçi sonuçlara ulaşılabilmesi için içten yanıt veriniz. Ölçeğe isim yazmayınız. Bu ölçekten elde edilecek bilgiler yalnızca araştırma amacıyla kullanılacaktır. Araştırmaya sağladığınız katkı için teşekkür ederim.

1. **Sınavdan en yüksek notu sen aldın.**
   a. Şansın yaver gittiği için en yüksek notu aldın.
   b. Çok çalıştığın için en yüksek notu sen aldın.
2. **Sınıf arkadaşların sana karşı çok saygılılar.**
   a. O gün mutlu oldukları için sana saygılılar.
   b. Sen onlara iyi davrandığın için sana saygılılar.
3. **Bir konuda başarı gösterdin.**
   a. Konu ilgi alanına girdiği için başarılı oldun.
   b. Konu ne olursa olsun başarılı olurdun.
4. **Sınıf arkadaşlarınla iyi anlaşıyorsun.**
   a. Genellikle herkesle iyi anlaşırsın.
   b. Sınıf arkadaşlarınla iyi anlaşmaya çalışırsın.
5. **Okuldaki notların çok iyi.**

a. Son günlerde derslerine çok çalıştığın için notların iyi.

b. Genellikle çok çalışırsın, o yüzden notların iyi.

6. Arkadaşların seni çalışma grubuna davet ettiler.

a. Arkadaşların o gün sana saygılıydı.

b. Arkadaşların her zaman sana saygılıdır.

7. Öğretmenin yerine bir başka öğretmen geldi ve seni sevdi.

a. Yalnızca o gün derse çok katıldığın için seni sevdi. Başka gün gelse sevmeyebilirdi.

b. Sen her zaman derse katılırsın. Ne zaman gelse seni severdi.

8. Arkadaşın çözemediği bir matematik problemini getirdi ve çözmeni istedi. Sen doğru çözdün.

a. Hangi problemi getirirse getirsin sen her zaman doğru çözersin.

b. Bir benzerini daha önce çözdüğün için soruyu doğru çözdün.

9. Sınıfta kimsenin çözemediği bir matematik problemini çözdün.

a. Şansın yolunda gittiği için problemi çözdün.

b. Problemin ne olduğu fark etmez hepsini çözersin.

10. Arkadaşınla ders çalışmak için sözleştin ancak gelmedi.

a. Senden öğrenebileceği bir şey olmadığı için gelmedi.

b. Ders çalışmak istemediği için gelmedi.

11. Fen bilimleri kulübüne üye olmak istedin ancak seni kabul etmediler.

a. Fen bilimleri dersinde başarılı olmadığın için kabul etmediler.

b. Üye sayısı dolduğu için kabul etmediler

12. Öğretmenin sana verdiği ödevlerin bir kısmını tamamlamadın.

a. Öğretmenin verdiği ödevleri genelde tamamlamazsın.

b. Ödev hoşuna gitmedi, onun için tamamlamadın.

13. Yarıyıl tatili için ailen sana kitap aldı. Tatil bitmeden kitabı okuyup bitirme hedefi koydun. Ancak hedefine ulaşamadın.

a. Kitap sıkıcı olduğu için hedefine ulaşamadın.

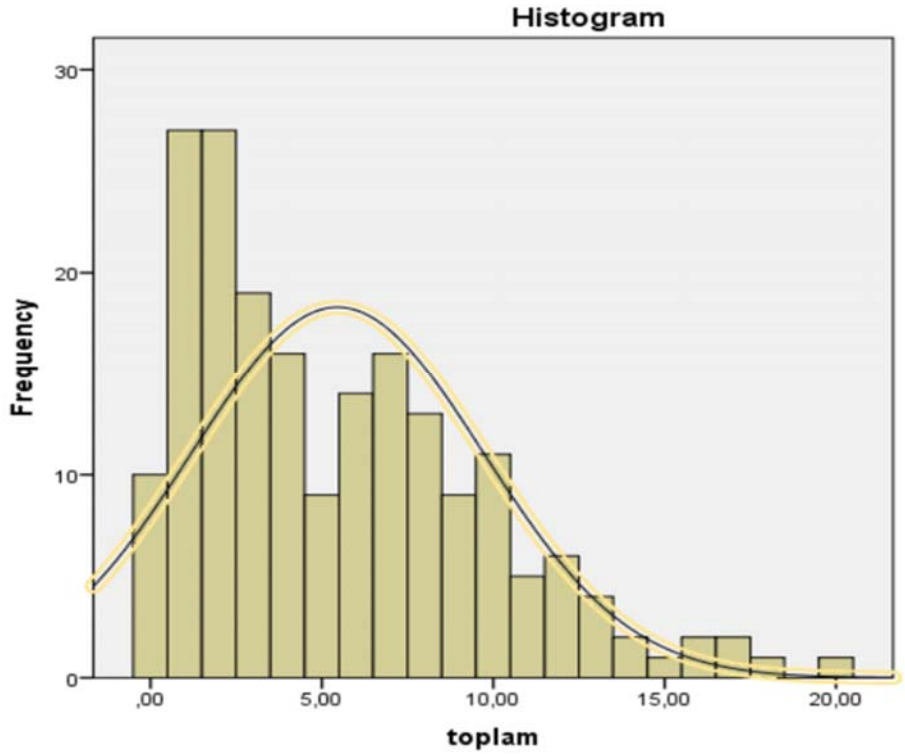
b. Zaten hedeflerinin çoğuna ulaşamazsın.

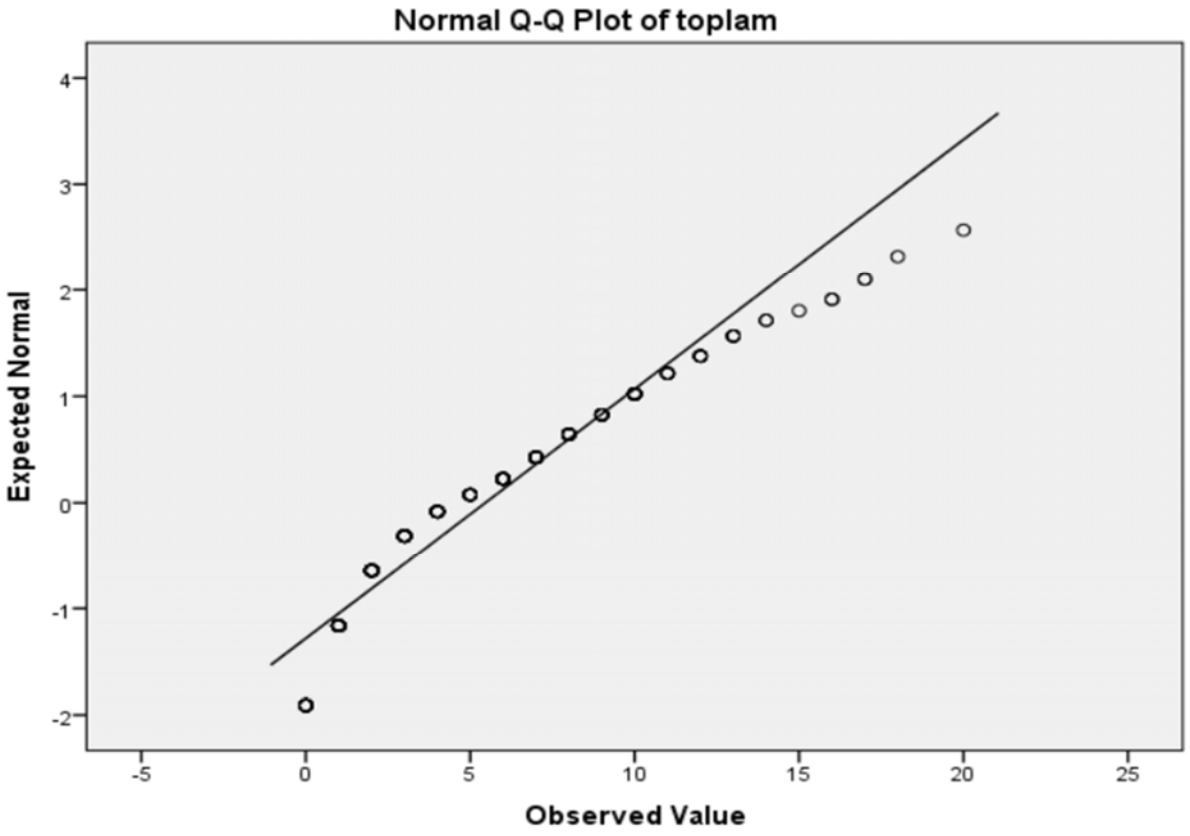
14. Öğretmenin hazırladığı bir testte başarısız oldun.

a. Öğretmenin hazırladığı tüm testlerde başarısız olursun.

b. Öğretmenin son hazırladığı testlerde başarısız oluyorsun.

Appendix-2: Histogram and Q-Q Plots Beck Hopelessness Scale





Geniş Türkçe Özet

Problem Durumu

Öğrenilmiş çaresizlik, 1960'lı yıllarda çalışılmaya başlanan bir kavramdır ve öğrenme süreciyle yakından ilişkilidir. Seligman ve Maeier (1967) tarafından tanıtılan bu kavram, bireyin kontrol edemeyeceği bir olay ya da durumla karşılaştığında, ortaya çıkacak sonucu davranışlarıyla değiştiremeyeceğini öğrenmesidir. Birey bu öğrenmeyi, kontrol olasılığı olan durumlarda da devam ettirir (Hiroto ve Seligman, 1975; Overmier ve Seligman 1967). Seligman ve Maier'e (1967) göre, öğrenilmiş çaresizliğin oluşmasını sağlayan temel öge kontrolsüzlüktür (uncontrobility). Birey, gösterdiği davranışla beklediği sonuç arasındaki ilişkiyi kopardığında, davranışıyla sonucu kontrol edemeyeceğini öğrenir ve sonuç davranıştan bağımsız duruma gelir. Davranışıyla sonucu kontrol edebilecek olsa da sonucun kontrolsüzlüğünü öğrendiği için kendisini sonuca götürecek davranışı göstermez. Davranışıyla sonucu kontrol edemeyen birey, gelecekteki davranışları için de benzer bir davranış-sonuç ilişkisi kurar. Gelecekte, sonucu kontrol edebilecek olsa bile davranışı göstermez. Başa çıkılması oldukça zor olan bu durum bireyde güdüsel, bilişsel ve heyecansal değişmelere yol açabilir ve yaşamında onarılamaz izler bırakabilir. Bireyin yaşamında olumsuz izler bırakan bu psikolojik özelliğin küçük yaş gruplarında ölçülmesi, gerekli önlemlerin alınması açısından oldukça önemlidir. Bu nedenle Türkiye'de okullarda yaygın olan bu durum için Öğrenilmiş Çaresizlik Eğilimi Ölçeği geliştirme çalışması gerçekleştirilmiştir.

Öğrenilmiş Çaresizliğin Ölçülmesi

Çalışmada öncelikle alanyazındaki öğrenilmiş çaresizlik ölçekleri taranmış, bu çalışmada ele alınan yaş grubu düzeyinde geliştirilmiş az sayıda ölçeğe rastlanmıştır. Çocuklarda nedensel yüklemelere odaklanan ölçekler incelendiğinde (Kaslow ve Nolen-Hoeksema, 1991; Kaslow ve Alloy, 1984) bu ölçeklerin oldukça eski tarihli oldukları görülmüştür. Bununla birlikte, bu ölçeklerin maddeleri incelendiğinde, ölçeklerde okul, aile ve okul dışı bağlamları ölçmeyi amaçlayan maddeler olduğu gözlenmiştir. Bu çalışma öğrenmelerin gerçekleştiği okul bağlamındaki çaresizliğin belirlenmesini amaçlamaktadır. Bu ölçeğin hem eski tarihli olması hem de farklı bağlamlarda ölçme yapıyor olması nedenleriyle bu ölçek tercih edilmemiştir.

Bulunan ikinci ölçek Fincham vd. (1989) tarafından öğretmen kontrol listesi olarak Amerika Birleşik Devletleri'nde geliştirilmiş, Sorrenti vd. (2014) tarafından İtalyan öğrenciler için uyarlaması yapılmıştır. Bu ölçeğin bir kontrol listesi olarak hazırlanmış olması, geliştirilme tarihinin eski olması ve geliştirilmesinde hangi yaş grubunun referans alındığıyla ilgili bir bilginin bulunmaması, uyarlama çalışmasının sınırlı sayıda öğrenciyle yapılmış olması ve madde kaybının çok olması gibi nedenlerle bu ölçeğin de kullanılmamasına karar verilmiştir.

İlgilenilen yaş grubunda kullanılabilecek bir diğer ölçek ise Quinless ve Nelson (1988) tarafından geliştirilmiştir. 14 maddeden oluşan ölçeğin güvenirlik çalışmaları dar bir grupta (n=24) gerçekleştirilmiştir. Bu ölçeğin de tercih edilmemesinin nedeni ise geliştirilmesinin üzerinden uzun zaman geçmiş olması ve bir güncelleme çalışmasının yapılmamış olmasıdır.

Alanyazındaki çalışmalar, öğrencinin öğrenilmiş çaresizlik yaşantısının fiziksel, bilişsel, eğitsel, sosyal ve profesyonel yaşamında birçok etkisinin olacağını göstermektedir. Bu nedenle, bu psikolojik yapının özellikle küçük yaş gruplarında ölçülebilmesi hızla önlem alınmasına ve iyileştirme çalışmalarının yapılmasına, gençlerin sağlıklı ve özgüvenli bireyler olarak yetişmesine yardımcı olacaktır. Bu doğrultuda bu çalışmanın amacı, ortaokul öğrencilerinin okul ortamındaki

öğrenilmiş çaresizlik eğilimlerinin belirlenmesinde kullanılabilecek bir ölçme aracı geliştirilmesidir.

Yöntem

Çalışma bir ölçek geliştirme çalışmasıdır. Çalışma grubunun seçiminde maksimum örnekleme deseni kullanılmıştır. Öğrencilerin hem sosyoekonomik bakımdan hem de öğrenilmiş çaresizlik yaşantısı bakımından heterojen olduğu bir bölge seçilmiştir. Otuz maddeden oluşan Öğrenilmiş Çaresizlik Eğilimi Ölçeği'nin uygulaması, Ankara ili Mamak ilçesinde bulunan ortaokulların 5, 6, 7 ve 8. sınıflarında okuyan öğrenciler üzerinde gerçekleştirilmiştir. Açımlayıcı ve doğrulayıcı faktör analizi için birbirine benzer iki gruptan veri toplanmıştır. Ölçeğin geliştirilme sürecinde nedensel yükleme kuramına uygun olarak 30 madde yazılmıştır. Geliştirilen 30 madde öncelikle uzman görüşüne sunulmuştur. Ölçeğin ölçüt geçerliği çalışması Beck Umutsuzluk Ölçeği ile korelasyonu hesaplanarak yapılmıştır.

Verilerin çözümlenmesinde açımlayıcı ve doğrulayıcı faktör analizi çalışmaları yürütülmüştür. Ölçüt geçerliği için Pearson momentler çarpımı korelasyon katsayısı kullanılmıştır. Ayrıca ölçme değişmezliği test edilmiştir. Ölçeğin hem AFA hem de DFA grubu için güvenirlik kestirimleri birleşik güvenirlik katsayısı ve madde toplam puan korelasyonlarıyla hesaplanmıştır.

Bulgular

Açımlayıcı faktör analizi sonuçlarına göre ölçeğin 3 faktörlü yapısının olduğu kabul edilmiştir. Faktörlerdeki maddeler nedensel yüklemelere uygun şekilde *genel-özel*, *içsel-dışsal* ve *değişebilir-değişmez* olarak isimlendirilmiştir. Toplam 14 madde DFA uygulaması için seçilmiştir. Açımlanan 3 faktörde açıklanan toplam varyans %50'dir. Doğrulayıcı faktör analizi sonuçları açımlanan yapının doğrulandığını göstermiştir (ise χ^2/sd= 93.955/74; p= 0.058; RMSEA= 0.036; CFI= 0.95; TLI= 0.94).

Geliştirilen ölçeğin ölçüt geçerliği çalışmasında Beck Umutsuzluk Ölçeği ile ilişkisi incelenmiştir. Aralarında orta düzeyde pozitif yönde ve istatistiksel olarak anlamlı bir ilişki bulunmuştur. Ölçeğin ölçüt geçerliğinin sağlandığı sonucuna varılmıştır. Yapılan ölçme değişmezliği çalışmasında ise yalnızca bir maddenin öğrencinin cinsiyetine göre yanlılık gösterdiği görülmüştür.

Geliştirilen ölçeğin güvenirlik kestirimleri ise toplam ölçek puanı ve alt ölçek puanları için için yüksektir. Madde toplam puan korelasyonları da ölçeğin güvenirlik kanıtlarını oluşturmuştur.

Tartışma ve Sonuç

Alanyazında, öğrenilmiş çaresizlikle ilgili ölçeklerin genellikle ergen ve yetişkinler için geliştirildiği görülmektedir. Ergenlik ve yetişkinlik dönemi öğrenilmiş çaresizlik yaşantısını kontrol etmek ve bu yaşantının düzeltilebilmesini sağlamak için geç kalınan bir dönemdir. Öğrenilmiş çaresizlik yaşantısının erken yaş dönemlerin belirlenmesi, bu olumsuz yaşantıyı ortadan kaldıracak düzenlemelerin ve düzeltmelerin yapılmasına katkıda bulunacaktır. Bu nedenle, bu çalışmada ortaokul öğrencilerinin öğrenilmiş çaresizlik eğilimleri hakkında bilgi verecek bir ölçme aracı geliştirilmesi hedeflenmiştir. Ölçeğin geliştirilmesi sürecinde Abramson vd. (1980) tarafından iyileştirilen Nedensel Yükleme Kuramı temel alınmıştır. Maddelerin yazımında, öğrencilerin yaş grubu, okul ve okuldaki ilişkileri göz önünde tutularak madde yazımına özen gösterilmiştir.

Ölçeğin geçerlik kanıtları açımlayıcı faktör analizi, doğrulayıcı faktör analizi ve ölçüt geçerliği çalışmalarına dayalı çözümlemelerden elde edilmiştir. Ölçme değişmezliği çalışması da yürütülmüştür. Açımlayıcı faktör analizi sonucunda ölçekte kalan 14 madde; içsel ya da dışsal genel yüklemeler, değişebilir ya da değişmez nedensel yüklemeler ve genel ya da özel nedensel yüklemeler olmak üzere 3 alt boyuta yerleşmiştir. Doğrulayıcı faktör analizi sonuçları modelin doğrulandığını görgül olarak kanıtlamıştır. Ölçüt geçerliği çalışması için Beck Umutsuzluk Ölçeği ile geliştirilen ölçeğin ilişkisi incelenmiştir. Beck Umutsuzluk Ölçeği ile Öğrenilmiş Çaresizlik Eğilimi Ölçeği puanları arasında pozitif yönde ve orta düzeyde bir ilişki elde edilmiştir.

Ölçeğin güvenirlik kestirimi Birleşik Güvenirlik katsayısı ile hesaplanmıştır. Güvenirlik kestirim sonuçlarına göre toplam ölçek puanı için hesaplanan güvenirlikler yüksektir. Alt boyutlar için hesaplanan güvenirlik katsayıları ise görece daha düşük olmakla birlikte sınırda olan güvenirlik kestirimleri de bulunmaktadır. Bu noktada, alt ölçeklerin madde sayısının az olmasının düşük güvenirliğin başlıca nedeni olduğu sonucuna varılmıştır. Tüm bu sonuçlar göz önünde bulundurulduğunda çocuklarda öğrenilmiş çaresizlik eğilimini ölçebilecek geçerli ve güvenilir bir araç geliştirildiği sonucuna varılmıştır.