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Corresponding Author	Kazım Nas [veyseltemel@kmu.edu.tr] https://orcid.org/0000-0001-8771-9568

THE RELATIONSHIP BETWEEN SPORTS HIGH SCHOOL STUDENTS 'ANGER LEVELS AND PSYCHOLOGICAL HARDINESS LEVELSIN TERMS OF VARIOUS VARIABLES

Kazım NAS[1]

[1]Karamanoglu Mehmetbey University, Sports Science Faculty, Turkey.

Abstract

The purpose of the study is to look into the relationship between the anger levels and psychological hardiness levels of the students studying at Sports High School. The model of the study is descriptive, one of the quantitative research methods. The research group consists of 211 adolescent high school students studying at the Sports High School in Istanbul. The Adolescent Anger Rating Scale developed by McKinnie-Burney (2001) and "Psychological Resilience Scale" developed by Bulut et al.(2012) were used. Skewness-Kurtosis normality distribution test was used. In the analysis of the data, Pearson Moment Correlation Analysis was performed to determine the relationship with the descriptive statistics and MANOVA analysis was used. It was concluded that adolescents' reactive anger levels from the sub-dimensions and the general anger levels were lowand their anger control levels were mid-level. In terms of psychological hardiness levels of adolescents, it was concluded that family support, peer support, adaptation support and empathy levels were low, while the levels of struggle willingness and school support were mid-level. According to the results of multivariate analysis, no statistically significant interaction was found between independent variables (p> .05). According to the results of the correlation analysis, it was concluded that there was a statistically significant positive relationship at the level of 0.000>0.05 between the scores obtained from the family support dimension, which is one of the sub-dimensions of the psychological hardiness scale, and the scores of the adolescent anger scale test.According to the results of the correlation analysis, it was concluded that there was a statistically significant positive relationship at the level of 0.000>.05 between the scores obtained from the family support dimension, one of the sub-dimensions of the psychological hardiness scale, and the scores of the adolescent anger scale test.

Keywords: Anger, Psychological Hardiness, Sports, Adolescent

INTRODUCTION

Adolescence is the period that begins with the end of childhood and passes until physiologically adulthood (Koc, 2004). Since the experiences of effective coping in adolescents are still insufficient, the adolescent may have some difficulties in self-management, and these feelings can negatively affect his / her whole life. On the other hand, adolescents may often have to suppress feelings of unwelcome fear, anger and jealousy in order to behave as desired by the social environment (Cuceloglu, 1998; Yavuzer 2003). As in all age groups, one of the most important sensational statements displayed by adolescent is anger. If anger is not stated in good ways, it can cause physical, psychological and social problems in the adolescent (Starner and Peters 2004).Angercan change from mild discomfort to severe anger and rage. However, when properly expressed, it is an extremely healthy and natural feeling. When anger goes out of control and becomes destructive, it causes problems in school-work life, personal relationships and general quality of life. Anger is at the root of many personal and social problems (Kısac, 1999; Wilde, 2006). Although anger is mostly known as a form of aggression and hostility, it is argued that anger does not always lead to aggression and hostility. However, the negative evaluation of anger is usually due to the style of expression. Because many people experience various problems due to anger expression. When anger is shown as open, it can be evaluated negatively by people,

and this can lead to negative self-concept, low self-esteem, interpersonal and intra-family communication conflicts, verbal and physical attacks, and incompatibilities regarding work / school life. Anger can be caused by both internal and external causes (Erkek, Ozgur&Gumus, 2006). Internal Causes; There are some basic emotions at the source of the inner causes that cause anger. External Causes; Injustice, physical injury and injuries are harassment, disappointment, being attacked and threats (Kokdemır, 2004; Ustun, Yavuzaslan, 1995).Today's adolescents, like all individuals, may encounter life events with different difficulties. There may be different problems such as natural disasters that negatively affect people, loss of parents or a loved one, separation of parents, change of school or address. While some adolescents have difficulty in the face of these events, some of them can overcome this situation without being affected or they can adapt to the situation and recover faster. The most important factor in the adaptation process is psychological resilience, a concept that requires effort, time, and continuity (Masten, 2001).

METHODS

In this chapter; Information was given on the type of research, research group, data collection, data tools and processes in the data analysis process. This is the investigation of the relationship between anger and psychological hardiness levels of the students studying in the Sports High School in Istanbul for the 2019-2020 academic year. Survey method, one of the descriptive research methods, was used in the research. The screening method is used to determine past or current situations (Buyukozturk et al., 2015).

Research Group

Research group consists of 139 Male (66%) and 72 Female (34%) and a total of 211 studentsfrom Sports High School in the 2019-2020 academic year in Istanbul.

Data Collection

Firstly, the available information regarding the aim of the research was given systematically by scanning the literature. Thus, a theoretical framework was formed on the subject. Secondly, the "Adolescent Anger Rating Scale" developed by McKinnie-Burney (2001) and "Psychological Hardiness Scale" developed by Bulut, Dogan and Altundag (2012) and an information form were used to collect personal information of the participants. The scales of the research were applied on a voluntary basis, by hand-to-face interviews.

Data Collection Tools

The data collection tool required to achieve the determined goals related to the study is given below:

Personal Information Form

In order to collect information about the personal characteristics of the participants and to create the independent variables of the study, a four-item information form (Gender, Age, Father's Education, Howdo you spent your leisure time?) was prepared by the researcher.

Adolescent Anger Rating Scale (AARS)

Adolescent Anger Rating Scale (AARS) was developed in the United States in 2001, by Dr. DeAnna McKinnie-Burney for adolescents between 11 and 19 years old.A four-point Likert-type AARS-Adolescent Anger Rating Scale consisting of 41 items was used in the Turkish version studies as in the original.Four types of anger scores are obtained with the scale: reactive anger, instrumental anger, anger control, and total anger.Re-application was made for the validity and reliability of the 41-item AARS. Internal consistency and test-retest validity were performed in the reliability studies. Cronbach alpha coefficient for 6th and 8th grades (N = 2171) was between (.80) - (. 92); It changes between (.81) and (.94) for the 9th and 12th grades (N = 2013).Test reliability is achieved by applying a tool to the same group at different times (Starner et al., 2004). A correlation coefficient between (.71) and (.74) for subscales and (.79) for the total score was obtained over the AARS scores applied to a group of 175 people with 15 days intervals. Validity studies started with a test of one hundred and one items in the developed question pool. An expert group consisting of eight volunteer members was formed to examine the test items and make a decision. Experts were given a questionnaire consisting of three parts to examine the validity and relativity of AARS. Each expert was asked to describe five behaviors related to instrumental anger and reactive anger, and to develop at least one descriptive behavior for the first two items. A decision was made in line with the responses of 8 experts.

The internal consistency (Cronbach Alpha) reliability coefficients of this study are; .84 for total Anger, .78 for Reactive Anger, .74 for Instrumental Anger, and .72 for Anger Control.

Adolescent Hardiness Scale (AHS)

The scale was developed by Bulut, Dogan, and Altundag (2012) to measure the psychological hardiness levels of adolescents, it consists of 29 items and is scored on a four-point Likert scale (1 = Not Suitable for Me, 4 = Well Suitable for Me). The sub factors of the scale consisting of 6 factors; dimensions of family support, peer support, school support, adaptation, struggle willingness

and empathy explain 56.99% of the total variance. Individuals who score higher on the scale are considered to have higher levels of psychological resilience. The Cronbach Alpha values of the scale were .87 for the whole scale, .89 for the "family support" dimension, .84 for the "peer support" dimension, .81 for the "school support" dimension, .70 for the "adaptation" dimension, and .67 for the "struggle willingless" dimension and .61 for the "empathy" dimension. This study was based on the total score of the scale.

The internal consistency (Cronbach Alpha) reliability coefficients of this study are; .71 for family support, .73 for peer support, .77 for school support, .75 for adaptation support, .70 for struggle willingness and .79 for empathy.

Analysis of Data

During the analysis and evaluation of data; The data were analyzed using SPSS 25.0 for Windows package program, which was prepared in Microsoft Excel 2003 program.Percentage and frequency method were used to determine the distribution of personal information of the participants. Skewness-Kurtosis normality distribution test was used to determine whether the measurements were suitable for normal distribution. According to Tabachnick and Fidell (2013), kurtosis-skewness values should be between +1.5 and -1.5. According to Skewness-Kurtosis technique, general adolescent anger, anger level sub-dimensions (Instrumental Anger, Reactive Anger, Anger Control) and psychological hardiness sub-dimensions (Family support, Peer Support, School Support, Adaptation Support, Struggle and Empathy) all of them showed normal distribution.Descriptive statistics and Multivariate MANOVA analyzes were used in the data analysis. Multivariate MANOVA analysis was preferred for comparing two dependent variables (Adolescent Anger and Psychological Resilience) with more than one sub-dimension and more than one independent variable. Multivariate MANOVA analysis shows whether there is an interaction between independent variables.In addition, it decreases the rate of possible type I error (finding a significant difference when there is no significant difference) (Tabachnick, Fidell, & Ullman, 2007). Finally, Pearson Product Moment Correlation Analysis was used to determine the relationship between Adolescent Anger Scale Scores and Psychological Resilience Scale Sub-Dimension Test Scores.

RESULTS

Personal Characteristics of the Research Group

Data and comments on the demographic characteristics of the adolescents participating in the study are given below.

Table 1. Distribution of the Demographic Characteristics of the Sample Group Participating in the Study

Personal Characteristics of Participants		n	%
Gender	Female	72	34.1
	Male	139	65.9
Age	1. Class	83	39.3
	2. Class	12	5.7
	3. Class	58	27.5
	4. Class	58	27.5
Father Education	Primary School	32	15.2
	Secondary School	60	28.4
	High School	80	37.9
	University	39	18.5
How do you spend your leisure time?	By Participating in Physical Activities	51	24.2
	By Participating in Social Events	37	17.5
	Participating in Cultural Events	19	9.0
	Resting	74	35.1
	Other	30	14.2

According to this distribution, 34.1% of the students participating in the research are women and 65.9% are men. 39.3% of the students are in the first class, 5.7% are in the second class, 27.5% are in the third class and 27.5% are in the fourth class. 15.2% of the participants' fathers are from primary school graduates, 28.4% of them are from secondary school graduates, 37.9% of them are from high school graduates, and 18.5% of them are from university graduates.The percentage of participants who said that they evaluate their leisure time by participating in physical activities is 24.2%, the rate of those who say that they evaluate by participating in social activities is 17.5%, the rate of those who say that they evaluate by participating in cultural activities is 9%, the rate of those who say that they evaluate by resting is 35.1% and others (the touristic trip and etc.) is 14.2%.

Table 2. Descriptive Statistics of Adolescent Anger Scale and Psychological Hardiness Scale Used in the Study

		N	Ort.	Ss	Min.	Max.	Skewness	Kurtosis
Adolescent Anger Scale	**Reactive anger**	211	35.55	9.77	19.00	76.00	.953	1.126
	Anger control	211	29.97	5.99	15.00	52.00	.153	.225
	Instrumental anger	211	11.44	3.76	8.00	32.00	1.851	4.950
	Total anger	211	76.96	13.91	45.00	160.00	1.329	5.465
Psychological Hardiness Scale	**Family support**	211	11.16	4.48	7.00	28.00	1.383	1.903
	Peer support	211	7.86	3.44	5.00	20.00	1.458	2.273
	School support	211	13.20	3.78	5.00	20.00	-.165	-.511
	Adaptation support	211	7.94	2.07	4.00	16.00	.589	1.344
	Struggle willingness	211	12.69	3.24	5.00	20.00	-.232	-.382
	Empathy	211	5.18	1.90	3.00	12.00	.977	1.205

Looking at Table 2, the students' general anger level score averages, anger scale sub-dimension mean scores and psychological resilience scale sub-dimension mean scores were examined. As a result of this examination, it is understood that the general anger averages of the students included in the study are at a low level with Mean = 76.96, the average of reactive anger scores from the sub-dimensions of the anger scale is Mean = 35.55, and their anger control score averages are close to the medium level with Mean = 29.97.Psychological hardiness sub-dimension mean scores of the students were examined. As a result of this examination, the average score of family support from the psychological hardiness sub-dimensions of the students included in the study was Mean = 11.16, the average score for peer support was Mean = 7.86, the mean of adaptation support was Mean = 7.94 and the Empathy mean score was Mean = 5.18. with a mean score of Mean = 12.69 and school support mean score of Mean = 13.20, which is one of the sub-dimensions of the psychological hardiness scale. In addition, according to the Skewness-Kurtosis normality test result of adolescent anger and psychological hardiness scales and sub-dimensions, it is understood that all dimensions are suitable for normal distribution since they are -1.5 and +1.5.

Table 3. Multivariate Manova Analysis Results According To The Gender, Father's Education, And How Time Is Spent

		F	Hypothesis	Eror	p	η^2
Gender	Pillai's Trace	1.487[b]	9.000	165.000	.156	.075
	Wilks' Lambda	1.487[b]	9.000	165.000	.156	.075
	Hotelling's Trace	1.487[b]	9.000	165.000	.156	.075
	Roy's Largest Root	1.487[b]	9.000	165.000	.156	.075
Father Education	Pillai's Trace	1.673	27.000	501.000	.019	.083
	Wilks' Lambda	1.663	27.000	482.527	.021	.083
	Hotelling's Trace	1.651	27.000	491.000	.022	.083
	Roy's Largest Root	2.213[c]	9.000	167.000	.024	.107
How do you spend your leisure time?	Pillai's Trace	1.235	36.000	672.000	.165	.062
	Wilks' Lambda	1.226	36.000	620.069	.174	.062
	Hotelling's Trace	1.216	36.000	654.000	.183	.063
	Roy's Largest Root	2.033[c]	9.000	168.000	.039	.098
Gender* Father Education* How do you spend your leisure time?	Pillai's Trace	1.127	90.000	1557.000	.201	.061
	Wilks' Lambda	1.127	90.000	1129.343	.203	.063
	Hotelling's Trace	1.124	90.000	1469.000	.206	.064
	Roy's Largest Root	3.389[c]	10.000	173.000	.000	.164

According to MANOVA findings, no significant interaction was found between independent variables ($F_{(90, 1129,343)} = 1.13$, $p > .05$). The main effects findings have been studied.

Table 4. Main Effects Table

	Dependent Variables	sd	Mean Square	F	p
Gender	Reactive anger	1	100.190	1.069	.303
	Anger control	1	23.654	.713	.400
	Instrumental anger	1	12.482	.904	.343
	Total anger	1	75.325	.383	.537
	Family support	1	7.567	.424	.516
	Peer support	1	89.253	8.181	.005*
	School support	1	.569	.041	.840
	Adaptation support	1	3.922	.910	.341
	Struggle willingness	1	13.002	1.345	.248
	Empathy	1	26.084	7.034	.009*
Father Education	Reactive anger	3	46.170	.493	.688
	Anger control	3	27.825	.839	.474
	Instrumental anger	3	11.737	.850	.468
	Total anger	3	80.310	.408	.747
	Family support	3	25.035	1.404	.243
	Peer support	3	7.721	.708	.549
	School support	3	59.491	4.266	.006*
	Adaptation support	3	6.076	1.410	.242
	Struggle willingness	3	20.321	2.102	.102
	Empathy	3	2.462	.664	.575
How do you spend your leisure time?	Reactive anger	4	117.821	1.258	.289
	Anger control	4	34.037	1.026	.395
	Instrumental anger	4	17.152	1.243	.295
	Total anger	4	225.984	1.149	.335
	Family support	4	34.387	1.928	.108
	Peer support	4	7.188	.659	.621
	School support	4	11.012	.790	.533
	Adaptation support	4	2.668	.619	.650
	Struggle willingness	4	6.051	.626	.645
	Empathy	4	3.316	.894	.469
Error	Reactive anger	173	93.691		
	Anger control	173	33.172		
	Instrumental anger	173	13.800		
	Total anger	173	196.672		
	Family support	173	17.836		
	Peer support	173	10.909		
	School support	173	13.946		
	Adaptation support	173	4.310		
	Struggle willingness	173	9.666		
	Empathy	173	3.708		

Total	Reactive anger	211
	Anger control	211
	Instrumental anger	211
	Total anger	211
	Family support	211
	Peer support	211
	School support	211
	Adaptation support	211
	Struggle willingness	211
	Empathy	211

*p<0.05

When Table 4 was examined, it was found that a statistically significant difference was effective between the gender variable, one of the independent variables, and the peer support dimension variable (F (1.173) = 89.25, p <.05) from the sub-dimensions of the psychological hardiness scale. Bonferonni follow-up test was conducted to determine the source of significant effectiveness in the peer support dimension, one of the psychological hardiness from sub-dimensions. When the Bonferonni test was examined, it was determined that male students received more peer support than female students in the peer support dimension (p <.05). A statistically significant difference was found to be effective between the gender variable and the empathy dimension variable (F (1.173) = 26.08, p <.05), one of the sub-dimensions of the psychological hardiness scale. Bonferonni follow-up test was conducted to determine the origin of the meaningful effectiveness in the empathy dimension, one of the psychological hardiness from sub-dimensions. When the Bonferonni test was examined, it was determined that male students were more empathetic than female students in the peer support dimension (p <.05). A statistically significant difference was found to be effective between the father education variable and the sub-dimensions of the psychological hardiness scale, the school support dimension variable (F (3.173) = 59.49, p <.05). Bonferonni follow-up test was conducted to determine the meaningful effectiveness of the school support dimension, which is one of the psychological hardiness from sub-dimensions. When the Bonferonni test was examined, it was determined that students whose fathers were in the primary school graduates received more school support than those who graduated from secondary school and high school (p <.05).

Table 5. Pearson Multiplication Moment Correlation Analysis Results Table to Determine the Relationship Between the Scores Obtained from the Psychological Hardiness Scale Sub-Dimensions and the Adolescent Anger Scale Test Scores

	N	**r**	***p***
Family support	211	.283	.000**
Peer support	211	.249	.000**
School support	211	.002	.973
Adaptation support	211	.094	.172
Struggle willingness	211	.053	.445
Empathy	211	.266	.000**

**. Correlation is significant at the 0.01 level (2-tailed)

From Table 5, as a result of the Pearson Product Moment Correlation analysis conducted to determine the relationship between the scores obtained from the family support dimension, one of the sub-dimensions of the psychological hardiness scale, and the scores of the adolescent anger scale test, there is a statistically significant positive relationship between the scores at the level (r = .283; p> .05), the Pearson Product Moment Correlation analysis, which was conducted to determine the relationship between the scores from the peer support dimension, one of the sub-dimensions of the psychological hardiness scale, and the scores of the adolescent anger scale test, found a statistically significant positive at the level between the scores (p <.05). As a result of the Pearson Product-Moment Correlation

analysis conducted to determine the relationship between the scores obtained from the school support dimension, one of the sub-dimensions of the psychological resilience scale, and the scores of the adolescent anger scale test, it was found that there was a statistically non-positive relationship between the scores at the level (r = .002; p>. 05), as a result of the Pearson Product-Moment Correlation analysis conducted to determine the relationship between the scores obtained from the adjustment support dimension, which is one of the sub-dimensions of the psychological resilience scale, and the scores of the adolescent anger scale test, there is a statistically positive statistically significant relationship at the level (r =. 094; p> .05), as a result of Pearson Product Moment Correlation analysis, which was conducted to determine the relationship between the scores obtained from the struggle willingness dimension, one of the sub-dimensions of the psychological resilience scale, and the scores of the adolescent anger scale test, there was a statistically non-significant positive relationship between the scores at the level (r = .053; p> .05), as a result of the Pearson Product Moment Correlation analysis conducted to determine the relationship between the scores obtained from the empathy dimension, which is one of the sub-dimensions of the psychological resilience scale, and the scores of the adolescent anger scale test, there is a statistically significant positive correlation at the level (r =. 266; p>.05).

DISCUSSION AND CONCLUSION

The results of the Adolescent Anger Scale (EAS) and Psychological Hardiness Scale (PBI) applied to sports high school students and their explanations are presented below.

In general, it was concluded that the general anger averages of the students included in the study were Mean = 76.96, the average reactive anger scores from the sub-dimensions of the anger scale were at a low level with Mean = 35.55, and that their anger control mean score was close to the mid-level, while Mean = 29.97. Considering the reason for these results, it can be said that sport has a positive effect in anger situations as in every field. According to Temel et al. (2018), while the adolescents' low level of reactive anger in total anger and anger sub-dimensions supports the current study, low level instrumental anger and anger control levels do not support the current study.In the study of Starner and Peters (2004), it was found that as the students' level of anger increased, their anger introversion, anger expression and anger control levels increased. It can be concluded that this result does not support this study.Again, Ozmen et al. (2016) concluded in the study that adolescents feel themselves almost moderately angry. In the study of Basic et al. (2017) students participating in sports recreation activities and again, in the study of Temel et al. (2015) to the teachers, in the study of Akpınar et al. (2012) to the school of Physical Education and Sports Students and in the study of Nas et al. (2016) to the footballers in the saloon,it can be said that their studies are in parallel with the current study in terms of their results.

While the average score of family support of the students was with 11.16, the peer support mean score was with 7.86, the adaptation support mean score was with 7.94 and the empathy score was with 5.18at a low level in the sub-dimensions of the scale, it is seen that the mean score of struggle willingness from the sub-dimensions of the psychological hardiness scale is with 12.69 and the mean score for school support is with 3.20at a medium level. When the literature is examined, findings consistent with this finding are seen.As a result of the research conducted by Arastaman (2013), it was found that the perceived support from the family and peers are important predictors of the psychological resilience of high school students.A study (Sun & Hui, 2007) concluded that adolescents have problems when they do not receive support from their families.The high level of social support perceived from family, friends and teachers ensures a high level of psychological resilience (Turan, 2014).The social support perceived by adolescents from teachers, as well as the level of social support perceived by their peers, is also of critical importance.Students who perceived increased teacher support had decreased depressive symptoms and increased self-esteem in connection with this change (Reddy, Rhodes & Mulhall, 2003).

According to the results of the Multiple Variable Analysis (MANOVA), a statistically significant interaction (p>.05) was not detected between the independent variables. Considering the main effects findings as a result of this, it was found that a statistically significant difference was effective between the gender variable and the peer support dimension variable ($F_{(1.173)}$= 89.25, p<.05) from the sub-dimensions of the psychological hardiness scale. Therefore, it was determined that male students received more peer support than female students (p<.05).Again, a statistically significant difference was found to be effective between the gender variable and the empathy dimension variable ($F_{(1.173)}$ =26.08, p<.05), one of the sub-dimensions of the psychological hardiness scale. Accordingly, it was determined that male students were more empathetic than female students (p<.05).

A statistically significant difference was found to be effective between the father education variable and the sub-dimensions of the psychological hardiness scale, the school support dimension variable ($F_{(3.173)}$ =59.49, p<.05). Accordingly, it was determined that students whose fathers were from primary school graduates received more school support than those who graduated from secondary school and high school (p<.05).

It was concluded that no statistically significant difference was determined in other dimensions (p>.05).

According to the result of the correlation analysis, the relationship between adolescent anger and psychological hardiness scale sub-dimensions;

There is a statistically significant positive correlation at the level of p>.05 between the scores obtained from the family support dimension, which is one of the sub-dimensions of the psychological hardiness scale, and the adolescent anger scale test scores (r =.283; p> .05),

It was determined that there is a statistically significant positive relationship at p<.05 level between the scores obtained from the peer support dimension, which is one of the sub-dimensions of the psychological hardiness scale, and the scores of the adolescent anger scale test (r =.249; p<.05).

School support (r=.002; p>.05), adaptation support (r=.094; p>.05), struggle willingness (r =.053; p>.05) are sub-dimensions of the psychological hardiness scale. It has been revealed that there is no a statistically significant positive correlation at the p>.05 level between the scores of the adolescent anger scale test.

It was determined that there is a statistically significant positive correlation at the level (r=.266; p>.05) between the scores of the empathy dimension, one of the sub-dimensions of the psychological resilience scale, and the scores of the adolescent anger scale test.

The fact that there was no study examining the relationship between adolescent anger and psychological resilience levels in the literature review is thought to shed light on future studies. And also, Other researchers can conduct studies on the subject using different sample groups. Because the subject has not been studied less is an area open to improvement.

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