



Examination of Physical Activity Attitudes and Anti-Social Behaviors of Middle School Students

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Abstract

The aim of this study is to examine the physical activity attitudes and antisocial behaviors of middle school students. The research group of the study consisted of a total of 1046 students, 509 boys and 537 girls, aged between 11 and 13, studying in 5-6-7-8th grades in three secondary schools affiliated to the Ministry of National Education in Esenyurt district of İstanbul province in the 2022-2023 academic year. "Personal Information Form", "Physical Activity Attitude Scale for Secondary School Students" and "Antisocial Behavior Scale for Secondary School Students" were used as data collection tools. SPSS 25.0 statistical package program was used to evaluate the data and to find calculated values. Data were summarized by giving mean and standard deviations. Whether the data were normally distributed was checked with the range of Kurtosis and Skewness coefficients and it was determined that the data were normally distributed. Since the data were normally distributed, independent group t-test was used for pairwise cluster comparisons and One-Way Analysis of Variance (ANOVA) was used for more than two cluster comparisons. Tukey HSD multiple comparison test was used to determine the source of significant differences as a result of ANOVA. The Pearson Product Moment Correlation Coefficient was used to determine whether there was a significant relationship between the mean scores of the Physical Activity Attitude Scale and Antisocial Behavior Scale sub-dimensions of the participants who participated in the study. Within the scope of this study, the scale reliability coefficient was calculated as .77. The significance level was taken as 0.05. As a result of the analysis, no significant difference was found between the physical activity attitudes of secondary school students and family income level and mother's working status ($p>0.05$), while a significant difference was found between gender, grade level, mother's education level and father's education level variables ($p<0.05$). While no significant difference was observed between antisocial behaviors and family income level ($p>0.05$), a significant difference was found between other demographic variables ($p<0.05$). In addition, while no significant difference was found between the self-confidence sub-dimension of the Physical Activity

Attitude Scale and the inappropriate behavior sub-dimension of the Antisocial Behavior Scale ($p>0.01$), significant differences were found between the other sub-dimensions ($p<0.01$) As a result, it can be said that students' physical activity attitudes affect antisocial behaviors.

Keywords: antisocial behaviors, attitude towards physical activity, secondary school students.

Ortaokul Öğrencilerinin Fiziksel Aktivite Tutumlarının ve Antisosyal Davranışlarının İncelenmesi

Özet

Bu araştırmanın amacı ortaokul öğrencilerinin fiziksel aktivite tutumlarının ve antisosyal davranışlarının incelenmesidir. Çalışmanın araştırma grubunu 2022-2023 Eğitim-Öğretim yılında İstanbul ili Esenyurt ilçesinde Milli Eğitim Bakanlığı'na bağlı üç ortaokulda 5-6-7-8. sınıfta öğrenim gören, yaşları 11 ile 13 arasında değişen, 509 erkek, 537 kız olmak üzere toplam 1046 öğrenci oluşturmaktadır. Veri toplama aracı olarak "Kişisel Bilgi Formu", "Ortaokul Öğrencileri İçin Fiziksel Aktivite Tutum Ölçeği" ve "Ortaokul Öğrencileri İçin Antisosyal Davranış Ölçeği" kullanılmıştır. Verilerin değerlendirilmesinde ve hesaplanmış değerlerin bulunmasında SPSS 25.0 istatistik paket programı kullanılmıştır. Veriler ortalama ve standart sapmalar verilerek özetlenmiştir. Verilerin normal dağılım gösterip göstermediği Basıklık ve Çarpıklık (Kurtosis - Skewness) kat sayıları aralığı ile kontrol edilmiştir ve verilerin normal dağıldığı tespit edilmiştir. Veriler normal dağılım gösterdiğinden dolayı ikili küme karşılaştırmaları için bağımsız grup t testi, ikiden fazla küme karşılaştırmaları için Tek Yönlü Varyans Analizi (ANOVA) kullanılmıştır. ANOVA sonucu anlamlı farklılıkların kaynağını belirlemek üzere Tukey HSD çoklu karşılaştırma testi kullanılmıştır. Araştırmaya katılan katılımcıların Fiziksel Aktivite Tutum Ölçeği ve Antisosyal Davranış Ölçeği alt boyutlarının puan ortalamaları arasında anlamlı bir ilişki olup olmadığına, Pearson Momentler Çarpım Korelasyon Katsayısından faydalanılarak bakılmıştır. Bu çalışma kapsamında ölçek güvenirlik katsayısı .77 olarak hesaplanmıştır. Araştırmada anlamlılık düzeyi 0.05 olarak alınmıştır. Yapılan analizler sonucunda ortaokul öğrencilerinin fiziksel aktivite tutumları ile aile gelir seviyesi ve anne çalışma durumu arasında anlamlı bir farklılık bulunmazken ($p>0,05$), cinsiyet, sınıf düzeyi, anne öğrenim düzeyi ve baba öğrenim düzeyi değişkenleri arasında anlamlı farklılık tespit edilmiştir ($p<0,05$). Antisosyal davranışlarla aile gelir seviyesi arasında anlamlı bir farklılık gözlenmemişken ($p>0,05$), diğer demografik değişkenler arasında anlamlı farklılık bulunmuştur ($p<0,05$). Ayrıca Fiziksel Aktivite Tutum Ölçeğinin özgüven alt boyutu ile Antisosyal Davranış Ölçeğinin uygun olmayan davranış alt boyutu arasında anlamlı farklılık saptanmazken ($p>0,01$), diğer alt boyutlar arasında anlamlı farklılıklar tespit edilmiştir ($p<0,01$) Sonuç olarak, öğrencilerin fiziksel aktivite tutumlarının antisosyal davranışları etkilediği söylenebilir.

Anahtar Kelimeler: antisosyal davranışlar, fiziksel aktiviteye yönelik tutum, ortaokul öğrencileri.

INTRODUCTION

The human body needs to move constantly due to its genetic structure. From the beginning of humanity to this time, people have been in constant motion and have had to use muscle power to meet their needs (63). We can define physical activity as activities that occur with energy consumption by using our muscles and joints in our daily lives, increase heart and respiratory rate and result in different degrees of fatigue (51). Physical activity contributes to people to be in a state of complete physical, mental and mental well-being and to live a quality and long life (22). People's physical activities contribute to them physically and psychologically in every period of their lives (15). In cases where mobility, which is a basic necessity of human genetics and life, is not given enough importance, mental, physical and psychological disorders may occur (24). We can call these psychological and mental behavioral disorders antisocial behaviors. In the most general sense, antisocial behaviors can be defined as actions that violate socially determined behavioral patterns, harm others, violate the rules and rights of others, and damage social norms (37,16). Many factors such as gender, grade level, mother's education level, father's education level, family socioeconomic level, number of siblings, antisocial behavior of one or both parents, and long-term violent computer games can affect antisocial behavior (6,35). The impact value of each factor on antisocial behaviors may vary depending on the life stages of the individual (32). For example, while family influence is more important for individuals in childhood, peer influence will become more important for individuals in adolescence (44). During adolescence, antisocial behaviors may appear in various forms. The most

common antisocial behaviors in this period are aggression, violent behavior and bullying (58). According to Morrison et al (45), individual risk factors include academic failure, difficulty in adapting to school and having developmental difficulties. While negative parental model is included in familial risk factors, low socioeconomic status is a social risk factor. Finally, school-related risk factors can be listed as teacher attitudes, low student participation and insufficient social activities. Considering these situations, it is stated with some study findings that physical activity has a positive effect on mental state, emotional management and coping with stress (7,9). Therefore, for the development of a healthy individual, the continuity of physical activity should be ensured. In this way, children and young people can be successful in overcoming stress (47,46). From this point of view, the aim of this study is to examine the physical activity attitudes and antisocial behaviors of secondary school students.

METHOD

Working Group

The population of the study consisted of secondary school students attending public schools affiliated to the Directorates of National Education in the central districts of Istanbul in the 2022-2023 academic year. The sample of the study consisted of a total of 1046 students, 537 girls and 509 boys, aged between 11 and 13, studying in the 5th, 6th, 7th, and 8th grades in three secondary schools affiliated to the Ministry of National Education in Esenyurt district of Istanbul province.

Data Collection Tools

In the process of collecting the information in this study, the necessary permissions were obtained from the Istanbul Provincial Directorate of National Education, and then the participants were asked to fill out the personal information form prepared by the researcher and the informed consent form. In addition, a report was obtained from the Selçuk University Faculty of Sports Sciences Non-Interventional Clinical Research Ethics Committee for the study. In this study, the "Personal Information Form" created by the researcher, "Physical Activity Attitude Scale for Secondary School Students" (61) and "Antisocial Behavior Scale for Secondary School Students" (53) were used.

Personal Information Form

This form included questions about the participants' gender, grade level, perception of family income level, parents' education level, number of siblings and whether they had their own rooms.

Physical Activity Attitude Scale for Secondary School Students

This scale is a 5-point Likert-type scale consisting of 25 items. This scale consists of 5 factors: love, willingness, benefit, socialization and self-confidence, and according to the total score of the answers given to the items, a high score from a sub-dimension indicates a high attitude, while a low score indicates a low attitude (61).

Antisocial Behavior Scale for Secondary School Students

The scale consists of 3 sub-dimensions: violence, appropriate behavior structure and inappropriate behavior structure. Scores that can be obtained from the total scale vary between 13-39. The higher the score obtained, the higher the level of antisocial behavior of the student (53).

Data Analysis

In this study, SPSS 25.0 statistical package program was used to evaluate the data and to find the calculated values. The data were summarized by giving mean and standard deviations. Whether the data were normally distributed or not was checked with the range of Kurtosis and Skewness coefficients, and since the range did not exceed +1.5 and -1.5, it was determined that the data were normally distributed (52). Since the data were normally distributed, independent group t-test was used for pairwise cluster comparisons and One-Way Analysis of Variance (ANOVA) was used for more than two cluster comparisons. Tukey HSD multiple comparison test was used to determine the source of significant

differences as a result of ANOVA. The Pearson Product Moment Correlation Coefficient was used to determine whether there was a significant correlation between the mean scores of the Physical Activity Attitude Scale and Antisocial Behavior Scale sub-dimensions. Within the scope of this study, the scale reliability coefficient was calculated as .77. The significance level was accepted as 0.05 in the study.

FINDINGS

The distribution of personal information of the students participating in the study is given in Table 1.

Table 1. Distribution of personal information of the students who participated in the study.

Variables		f	%
Gender	Female	537	51,3
	Male	509	48,7
Class Level	Grade 5	180	17,2
	Grade 6	180	17,2
	Grade 7	387	37,0
	Grade 8	299	28,6
Income Status	Medium and Low	618	59,1
	Good and High	428	40,9
Mother's Education Status	Primary School	511	48,9
	Middle School	282	27,0
	High School and Above	253	24,2
Father's Education Status	Primary School	345	33,0
	Middle School	352	33,7
	High School and Above	349	33,4
Mother's Employment Status	Not working	748	71,5
	Working	298	28,5
Number of Siblings	1	216	20,7
	2	266	25,4
	3	290	27,7
	4 and above	274	26,2
Room Availability	There is	534	51,1
	No	512	48,9
Total		1046	100

Table 2. t test results of the mean scores of the sub-dimensions of the physical activity attitude scale according to the gender variable of the students participating in the study.

	Gender	N	X	SS	t	p
Love	Female	537	1,86	0,71	2,61	0,01*
	Male	509	1,99	0,86		
Willingness	Female	537	2,69	0,54	0,34	0,73
	Male	509	2,7	0,66		
Benefit	Female	537	3,45	0,84	1,24	0,22
	Male	509	3,52	0,92		
Socialization	Female	537	3,71	0,87	1,28	0,21
	Male	509	3,64	1,03		
Self-confidence	Female	537	3,49	0,87	1,4	0,16
	Male	509	3,57	0,95		

*P<0,05.

As a result of the examination of the students participating in the study according to the gender variable, no statistically significant difference was found in the willingness, benefit, socialization and self-confidence sub-dimensions of the physical activity attitude scale ($p>0.05$), while a significant difference was found in favor of male students in the love sub-dimension ($p<0.05$).

Table 3. ANOVA and Tukey test results of the mean scores of the sub-dimensions of the physical activity attitude scale according to the grade level variable of the students participating in the study.

	Classroom	N	X	Ss	F	p	Tukey
Love	A	5	180	1,80	2,41	0,07	
	B	6	180	1,98			
	C	7	387	1,90			
	D	8	299	1,99			
Willingness	A	5	180	2,71	5,17	0,00*	C<D
	B	6	180	2,69			
	C	7	387	2,61			
	D	8	299	2,79			
Benefit	A	5	180	3,64	3,92	0,01*	D<A
	B	6	180	3,5			
	C	7	387	3,5			
	D	8	299	3,36			
Socialization	A	5	180	3,79	2,94	0,03*	D<A
	B	6	180	3,66			
	C	7	387	3,73			
	D	8	299	3,55			
Self-confidence	A	5	180	3,65	2,77	0,04*	D<A
	B	6	180	3,45			
	C	7	387	3,57			
	D	8	299	3,44			

*P<0,05.

As a result of the examination of the students participating in the study according to the class variable, while there was no statistically significant difference in the love sub-dimension of the physical activity attitude scale ($p>0.05$), a statistically significant difference was found between the 7th and 8th grade participants in the willingness sub-dimension in favor of the 8th grade participants ($p<0.05$). In the sub-dimensions of utility, socialization and self-confidence, a statistically significant difference was observed only between the 5th and 8th grade students in favor of the 5th grade participants ($p<0.05$).

Table 4. t test results of the mean scores of the sub-dimensions of the physical activity attitude scale according to the family income level variable of the students participating in the study.

	Family Income Level	N	X	Ss	t	P
Love	Medium and Low	618	1,90	0,74	0,91	0,38
	Good and High	428	1,95	0,86		
Willingness	Medium and Low	618	2,69	0,61	0,27	0,79
	Good and High	428	2,70	0,59		
Benefit	Medium and Low	618	3,45	0,87	1,51	0,13
	Good and High	428	3,54	0,90		
Socialization	Medium and Low	618	3,70	0,94	0,72	0,47
	Good and High	428	3,65	0,97		
Self-confidence	Medium and Low	618	3,53	0,89	0,17	0,86
	Good and High	428	3,52	0,94		

As a result of the examination of the students participating in the study according to the income level variable, there was no statistically significant difference in the sub-dimensions of the physical activity attitude scale ($p > 0.05$).

Table 5. ANOVA and tukey test results of the mean scores of the sub-dimensions of the physical activity attitude scale according to the mother's education level variable of the students participating in the study.

	Mother's Level of Education	N	X	Ss	F	P	Tukey
Love	A Primary School	511	1,96	0,77	3,78	0,02*	C<A C<B
	B Middle School	282	1,97	0,79			
	C High School and Above	253	1,80	0,81			
Willingness	A Primary School	511	2,71	0,61	0,61	0,54	
	B Middle School	282	2,68	0,62			
	C High School and Above	253	2,67	0,57			
Benefit	A Primary School	511	3,48	0,85	1,29	0,28	
	B Middle School	282	3,44	0,87			
	C High School and Above	253	3,56	0,96			
Socialization	A Primary School	511	3,72	0,96	2,04	0,13	
	B Middle School	282	3,58	0,92			
	C High School and Above	253	3,70	0,97			
Self-confidence	A Primary School	511	3,52	0,88	1,50	0,22	
	B Middle School	282	3,47	0,89			
	C High School and Above	253	3,60	0,98			

*P<0,05.

As a result of the examination of the students participating in the study according to the mother's education level variable, while there was no statistically significant difference in the willingness, benefit, socialization and self-confidence sub-dimensions of the physical activity attitude scale ($p > 0.05$), a statistically significant level difference was found in favor of the participants whose education level was high school and above and the participants whose education level was primary and secondary school level in the love sub-dimension ($p < 0.05$).

Table 6. ANOVA and tukey test results of the mean scores of the sub-dimensions of the physical activity attitude scale according to the father's education level variable of the students participating in the study.

	Father's Level of Education	N	X	SS	F	p	Tukey
Love	A Primary School	345	1,91	0,75	2,20	0,11	
	B Middle School	352	1,99	0,83			
	C High School and Above	349	1,87	0,78			
Willingness	A Primary School	345	2,72	0,62	4,02	0,02*	C<B
	B Middle School	352	2,74	0,64			
	C High School and Above	349	2,62	0,53			
Benefit	A Primary School	345	3,44	0,86	0,76	0,47	
	B Middle School	352	3,50	0,9			
	C High School and Above	349	3,52	0,89			
Socialization	A Primary School	345	3,66	0,97	0,23	0,79	
	B Middle School	352	3,67	0,95			
	C High School and Above	349	3,71	0,94			
Self-confidence	A Primary School	345	3,51	0,87	1,16	0,32	
	B Middle School	352	3,58	0,95			
	C High School and Above	349	3,48	0,89			

P<0,05.

As a result of the examination of the students participating in the study according to the father's education level variable, while there was no statistically significant difference in the sub-dimensions of love, benefit, socialization and self-confidence from the sub-dimensions of the physical activity attitude scale ($p>0.05$), a statistically significant difference was found in favor of the participants with an education level of high school and above and the participants with an education level of secondary school in the willingness sub-dimension ($p<0.05$).

Table 7. t test results of the mean scores of the sub-dimensions of the physical activity attitude scale according to the working status of the mother of the students participating in the study.

	Mother's Employment Status	N	X	SS	t	p
Love	Not working	748	1,92	0,77	0,01	0,99
	Working	298	1,92	0,83		
Willingness	Not working	748	2,68	0,58	0,71	0,50
	Working	298	2,71	0,65		
Benefit	Not working	748	3,49	0,87	0,04	0,97
	Working	298	3,49	0,93		
Socialization	Not working	748	3,70	0,94	1,08	0,28
	Working	298	3,63	0,98		
Self-confidence	Not working	748	3,52	0,88	0,23	0,83
	Working	298	3,54	0,97		

As a result of the examination of the students participating in the study according to the working status of their mothers, there was no statistically significant difference in the sub-dimensions of the physical activity attitude scale ($p>0.05$).

Table 8. t test results of the mean scores of the antisocial behavior scale sub-dimensions according to the gender variable of the students participating in the study.

	Gender	N	X	Ss	t	P
Violence	Female	537	1,74	0,38	0,27	0,79
	Male	509	1,74	0,42		
Appropriate Behavior	Female	537	1,45	0,46	2,64	0,01*
	Male	509	1,53	0,49		
Inappropriate Behavior	Female	537	2,73	0,38	5,04	0,00*
	Male	509	2,60	0,44		

P<0,05.

As a result of the examination of the students participating in the study according to the gender variable, no statistically significant difference was observed in the violence sub-dimension of the antisocial behavior scale ($p>0.05$), while a statistical difference was found in favor of male students in the appropriate behavior sub-dimension ($p<0.05$). In the sub-dimension of inappropriate behavior, a statistical difference was observed in favor of female students ($p<0.05$).

Table 9. ANOVA and tukey test results of the mean scores of the antisocial behavior scale sub-dimensions according to the grade level variable of the students participating in the study.

	Classroom	N	X	Ss	F	P	Tukey
Violence	A	5	180	1,72	0,34	0,79	
	B	6	180	1,74			
	C	7	387	1,75			
	D	8	299	1,74			
Appropriate Behavior	A	5	180	1,38	4,93	0,00*	A<C
	B	6	180	1,50			
	C	7	387	1,54			
	D	8	299	1,48			
Inappropriate Behavior	A	5	180	2,83	12,46	0,00*	B<A
	B	6	180	2,68			C<A
	C	7	387	2,60			D<A
	D	8	299	2,65			

P<0,05.

As a result of the examination of the students who participated in the study according to the class variable, while no statistically significant difference was found in the violence sub-dimension of the antisocial behavior scale sub-dimensions ($p>0.05$), a statistically significant difference was found between the 5th grade and 7th grade participants in the appropriate behavior sub-dimension in favor of the 7th grade participants ($p<0.05$). In the sub-dimension of inappropriate behavior, it was determined that there was a statistically significant difference in the mean scores between the 5th grade and all other grade level students in favor of the 5th grade participants ($p<0.05$).

Table 10. t test results of the mean scores of the antisocial behavior scale sub-dimensions according to the family income level variable of the students participating in the study.

	Family Income Level	N	X	Ss	t	P
Violence	Medium and Low	618	1,72	0,37	1,87	0,07
	Good and High	428	1,77	0,43		
Appropriate Behavior	Medium and Low	618	1,50	0,47	0,88	0,38
	Good and High	428	1,48	0,48		
Inappropriate Behavior	Medium and Low	618	2,67	0,42	0,48	0,63
	Good and High	428	2,68	0,41		

As a result of the examination of the students participating in the study according to the income level variable, there was no statistically significant difference in the sub-dimensions of the antisocial behavior scale ($p>0.05$).

Table 11. ANOVA and tukey test results of the mean scores of the antisocial behavior scale sub-dimensions according to the mother's education level variable of the students participating in the study.

	Mother's Level of Education	N	X	Ss	F	P	Tukey
Violence	A Primary School	511	1,75	0,38	1,49	0,23	
	B Middle School	282	1,76	0,43			
	C High School and Above	253	1,70	0,38			
Appropriate Behavior	A Primary School	511	1,50	0,48	6,11	0,00*	C<A C<B
	B Middle School	282	1,55	0,49			
	C High School and Above	253	1,41	0,44			
Inappropriate Behavior	A Primary School	511	2,67	0,41	1,50	0,23	
	B Middle School	282	2,64	0,42			
	C High School and Above	253	2,70	0,41			

P<0,05.

As a result of the examination of the students who participated in the study according to the mother's education level variable, it was seen that there was no statistically significant difference in the sub-dimensions of violence and inappropriate behavior from the sub-dimensions of the antisocial behavior scale ($p>0.05$), while in the appropriate behavior sub-dimension, it was seen that the mean scores differed statistically significantly in favor of the participants whose education level was high school and above and the participants whose education level was primary and secondary school ($p<0.05$).

Table 12. ANOVA and tukey test results of the mean scores of the antisocial behavior scale sub-dimensions according to the father's education level variable of the students participating in the study.

	Father's Level of Education	N	X	Ss	F	P	Tukey
Violence	A Primary School	345	1,76	0,39	0,83	0,44	
	B Middle School	352	1,72	0,42			
	C High School and Above	349	1,75	0,38			
Appropriate Behavior	A Primary School	345	1,51	0,48	2,41	0,09	
	B Middle School	352	1,52	0,49			
	C High School and Above	349	1,45	0,45			
Inappropriate Behavior	A Primary School	345	2,68	0,41	6,89	0,00*	B<C
	B Middle School	352	2,61	0,44			
	C High School and Above	349	2,72	0,39			

P<0,05.

As a result of the examination of the students who participated in the study according to the father's education level variable, no statistically significant difference was found in the sub-dimensions of violence and appropriate behavior sub-dimensions of the antisocial behavior scale ($p>0.05$), while in the sub-dimension of inappropriate behavior, it was found that there was a statistically significant difference in the mean scores between the participants whose education level was at the secondary school level and the participants whose education level was high school and above in favor of the participants whose education level was high school and above ($p<0.05$).

Table 13. t test results of the mean scores of the antisocial behavior scale sub-dimensions according to the working status of the mother of the students participating in the study.

	Mother's Employment Status	N	X	Ss	t	P
Violence	Not working	748	1,74	0,39	0,15	0,88
	Working	298	1,74	0,42		
Appropriate Behavior	Not working	748	1,49	0,48	0,32	0,75
	Working	298	1,48	0,46		
Inappropriate Behavior	Not working	748	2,69	0,40	2,23	0,03*
	Working	298	2,63	0,44		

P<0,05.

As a result of the examination of the students participating in the study according to the working status of their mothers, no statistically significant difference was found in the sub-dimensions of violence and appropriate behavior from the sub-dimensions of the antisocial behavior scale ($p>0.05$), while in the sub-dimension of inappropriate behavior, it was determined that the mean scores differed statistically significantly in favor of non-working mothers ($p<0.05$).

Table 14. Pearson product-moment correlation coefficient results to determine the relationship between the mean scores of the physical activity attitude scale and antisocial behavior scale sub-dimensions of the students participating in the study.

Physical Activity Attitude Scale		Love	Willingness	Benefit	Socialization	Self-confidence
Antisocial Behavior Scale	Violence	r 0,15**	0,08**	-0,08**	-0,09**	-0,12**
		p 0,00	0,01	0,01	0,00	0,00
	Appropriate Behavior	r 0,21**	0,07**	-0,12**	-0,14**	-0,14**
		p 0,00	0,02	0,00	0,00	0,00
	Inappropriate Behavior	r -0,18**	-0,12**	0,17**	0,18**	-0,00
		p 0,00	0,00	0,00	0,00	0,99
TOTAL	N	1046	1046	1046	1046	1046

**** P<0,01**

In the results of Pearson Product Moment Correlation Coefficient, which was performed to determine the relationship between the mean scores of the Physical Activity Attitude Scale and Antisocial Behavior Scale sub-dimensions of the students who participated in the study, a statistically significant relationship was found between the violence and appropriate behavior sub-dimension of the Antisocial Behavior Scale and the love and willingness sub-dimension of the Physical Activity Attitude Scale, and a statistically significant relationship was found in the negative direction in the benefit, socialization and self-confidence sub-dimension ($p<0.01$). While there was a statistically significant relationship between the inappropriate behavior sub-dimension of the Antisocial Behavior Scale and the love and willingness sub-dimension of the Physical Activity Attitude Scale ($p<0.01$), there was no statistically significant difference in the self-confidence sub-dimension ($p>0.01$).

DISCUSSION AND CONCLUSION

In the study conducted to examine the physical activity attitudes and antisocial behaviors of secondary school students, it was concluded that both physical activity attitudes and antisocial behaviors were affected by some demographic factors. In addition, while there was no significant difference between the self-confidence sub-dimension of the physical activity attitude scale and the inappropriate behavior sub-dimension of the antisocial behavior scale, significant differences were found between the other sub-dimensions.

Research has shown that children with positive attitudes towards physical activity develop into physically active and healthy adults. Acquisition, change and modification in attitudes are the result of various experiences at various stages of life, especially adolescence (49). In a study conducted on secondary school students, it was reported that there was a significant difference between the levels of attitudes towards physical activity and the gender variable, while there was no significant difference between the class level, mother and father education levels (10). In a different study, middle school students' attitudes towards physical education course differed significantly according to grades, but did not differ according to gender (36). Türksoy and Özlü (54) stated that age, gender, sporting status and grade level did not cause a difference in the attitudes of secondary school students towards physical education course. Yetiş et al. (59), on the other hand, concluded that gender, class factor, school type, mother/father occupation were effective in students' attitudes towards physical education and sports course. The researchers stated that male students studying in the tenth grade, studying at a sports high school, whose father's occupation was self-employment, and whose mother's occupation was civil servant had higher attitudes towards physical education and sports course. In a meta-analysis study, it was reported that variables such as gender, research region, research type, grade level, research year and sample size were not directive on secondary school students' attitudes towards physical education and sports course (14). In elementary school students, factors such as physical education teacher, relationships between friends, doing sports and having a family member who does sports affect the attitude towards physical education course, while the economic income level of the family, gender and age factors did not affect student attitudes (41). When the attitudes of secondary school students towards physical education course were examined, it was observed that there were significant differences according to the variables of gender, age, licensed sports and regular sports (20). In a study conducted on high school students, it was stated that attitudes towards physical education course were not affected by class, age and gender variables (2,29). In contrast to these studies, in a different study, independent variables such as gender, sports, place of residence and grade level create a significant difference on high school students' attitudes towards physical activity (1). In a study examining the attitudes of secondary school students towards physical education and sports course according to some variables, it was stated that the attitudes of the family towards sports and the status of doing sports, economic levels and socio-economic levels of the region where the schools are located have a positive effect on students' attitudes towards physical education course (33). In the current study, significant differences were found between the love sub-dimension and gender and mother's education level; between the willingness sub-dimension and father's education level; and between the class level and willingness, benefit, socialization and self-confidence sub-dimensions. In addition, no significant difference was observed between the income level and mother's working status variables and the sub-dimensions of the physical activity attitude scale. When the literature was examined, it was determined that students' physical activity attitudes were affected differently by demographic factors. It can be said that this situation is caused by socio-cultural and socio-economic structure variables among students.

It was reported that antisocial behaviors differed significantly according to gender variable and male students showed higher levels of antisocial behavior (43,31, 28,4,13,23,6,48,25,34,26,17,50,5,38). Unlike these research findings, there are also studies in which antisocial behaviors are not affected by gender (42,12,3,57,11,53). In the current study, a significant difference was found between gender and antisocial behavior scale sub-dimensions of appropriate behavior and inappropriate behavior in secondary school students. It was determined that female students had more inappropriate behavior scores than male students.

It is said that antisocial behaviors increase as the grade level of adolescents increases (56,23,35). Similarly, it was stated that 8th grade students were more prone to violence and had lower levels of school engagement than 5th, 6th and 7th grade students (50). In a different study, it was found that grade level did not significantly affect vandalistic behaviors (55). In contrast to these studies, in the current study, it was observed that the

appropriate behavior and inappropriate behavior sub-dimensions of the antisocial behavior scale differed according to the grade levels. It can be said that as the grade level increases, appropriate behavior scores increase.

Studies have shown that as the perceived socioeconomic level of secondary school students decreases, their susceptibility to antisocial behaviors increases (8,18, 21,40,53). Low socio-economic status may lead to a decrease in the family's interest in the child, which in turn may cause children to be prone to problematic behaviors (27). In contrast to these studies, in a study conducted on secondary school students studying in Adiyaman province, it was reported that children from families with low monthly income exhibited less vandalistic behaviors compared to other children (55). In the current study, it was observed that students' antisocial behavior scale sub-dimensions were not affected by the income level variable.

It was found that adolescents' perceptions of democratic attitudes increased as the level of father and mother education increased, and adolescents whose parents had democratic behavior had a low tendency to aggression (60). Similarly, in a study conducted on high school students, it was stated that as the education level of parents increased, aggression levels decreased (62). While the father's education level contributed significantly to the increase in aggression, it was determined that the effect of the mother's education level on aggression was not significant (39). Contrary to these studies, there was no significant difference between the mean scores of students' trait anger and aggression according to their parents' education level (30). In the current study, a significant difference was observed between father's education level and inappropriate behavior sub-dimension, and between mother's education level and appropriate behavior sub-dimension.

The research has some limitations. The fact that the scale was tested on a limited sample group, the limitations arising from the fact that the human element is at the center of the research conducted in the field of social sciences and the limitations related to the sensitivity of the statistical methods used in this field are also in question for this research.

While no significant difference was found between the self-confidence sub-dimension of the physical activity attitude scale and the inappropriate behavior sub-dimension of the antisocial behavior scale, significant differences were found between the other sub-dimensions. As a result, it can be said that students' physical activity attitudes affect antisocial behaviors.

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