A Scale Development Study to Determine Secondary School Students' Perceptions of Extracurricular Activities

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Abstract: Extracurricular activities are important educational opportunities that contribute to students' academic, social and emotional development. Students' perceptions of these activities directly affect their motivation to participate and the gains they will achieve. The purpose of this study is to develop a valid and reliable measurement tool that measures middle school students' perceptions of extracurricular activities. The item pool of the scale, which was developed based on Self-Determination Theory, was created and organized in line with expert opinions. As a result of the exploratory factor analysis performed with the data collected from middle school students (n=294), a single-factor structure with 10 items explaining 54.4% of the variance was obtained. Cronbach's alpha and McDonald's omega reliability coefficients of the scale were found to be 0.91. Confirmatory factor analysis with data collected from a different sample group (n=196) showed that the single-factor structure was confirmed and the reliability coefficients were 0.85. The one-factor structure is compatible with the developmental characteristics of middle school students and reflects the interrelated and holistic nature of basic psychological needs (autonomy, competence, relatedness). The developed scale is a useful tool for the evaluation and improvement of extracurricular activities at the secondary school level and for planning activities in accordance with student needs.

Keywords: Extracurricular activities, perception, scale development, secondary school students, Self-Determination Theory

Ortaokul Öğrencilerinin Program Dışı Etkinliklere İlişkin Algılarını Belirlemeye Yönelik Bir Ölçek Geliştirme Çalışması

Öz: Program dışı etkinlikler, öğrencilerin akademik, sosyal ve duygusal gelişimlerine katkı sağlayan önemli eğitim fırsatlarıdır. Öğrencilerin bu etkinliklere yönelik algıları, katılım motivasyonlarını ve elde edecekleri kazanımları doğrudan etkilemektedir. Bu çalışmanın amacı, ortaokul öğrencilerinin program dışı etkinliklere yönelik algılarını ölçen geçerli ve güvenilir bir ölçme aracı geliştirmektir. Öz-Belirleme Teorisi temel alınarak geliştirilen ölçeğin madde havuzu oluşturulmuş ve uzman görüşleri doğrultusunda düzenlenmiştir. Ortaokul öğrencilerinden (n=294) toplanan verilerle gerçekleştirilen açımlayıcı faktör analizi sonucunda, varyansın %54,4'ünü açıklayan 10 maddelik tek faktörlü bir yapı elde edilmiştir. Ölçeğin Cronbach alfa ve McDonald omega güvenirlik katsayıları 0,91 olarak bulunmuştur. Farklı bir örneklem grubundan (n=196) toplanan verilerle yapılan doğrulayıcı faktör analizi, tek faktörlü yapının doğrulandığını ve güvenirlik katsayılarının 0,85 olduğunu göstermiştir. Tek faktörlü yapı, ortaokul öğrencilerinin

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özellikleriyle uyumlu olup, temel psikolojik ihtiyaçların (özerklik, yetkinlik, ilişkisellik) birbiriyle ilişkili ve bütüncül doğasını yansıtmaktadır. Geliştirilen ölçek, ortaokul düzeyindeki program dışı etkinliklerin değerlendirilmesi, iyileştirilmesi ve öğrenci ihtiyaçlarına uygun etkinlik planlaması için kullanışlı bir araç niteliğindedir.

Anahtar kelimeler: Program dışı etkinlikler, algı, ölçek geliştirme, ortaokul öğrencileri, Öz-Belirleme Teorisi

Introduction

Education is an active process that continues throughout life. In this process, people are in a constant development and change with the innovations of the age. However, addressing this learning process only in the school environment is a situation that is not accepted by educators (Köse, 2013). The knowledge acquired at school can be through the execution of a formal program, but it also includes different types of programs. In this context, Posner (1995) defines curriculum as official, operational, hidden, null and extra curriculum. He (1995) explains extra-curricular activities as all the experiences planned outside the formal curriculum. When the related literature is examined, it is seen that extra curriculum includes extracurricular activities (Broh, 2002; Darling et al., 2005; Feldman & Matjasko, 2005).

There are various explanations regarding the definition of extracurricular activities. Massoni (2011) defines extracurricular activities as activities that students participate in outside the official program of schools. More comprehensive definition of extracurricular activities is given by Bartkus et al. (2012) as academic or non-academic activities that are carried out within the school, but that take place outside of regular class hours and are not part of the program. There are different perspectives on the grouping of extracurricular activities as well (Chambers & Schreiber, 2004). Massoni (2011) includes sports teams, art clubs, music, academic and leadership clubs, youth groups, volunteer work, and community clubs among extracurricular activities. In a more inclusive way, it can be said that it is possible to consider extracurricular activities in the context of social, artistic, cultural, sportive and scientific activities and student clubs (Demir, 2019). Studies on extracurricular activities show that extracurricular activities affect learning in different ways and provide various advantages that affect learning. In the study conducted by Park (2015), it was concluded that extracurricular activities support social development and mental health in learners, provide intrinsic motivation, and increase academic achievement in terms of language development. Similarly, in the Turkish education system, extracurricular activities are also considered to be an effective element in developing higher-order thinking skills and citizenship education (Ekinci, 2021).

The first step of the cognitive process starts with perception. Perception is the processing incoming information and putting it into a certain structure and organization. The information and data brought by stimuli coming through the senses are processed and stored in various ways, but mental actions such as summarizing, classifying and reducing are involved in these processes (San, 2010). In short, it can be said that the perception of a concept is related to how an individual or a society thinks, feels and evaluates a subject, situation or object. In the context of extracurricular activities, students' perception of extracurricular activities can be considered as a factor affecting how interested they are in this concept and how willing they are to learn this concept. If this situation is considered within the concept of motivation, according to Grolnick et al. (1997), the individual's adoption and internalization of values, attitudes or behaviors that he/she encounters and observes in the process of social interaction takes place through motivational mechanisms.

Self-determination is the capacity to make one's own choices without any external stimulus, which is also a need (Deci & Ryan, 1985). According to self-determination theory, there are three motivational factors in human behavior; competence, autonomy and relatedness. The theory suggests that these three motivational determinants are universal (Ryan & Deci, 2000; Véronneau et al., 2005). Autonomous individuals can define the goals they want to achieve and complete tasks to reach these goals. Thus, these individuals are able to organize their lives and maintain control (Deci & Ryan, 2008). The concept of efficacy refers to individuals' feeling competent and functional to cope with their environment and take action (Deci & Ryan, 2000). Relatedness involves establishing close and high quality relationships with trusting connections (Baumeister & Leary, 1995).

Self-determination theory in education is important for increasing students' engagement in learning processes and enabling them to learn more effectively. Students show higher motivation and have more lasting learning experiences in an environment that meets their needs for autonomy, competence and connection. In extracurricular activities, it is essential that students voluntarily join in extra-curricular activities that take place outside of class hours without any concern for receiving any reward or raising their grades (Bartkus et al., 2012; Ebert et al., 2011). In this direction, these activities students participating these activities voluntarily and without academic anxiety, have more intrinsic motivation. Moreover, in terms of self-determination theory, extracurricular activities offer students the opportunity to make choices based on their own interests. When students participate in activities based on their own preferences, independent of the course, this gives them a greater sense of autonomy. Taking part in an activity of their own choice can increase a student's intrinsic motivation. Also, having experiences of success in these activities reinforces the student's sense of competence. In addition, extracurricular activities allow students to build social relationships and become part of a community. This enables students in particular to build stronger social bonds and develop a sense of belonging. The interaction with friends and teachers they connect with fulfills their emotional needs and can be said to contribute to their social development.

Considering that development is an inseparable whole. When a change occurs in any of the areas of physical development, cognitive development, emotional development, moral development and personality development, it is obvious that this change also affects other areas of development (Senemoğlu, 2009). Especially adolescence is one of the most critical periods of development. In this period, individuals begin to acquire characteristics such as reasoning, developing values and taking responsibility. In other words, adolescence is a period of physical, mental, emotional, psychological and social growth (Doğan 2007). Considering the benefits of extracurricular activities, engaging individuals in such a critical growth period in the approriate extracurricular activities will contribute significantly to their developmental areas by motivating them.

A review of the literature reveals that despite various studies on extracurricular activities, research typically focuses on how student participation in these activities affects them (Durlak & Weisberg, 2017; Giancursio, 2021; Kortel, 2023; Köse, 2013; Özçelik, 2021; Öztürk & Yıldırım, 2016). Nevertheless, there remains a gap in valid and reliable measurement tools for assessing middle school students' perceptions of these activities. Also, measuring students' perceptions of extracurricular activities provides a better understanding of the impact of these activities on students' social, emotional and academic development (Mahoney & Cairns, 2007). Moreover, such a scale could be used to determine the extent to which students value such activities and which

activities are more effective, contributing to the development of more efficient educational policies (Eccles & Barber, 1999). The basic psychological needs framework of Self-Determination Theory provides a theoretical basis for understanding adolescents' perceptions of extracurricular activities. In this context, the aim of this study is to develop a valid and reliable measurement tool that can determine middle school students' perceptions of extracurricular activities. In the scale development process, Self-Determination Theory was taken as a basis in the light of the above explanations. The developed scale is expected to contribute to understanding middle school students' perceptions of extracurricular activities and planning effective activities in this direction. In addition, it is thought that measuring perceptions towards extracurricular activities at the middle school level can contribute to understanding students' motivation to participate in activities in this critical developmental period and to ensure sustainable participation.

Method

The research was designed in exploratory correlational design. For Fraenkel et al. (2012), exploratory correlational design aims to determine the natural relationship between variables. Christensen et al. (2015) state that this design is also used to better understand a phenomenon. Within the scope of this research, since it was aimed to develop a scale by making use of the relationships between the items aiming to determine the awareness of extracurricular activities, the research was conducted using the exploratory correlational design.

Study Group

In the study, two study groups were used for scale development. Exploratory factor analysis (EFA) was conducted on the first group (exploratory study group), while confirmatory factor analysis was conducted on the second group (validation study group). The exploratory group consisted of 294 and the confirmation group consisted of 196 middle school students. Sample sizes were determined based on established guidelines in the factor analysis literature. For EFA, Comrey and Lee (1992) classify sample sizes as: 100 = poor, 200 = fair, 300 = good, 500 = very good, and 1000+ = excellent. The current EFA sample size (n = 294) meets the "good" criteria according to this classification. Furthermore, Guadagnoli and Velicer (1988) demonstrated through simulation studies that component patterns with moderate loadings (around .40) provide stable solutions when $N \geq 150$, and patterns with high loadings ($\geq .60$) yield reliable results regardless of sample size. For CFA, while sample size requirements vary based on model complexity and factor loadings, Kline (2016) indicates that samples of 200 or more are generally adequate for well-specified models with strong factor loadings. Hair et al. (2009) suggest minimum sample sizes of 150-400 for CFA, depending on the number of observed variables and model complexity. Given that the current study involves a relatively simple single-factor model with 10 items and strong factor loadings, the sample sizes employed (n = 294 for EFA, n = 196 for CFA) are appropriate and sufficient for conducting reliable factor analyses. Demographic characteristics of both groups are presented in Table 1.

Table 1

Demographic characteristics of study groups

Variables	Exploration Group		Validation Group	
Category	Frequency	Percentage (%)	Frequency	Percentage (%)
Gender				
Female	154	52,4	91	46,4

Male	140	47,6	105	53,6
Grade Level				
5	75	25,5	26	13,3
6	111	37,8	20	10,2
7	86	29,3	79	40,3
8	22	7,5	71	36,2

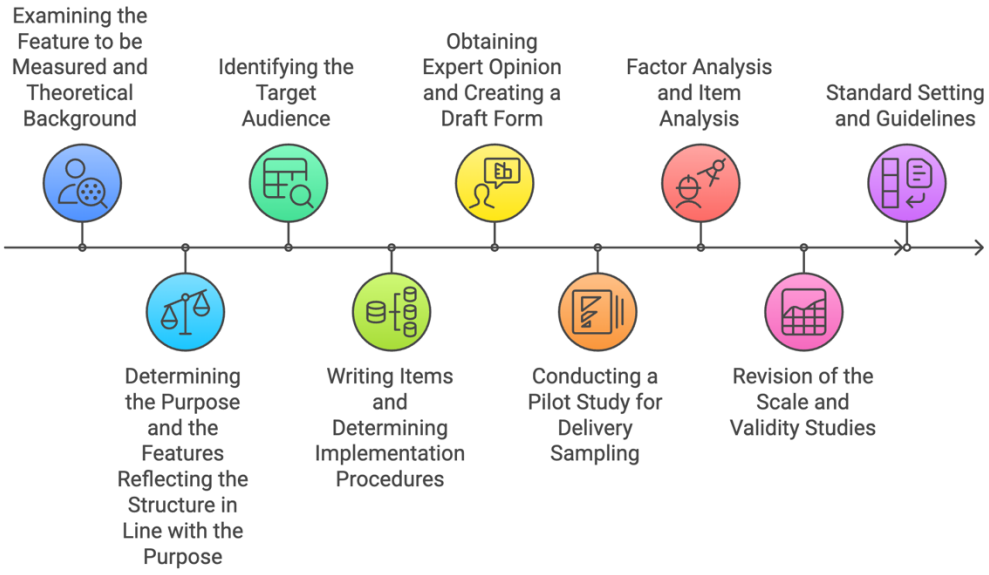
When the demographic characteristics of the exploratory group are analyzed in Table 1, 52.4% of the group consists of female students and 47.6% of male students. In terms of grade distribution, the highest participation was at the 6th grade level with 37.8%, while the lowest participation was at the 8th grade level with 7.5%. For the validation group, 46.4% of the group consisted of female students and 53.4% of the group consisted of male students. In terms of grade distribution, the highest participation was at the 7th grade level with 40.3% and the lowest participation was at the 6th grade level with 10.2%.

Data Collection Tool and Collection of Data

Price's (2017) stages were followed during the development of the data collection tool. In this context, the stages in Figure 1 were followed in the process of developing the Scale for Secondary School Students' Perceptions of Extracurricular Activities.

Figure 1

Data collection tool development process



In line with the process in Figure 1, 20 items were written for item pool development. For content validity, the opinions of three subject area experts and three measurement and evaluation experts were taken. While obtaining their opinions, evaluation criteria such as "should remain, should be corrected and should be removed" were used for each item. Gwet's AC1 coefficient was used for the agreement between expert opinions. A score of 2 points was given for "should remain",

1 point for "should be corrected" and 0 point for "should be removed". Gwet's AC1 coefficient for the agreement between experts was calculated as 0.612. Gwet's AC1 coefficient being in the range of 0.61-0.80 indicates good agreement between the experts according to Landis and Koch (1977) classification. After the expert opinions, six items were removed and a total of 14 items were included in the pilot application phase of the scale. After the pilot application, factor analysis and item analysis were conducted and at this stage, four items had to be removed from the scale. These items were the negatives of the other items and did not require a change in the structure. Validity studies were conducted after the pilot study. Evidence was presented that the data obtained from the scale were valid and reliable in a new sample.

Ethics committee permission was obtained from the Academic Assessment Coordinatorship of Başkent University with the number number E-62310886-605.99-145396. The pilot study was conducted face-to-face in the spring semester of 2023-2024 and the validation study was conducted face-to-face in the fall semester of 2024-2025. On average, the applications lasted 15 minutes in the trial application and 10 minutes in the validation application.

Data Analysis

In the exploratory study, which was the first study conducted to develop the scale, the pilot implementation was conducted on 14 items. At this stage, data were collected from 304 students. As a result of the examination, no missing data was encountered and only one student's data was removed due to careless coding. In the exploratory study, construct validity was evaluated with Exploratory Factor Analysis (EFA).

Within the scope of construct validity evidence, Hull method and optimal parallel analysis were performed to determine the number of dimensions in the scale. These two methods are widely preferred to determine the factor structure before EFA (Güler & Kılıç, 2023). Before applying EFA, relevant assumptions (multivariate outliers and multivariate normality) were tested. As a result of the multivariate outliers check based on Mahalonobis distances, 9 students' data were excluded from the data set at a statistical significance level of 0.001. Finally, the assumption of multivariate normality was evaluated with Mardia's test (1970).

In the exploratory study, the factorability and appropriateness of the data in EFA were tested with Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity. After the EFA, after the relevant construct was identified, item-based validity evidence was examined by calculating the corrected item correlation coefficients. Within the scope of reliability analyses, Cronbach's alpha and McDonald's omega coefficients based on internal consistency were obtained. In addition, item statistics were calculated to examine the validity of the items.

The validation study, which was the second study conducted to develop the scale, was conducted on 10 items. At this stage, data were collected from 199 students and no missing data or data that needed to be removed due to careless coding were encountered. In the validation study, construct validity was examined with Confirmatory Factor Analysis (CFA).

Before applying CFA, the relevant assumptions (multivariate outliers and multivariate normality) were tested. As a result of the multivariate outliers check based on Mahalonobis distances, 3 students' data were excluded from the data set at 0.001 statistical significance level. Finally, the assumption of multivariate normality was evaluated with Mardia's test (1970). With the CFA analysis, the structure revealed after the EFA was tested. Within the scope of reliability

analyses, Cronbach's alpha and McDonald's omega coefficients, which are also based on internal consistency, were obtained.

Parallel analyses (Hull and optimal parallel analysis) within the scope of the study were conducted using Factor 12.02.01 software (Lorenzo-Seva & Ferrando, 2022); EFA, item statistics and reliability coefficients in both applications were conducted using JASP 0.19.1 software (JASP Team, 2024); and CFA within the scope of the validation study was conducted using Jamovi 2.6.13 software (The Jamovi Project, 2024).

Results

The findings of the study are structured in two sections as exploratory and confirmation study findings in accordance with the procedures carried out in the research.

Findings of the Exploratory Study

In the exploratory study, data belonging to 304 students were gathered and EFA of the 14-item scale was performed on 294 learner data by removing the data of 10 students in total. Multivariate normality was examined with the Mardia test (skewness and kurtosis) and it was seen that the normality assumption was not met. Therefore, factor extraction method based on the minimum residual (minimum residuals/ residual variance) method was used in EFA (Coughlin, 2013).

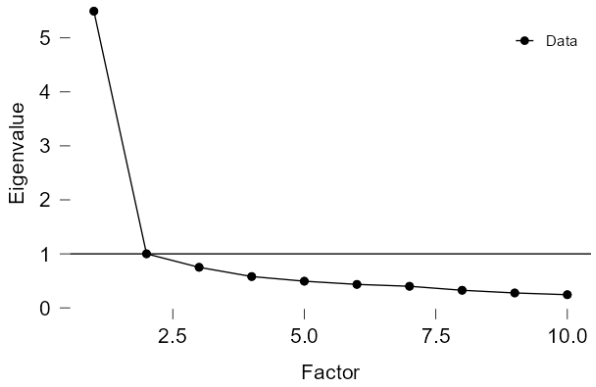
Before the factor analysis, the KMO value was calculated as 0.892 and it was seen that the KMO value was at a good level (0.80 and above) (Alpar, 2021). In addition, Bartlett's test was found to be statistically significant ($X^2_{(45)}$=1905.54; p<0,05) and it was determined that the data were suitable for factor analysis (Field, 2018). Due to the data structure (5-point Likert), parallel analyses and EFA were conducted based on the polychoric correlation matrix. In order to decide on the number of factors, Hull and Optimal parallel analysis were used. Based on the results of Hull method and optimal parallel analysis, a unidimensional structure was suggested.

To determine the number of factors, the Kaiser rule (considering factors with eigenvalues greater than 1) (Kaiser, 1960) and the scree plot were also examined. The preliminary EFA results revealed the presence of two factors with eigenvalues greater than 1; however, two items were found to have factor loadings below 0.40 (Alpar, 2021). Upon removal of these two items, the remaining 12 items would be distributed across the factors as 10 and 2 items, respectively. Considering the requirement that factors in EFA should consist of at least three items (Fabrigar et al., 1999) and the sharp decline in the scree plot (Büyüköztürk, 2024), it was decided to proceed with a unidimensional structure for the scale, as also suggested by the parallel analysis results.

During the factor analysis process, a polychoric correlation matrix was used as the correlation matrix, the minimum residual method was employed as the factor extraction method, and the promin method was used as the rotation method based on the assumption that factors might be correlated. EFA was conducted with the 14-item version of the scale, and four items were removed due to factor loadings below 0.40, resulting in a final EFA with 10 items. The analysis also produced the scree plot shown in Figure 2.

Figure 2

Scree plot



As seen in the scree plot in Figure 2, there is a sharp drop related to the first dimension, and there is only one dimension with a factor eigenvalue greater than 1. The EFA results for the obtained one-dimensional structure are presented in Table 2.

Table 2

Exploratory factor analysis results

Item No	Factor Loading	Item No	Factor Loading
1	0.74	6	0.76
2	0.84	7	0.64
3	0.75	8	0.78
4	0.79	9	0.71
5	0.70	10	0.64
Eigenvalue	5.88	Explained Variance	54.4%

Upon examination of Table 2, it was observed that the scale has a one-dimensional structure with 10 items and explains 54.4% of the variance. Büyüköztürk (2024) stated that an explained variance ratio of 30% and above would be sufficient for one-dimensional scales, and it was observed that the scale meets this criterion. In Table 2, it was also seen that the factor loading values of the items range between 0.64 - 0.84, and it was determined that the 0.40 criterion specified by Alpar (2021) was met.

Within the scope of reliability analysis, Cronbach's alpha and McDonald's omega coefficients and their values in the 95% confidence interval were calculated. Accordingly, Cronbach's alpha was determined as 0.91 (CI 0.89 - 0.92) and McDonald's omega as 0.91 (CI 0.89 - 0.92). Büyüköztürk (2024) stated that reliability coefficients based on internal consistency having values of 0.70 and above would be sufficient for the reliability of scores obtained from the scale. Considering this value, it was observed that the scale scores are reliable.

As part of the item statistics, item mean, standard deviation, and item discrimination (corrected item-total correlation) were calculated, and these values are presented in Table 3.

Table 3

Item statistics

Item No	X	SS	r_{jx}	Item No	X	SS	r_{jx}
1	3.78	1.00	0.67	6	3.37	1.22	0.68
2	3.72	1.09	0.76	7	3.95	1.04	0.56
3	3.68	1.10	0.68	8	3.59	1.18	0.72
4	3.75	1.20	0.72	9	3.20	1.23	0.65
5	3.54	1.14	0.65	10	3.20	1.15	0.59

When Table 3 is examined, it was observed that the item means of the scale range between 3.20 - 3.95, and the item standard deviation ranges between 1.00 - 1.23. The corrected item correlation values, which are indicators of item discrimination, were found to vary between 0.56 - 0.76. A value above 0.30 indicates that the items are discriminatory (Nunnally & Bernstein, 1994), and in this respect, it was determined that all items of the scale are discriminatory.

Findings from the Validation Study

In the validation study, data were obtained from 199 students, and after removing the data of 3 students, a CFA was performed on the 10-item scale using data from 196 students. Multivariate normality was examined with the Mardia test (skewness and kurtosis), and it was observed that the normality assumption could not be satisfied. Therefore, the analysis in the CFA was conducted based on the unweighted least-squares (ULS) method (Kline, 2016). Due to the data structure (5-point Likert), the CFA was performed based on a polychoric correlation matrix. As a result of the CFA analysis, the one-dimensional structure obtained from the EFA was tested and confirmed. The goodness of fit values obtained for this are presented in Table 4.

Table 4

Goodness of fit values for the model

	χ^2	sd	TLI	CFI	NFI	PNFI	RMSEA	SRMR
Model	51.78	35	0.99	0.99	0.97	0.75	0.050	0.069

When examining Table 4, it is observed that the model's TLI and CFI values are calculated as 0.99, NFI value as 0.97, PNFI value as 0.75, RMSEA value as 0.050, and SRMR value as 0.069. For goodness of fit values, TLI, CFI, and NFI values being 0.95 and greater; PNFI value being 0.50 and greater; RMSEA value being less than 0.08; and SRMR value also being less than 0.8 are indicators that the model shows good fit (Hu and Bentler, 1999; Kline, 2016). These results indicate that the one-dimensional structure of the scale demonstrates good model fit.

As a result of the CFA, standardized factor loadings (λ) and t values for the items were calculated, and these values are presented in Table 5.

Table 5

Statistics related to ıtems as a result of confirmatory factor analysis

Item No	λ	t	Item No	λ	t

1	0.61	16.14*	6	0.59	15.70*
2	0.69	17.83*	7	0.62	16.31*
3	0.65	17.14*	8	0.74	18.93*
4	0.67	17.49*	9	0.64	16.89*
5	0.68	17.79*	10	0.56	14.98*

Note: λ: standardized factor loading, t: t value, * $p < 0.05$

Upon examination of Table 5, it was observed that the standardized factor loading values of the scale items range between 0.56-0.74. Hair et al. (2009) stated that this value should be above 0.50. Accordingly, all items of the scale meet the relevant condition, and additionally, the t values of all items are statistically significant, meaning they are significant indicators for the model.

Within the scope of reliability analysis, Cronbach's alpha and McDonald's omega coefficients and their values in the 95% confidence interval were calculated. Accordingly, Cronbach's alpha was determined as 0.85 (CI 0.81 - 0.88) and McDonald's omega as 0.85 (CI 0.82 - 0.88). Büyüköztürk (2024) stated that reliability coefficients based on internal consistency having values of 0.70 and above would be sufficient for the reliability of scores obtained from the scale. Considering this value, it was observed that the scale scores are reliable. Both Turkish and English versions of the scale items are provided in Appendix 1.

Conclusion, Discussion and Recommendations

In this study, a scale that can validly and reliably measure middle school students' perceptions of extracurricular activities was developed. During the scale development process, a comprehensive item pool was generated, the items were organized in line with expert opinions, and the final form was reached according to the results of the analysis. The scale was scored on a five-point Likert scale as "strongly disagree [1], disagree [2], undecided [3], agree [4], strongly agree [5]". As a result of the exploratory factor analysis, a single-factor structure with 10 items explaining 54.4% of the variance was obtained. The reliability of the scale was found to be 0.91 with Cronbach's alpha and McDonald's omega coefficients in the first application and 0.85 in the validation study conducted with confirmatory factor analysis. These values indicate that the scale is highly reliable.

The single-factor structure of the scale offers important implications when evaluated from the perspective of Self-Determination Theory (SDT). As Ryan and Deci (2020) stated, basic psychological needs as autonomy, competence, and relatedness are closely interrelated and contribute to intrinsic motivation when met holistically. When the items of the scale are examined, it is seen that these items assess the perceptions of autonomy ("Extracurricular activities contribute to my self-knowledge"), competence ("Extracurricular activities improve my self-confidence") and relatedness ("I believe that extracurricular activities expand my social environment") needs in a holistic manner. The fact that a single factor explained 54.4% of the total variance in the exploratory factor analysis shows that secondary school students' perceptions of extracurricular activities can be gathered under a single structure. This finding is consistent with Vansteenkiste et al.'s (2020) explanation of the interrelated and complementary nature of basic psychological needs.

When Hansen and Larson's (2005) study is examined, the scale developed shows a multidimensional structure for young people. This difference is meaningful when evaluated from a developmental perspective. As Eccles and Roeser (2011) state, the middle school period (11-14 years) is a period in which students have not yet developed differentiated and crystallized

perceptions. Steinberg and Morris (2001) state that middle school students tend to evaluate their experiences more holistically. In this respect, the one-factor structure of the scale developed in this study is compatible with the developmental characteristics of middle school students.

In the context of suggestions for practitioners, the developed scale can be used by educators and curriculum developers to evaluate and improve extracurricular activities at the secondary school level. Thus, it may be possible to evaluate the appropriateness of the activities for students' needs and make necessary arrangements. School administrators and teachers can use this scale to identify factors that may positively affect students' perceptions of extracurricular activities and plan activities accordingly. For policy makers, this scale can contribute to making data-based decisions that take into account the student perspective in planning regulations and resources for extracurricular activities at the secondary school level. This scale can save time and resources for practical applications.

In the context of suggestions for researchers, the validity and reliability studies can be expanded by testing the developed scale in schools at different socio-economic levels, in different regions and in larger samples. In addition, longitudinal studies can be conducted to examine how students' perceptions of extracurricular activities change over time. Future research can examine the relationships between students' perceptions of extracurricular activities and their motivation to participate in these activities, their commitment to these activities, and their achievements. The relationship with academic achievement and school engagement can also be examined. Direct testing of the relationships between perceptions and the basic components of Self-Determination Theory (autonomy, competence, relatedness) may strengthen the theoretical foundation.

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Geniş Özet

Giriş

Program dışı etkinlikler, öğrencilerin akademik, sosyal ve duygusal gelişimlerine katkı sağlayan önemli eğitim fırsatlarıdır. Öğrencilerin bu etkinliklere yönelik algıları, katılım motivasyonlarını ve elde edecekleri kazanımları doğrudan etkilemektedir. Bu etkinlikler, Posner (1995) tarafından formal eğitim programının dışında tasarlanan deneyimlerin bütünü şeklinde tanımlanırken, Massoni (2011) bunları eğitim kurumlarının resmi öğretim programı haricinde öğrencilerin dahil olduğu uğraşlar olarak nitelendirmiştir. Park (2015) tarafından gerçekleştirilen araştırmada, bu etkinliklerin öğrenme sürecindeki bireylerde toplumsal gelişime ve psikolojik sağlığa katkı sağladığı, içsel güdülenme oluşturduğu ve dil gelişimi açısından eğitimsel performansı yükselttiği bulgusuna varılmıştır. Benzer şekilde, Türk eğitim sisteminde, program dışı etkinliklerin, üst düzey düşünme becerilerini geliştirmede ve vatandaşlık eğitiminde de etkili bir unsur olduğu düşünülmektedir (Ekinci, 2021).

Park (2015), program dışı etkinliklerin sosyal gelişimi ve ruhsal sağlığı desteklediğini, içsel motivasyon sağladığını ve akademik başarıyı artırdığını belirtmiştir. Öz-Belirleme Teorisi'ne göre (Deci ve Ryan, 1985), insan davranışında özerklik, yeterlik ve ilişkili olma olmak üzere üç temel motivasyonel etken bulunmaktadır. Program dışı etkinlikler, öğrencilere kendi ilgi alanlarına göre seçim yapma fırsatı sunarak özerklik hissini artırmakta, başarı deneyimleri sağlayarak yeterlik duygusunu pekiştirmekte ve sosyal ilişkiler kurmalarına olanak tanıyarak ilişkili olma ihtiyacını karşılamaktadır. Zihinsel işleyişin başlangıç noktası, idrak etme süreci ile gerçekleşir. İdrak, dışarıdan edinilen verileri işleyerek sistemli ve düzenli bir yapıya dönüştürme faaliyetidir. Duyu organları aracılığıyla alınan uyaranların taşıdığı enformasyon ve veriler çeşitli yöntemlerle işlenir ve muhafaza edilir, fakat bu süreçler esnasında özetleme, kategorize etme ve sadeleştirme gibi zihinsel faaliyetler devreye girer (San, 2010).

Alanyazında program dışı etkinliklerin öğrencilere sağladığı çeşitli faydalar vurgulanmasına rağmen, ortaokul öğrencilerinin bu etkinliklere yönelik algılarını ölçebilecek geçerli ve güvenilir bir ölçme aracının eksikliği görülmektedir. Bu bağlamda, bu araştırmanın amacı ortaokul öğrencilerinin program dışı etkinliklere yönelik algılarını belirleyebilecek, geçerliği ve güvenirliği sağlanmış bir ölçme aracı geliştirmektir.

Yöntem

Araştırma açımlayıcı ilişkisel desende tasarlanmıştır. Fraenkel vd. (2012) açımlayıcı ilişkisel deseni, değişkenler arasındaki doğal ilişkiyi belirlemeyi amaçlayan bir desen olarak tanımlamaktadır. Bu araştırmada program dışı etkinliklere yönelik algıları belirleyebilmeyi

amaçlayan maddeler arasındaki ilişkilerden faydalanılarak ölçek geliştirme amaçlandığından, açımlayıcı ilişkisel desen kullanılmıştır.

Araştırmada iki farklı çalışma grubu ile çalışılmıştır. İlk grup (n=294) üzerinde açımlayıcı faktör analizi (AFA), ikinci grup (n=196) üzerinde ise doğrulayıcı faktör analizi (DFA) gerçekleştirilmiştir. Veri toplama aracının geliştirilmesinde Price'ın (2017) aşamaları takip edilmiştir. Alanyazın taraması yapılarak ölçek için 20 madde yazılmıştır. Kapsam geçerliği için uzman görüşleri alınmış ve uzman görüşleri arasındaki uyum için hesaplanan Gwet'in AC1 katsayısı 0,612 olarak bulunmuştur. Uzman görüşleri sonrasında altı madde çıkartılmış ve pilot uygulama 14 madde ile gerçekleştirilmiştir.

Verilerin analizinde, AFA öncesinde faktör yapısını belirlemek için Hull yöntemi ve optimal paralel analiz kullanılmıştır. Verilerin faktörlenebilirliği Kaiser-Meyer-Olkin (KMO) ve Bartlett küresellik testi ile değerlendirilmiştir. Güvenirlik analizlerinde Cronbach alfa ve McDonald omega katsayıları hesaplanmıştır. DFA ile AFA sonucunda elde edilen yapı test edilmiştir.

Bulgular

Keşif çalışmasında çoklu doğrusallık varsayımı tolerans ve VIF değerleri ile incelenmiş, çok değişkenli normallik varsayımı sağlanamadığından AFA'da minimum residual yöntemi kullanılmıştır. KMO değeri 0,892 olarak hesaplanmış ve Bartlett testi istatistiksel olarak anlamlı bulunmuştur ($X^2(45)=1905,54$; $p<0,05$).

Hull analizi ve optimal paralel analiz sonucunda tek boyutlu bir yapı önerilmiştir. AFA sonucunda 10 maddelik tek boyutlu bir ölçek yapısı elde edilmiştir. Bu yapı varyansın %54,4'ünü açıklamaktadır. Maddelerin faktör yük değerleri 0,64-0,84 arasında değişmektedir. Güvenirlik analizi sonucunda Cronbach alfa ve McDonald omega katsayıları 0,91 olarak belirlenmiştir. Düzeltilmiş madde korelasyon değerleri ise 0,56-0,76 arasında değişmektedir.

Doğrulama çalışmasında DFA sonucunda tek boyutlu yapı doğrulanmıştır. Model uyum indeksleri incelendiğinde TLI ve CFI değeri 0,99, NFI değeri 0,97, PNFI değeri 0,75, RMSEA değeri 0,050 ve SRMR değeri 0,069 olarak hesaplanmıştır. Bu değerler modelin iyi uyum gösterdiğini ortaya koymaktadır. Standartlaştırılmış faktör yük değerleri 0,56-0,74 arasında değişmekte olup tüm maddelerin t değerleri istatistiksel olarak anlamlıdır. Güvenirlik katsayıları 0,85 olarak hesaplanmıştır.

Sonuç ve Tartışma

Bu araştırmada ortaokul öğrencilerinin program dışı etkinliklere yönelik algılarını ölçen geçerli ve güvenilir bir ölçme aracı geliştirilmiştir. Beşli likert tipinde 10 maddeden oluşan ölçek tek faktörlü bir yapı göstermektedir. Ölçeğin açıkladığı varyans oranı %54,4 olup, güvenirlik katsayıları 0,85-0,91 arasında değişmektedir.

Ölçeğin tek faktörlü yapısı, Öz-Belirleme Teorisi perspektifinden önemli çıkarımlar sunmaktadır. Ryan ve Deci'nin (2020) belirttiği gibi, temel psikolojik ihtiyaçlar (özerklik, yeterlik ve ilişkisellik) birbiriyle yakından ilişkilidir ve bütüncül olarak karşılandığında içsel motivasyona katkı sağlar. Ölçek maddeleri incelendiğinde, özerklik, yeterlik ve ilişkisellik ihtiyaçlarına yönelik algıları bütüncül olarak değerlendirdiği görülmektedir.

Alanyazındaki benzer çalışmalardan farklı olarak (Hansen ve Larson, 2005), bu ölçeğin tek faktörlü yapı göstermesi gelişimsel perspektiften anlamlıdır. Ortaokul dönemi (11-14 yaş), Eccles

ve Roeser'in (2011) belirttiği gibi, öğrencilerin henüz farklılaşmış algılar geliştirmediği bir dönemdir. Steinberg ve Morris (2001) bu dönemdeki öğrencilerin deneyimlerini daha bütüncül değerlendirme eğiliminde olduklarını belirtmektedir.

Geliştirilen ölçek, eğitimciler ve program geliştiriciler tarafından program dışı etkinliklerin değerlendirilmesinde, iyileştirilmesinde ve öğrenci ihtiyaçlarına uygun etkinlik planlamasında kullanılabilir. Okul yöneticileri, öğrencilerin algılarını olumlu etkileyebilecek faktörleri belirleyebilir. Politika geliştiriciler için de ölçek, program dışı etkinliklere ilişkin düzenlemelerin planlanmasında, öğrenci perspektifini dikkate alan kararlar alınmasına katkı sağlayabilir.

Gelecek araştırmalarda, ölçeğin farklı sosyo-ekonomik düzeylerdeki okullarda test edilmesi ve öğrencilerin program dışı etkinliklere yönelik algıları ile akademik başarıları arasındaki ilişkilerin incelenmesi önerilmektedir. Program dışı etkinliklere yönelik algı ile Öz-Belirleme Teorisi'nin temel bileşenleri arasındaki ilişkilerin doğrudan test edilmesi de kuramsal temeli güçlendirebilir.

Appendix 1

The Scale for Secondary School Students' Perceptions of Extracurricular Activities

No	Original Items in Turkish	English Translations of Items
1.	Program dışı etkinliklere katılmaktan hoşlanırım.	I enjoy participating in extracurricular activities.
2.	Program dışı etkinlikler eğlenerek öğrenmemi sağlar.	Extracurricular activities enable me to learn while having fun.
3.	Program dışı etkinliklerin sosyal çevremi genişlettiğine inanırım.	I believe that extracurricular activities expand my social circle.
4.	Program dışı etkinlikler yeni ilgi alanlarımın oluşmasını sağlar.	Extracurricular activities help me develop new interests.
5.	Program dışı etkinlikler sorumluluk almamı sağlar.	Extracurricular activities allow me to take on responsibility.
6.	Program dışı etkinlikler kendimi tanımama katkı sağlar.	Extracurricular activities contribute to my self-discovery.
7.	Program dışı etkinliklere katılmaktan mutlu olurum.	I am happy to participate in extracurricular activities.
8.	Program dışı etkinlikler özgüvenimi geliştirir.	Extracurricular activities improve my self-confidence.
9.	Program dışı etkinlikler derslerdeki başarımı olumlu etkiler.	Extracurricular activities positively affect my academic success.
10.	Program dışı etkinlikler okul içindeki olumsuz davranışlarımı azaltır.	Extracurricular activities reduce my negative behaviors at school.

Note: The following scale items constitute English translations of the Turkish measures originally utilized in this research. The scale construction and psychometric evaluation procedures, including validation and reliability testing, were exclusively conducted with the Turkish language version. The English translations presented herein are intended for illustrative purposes only and lack independent psychometric validation. For research or applied purposes, users should employ the original Turkish scale items.