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### **Analysing Of Physical Education And Sports Higher School Students' Aggression Levels**

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#### **Abstract**

The purpose of this research is to analyze aggression levels of physical education and sports school students who have education academically. Survey research model was conducted. Personal information form and Aggression Scale by Can (2002) which was adapted to Turkish form of Aggression Questionnaire Scale which is developed by Buss and Perry (1992) and updated by Buss and Warren (2000) was used as data collection tool. Working group consists of 300 volunteer students. Research results show that amateur participants' aggression score ( $74.05 \pm 15.696$ ) was significantly higher than professional participants' aggression score ( $p < 0.05$ ), participants' aggression scores who do exercise 1 hour per week ( $78.47 \pm 14.493$ ) is significantly higher than participants' aggression scores who do exercise 2 hours, 3 hours and 3+ hours per week ( $p < 0.05$ ), unlicensed sportsmen's aggression scores are significantly higher than licensed sportsmen's aggression scores.

Keywords: Physical Education and Sports Higher School, Student, Aggression Level

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## 1. Introduction

Individual is a part of society that he lives in, so it is expected that individual should have a healthy and social interaction patterns. Particularly, there are certain behavior patterns in interpersonal relation and interaction. These behavior patterns are shyness at one end and aggression at the other end (Erdogdu, 2004).

Aggression events in sports have great importance. Although aggression events is accepted incompatible with sports at first, the person involved these events find reasons for their behaviors. In fact, it is constantly emphasized that sports must be or should be peace, brotherhood and friendship, closes the society each other. It is known that war was paused during the Olympics in the past (Ozbaydar, 1983).

Sports training is an education for creating physical, psychological and social behavior. In such education, the body is a vehicle and the aim is to train personality at all. Sports training is a strong education field that helps individual to grow, develop and having positive changes in behaviors. When we look at the objectives of sports education, it can be stated that sports enhances personal and social behaviors such as self-confidence, self-control, snap decision, cooperation, attention, courage, truth, looking after one's right, discipline and willing to work (Yalcin, 1995).

Nowadays, being aggressive is a problem both in social relations and in sports. When defining sports, it is mentioned that sports often removes aggression and lightens burst of anger (Ersan, 2000). The purpose of this study is to analyze aggression levels of physical education and sports higher school students who study academically. It is important to prevent aggressive behaviors and to determine the impact of sports which is one of the variables related to aggressive behaviors and to take the necessary measures.

## 2. Method

For this study, survey research model was conducted. Survey model is a research approach whose purpose is to identify the situation which is exist (Karasar, 2014). The study was conducted on 200 students studying at Nigde University Physical Education and Sports Higher School and 200 students studying at Aksaray University Physical Education and Sports Higher School, totally on 400 students, in 2014-2015 academic years.

In study, personal information form which was developed by researchers and Aggression Scale by Can (2002) which was adapted to Turkish form of Aggression Questionnaire Scale, which is developed by Buss and Perry (1992) and updated by Buss and Warren (2000), was used as data collection tool. In 1992, Buss and Perry's "Aggression Questionnaire" which is called as Aggression Questionnaire was developed as a new self-report scale.

This scale was originated from the Hostility Inventory of Buss and Durke, renovated and improved psychometrically. Besides, it includes the main feature of the inventory and meets the current applicable standards. The scale was revised by Buss and Warren in 2000. Aggression Scale contains 34 items. It includes quinary likert-type scale responses. Answers of students are gradeified as "5 = totally appropriate for my character", "4 = very suitable for my character", "3 = somewhat appropriate for my character", "2 = less favorable to my character", "1 = not suitable for my character". The lowest score is 34, the highest score is 170. If aggression scale sub-scores are high, individual's sub-scores should be analyzed (Buss, Warren, 2000; Akt: Can, 2002: 38). In this study, aggression sub-scale score are not high so it was evaluated on total score and subscale scores were not analyzed.

SPSS 22.0 Statistics Package Software was used to analyze obtained data. Before analyzing the data, reliability test was conducted and Cronbach's alpha internal consistency coefficient was calculated as ,89. It was examined whether it was suitable for normal distribution (or not) and it was seen that data was not suitable for normal distribution. Therefore, non-parametric tests were used for basic statistical analysis. While Mann-Whitney U analysis was used to make comparisons with participants' gender, disease status, type of sports they do, status of making regular sports and status of doing sports either licensed or unlicensed, Kruskal-Wallis H analysis was used to make comparisons with grade levels, their branches, age groups, places where they stay and period of doing sports as licensed. After Kruskal-Wallis H analysis, there was a significant difference between

groups, so Mann-Whitney U analysis was conducted as post-hoc test. Significance level was determined as “ $p < 0,05$ ” in this analysis. Frequency analysis was used to determine percentage distribution of participant's demographics information.

### 3. Findings

**Table 1. Descriptive Statistics Regarding Participant's Demographics Information**

Variables	Sub-Variables	f	%
Class	1 <sup>st</sup> grade	84	28,0
	2 <sup>nd</sup> grade	53	17,7
	3 <sup>rd</sup> grade	61	20,3
	4 <sup>th</sup> grade	102	34,0
Branch	Physical Education Teacher	149	49,7
	Coaching	72	24,0
	Directorate	38	12,7
Gender	Recreation	41	13,7
	Male	205	68,3
Age	Female	95	31,7
	20-22 years old	107	35,7
	23-25 years old	112	37,3
Situation of having disease	25+ years old	81	27,0
	Yes	21	7,0
Places where they stay	No	279	93,0
	with family	122	40,7
	Dormitory (state)	30	10,0
Sports type they do	Dormitory (private)	5	1,7
	with friends	143	47,7
Situation of doing sports regularly	Amateur	182	60,7
	Professional	118	39,3
Period of doing sports per week	Yes	159	53,0
	No	141	47,0
Situation of being licensed	1 hour	30	18,9
	2 hours	49	30,8
	3-4 hours	80	50,3
Period of doing sports as licensed	Yes	206	68,7
	No	94	31,3
Period of doing sports as licensed	2-6 years	68	33,2
	7-10 years	107	52,2
	10+ years	30	14,6

A considerable part of participants is 1<sup>st</sup> and 4<sup>th</sup> grade students and about half of participants study at physical education teacher branch. %68,3 of participants are male and %31,7 of participants are female. 35.7% of participants are in 20-22 age group, 37.3% of participants are in 23-25 age group and 27% of participants are in 25+ age group. 93% of those do not have disease. A considerable part of participants live with their family (%40,7), a considerable part of participants live with their friend (%47,7). %53 of participants are amateur, %39,3 of participants are professional in sports. %53 of participants do sports regularly, %18,9 of participants do sports 1 hour per week regularly, 30.8% of them do sports 2 hours per week, 50.3% of them do sports 3-4 hours per week. 68.7% of participants are licensed, 33.2% of licensed participants do sports for 2-6 years, 52.2% of licensed participants do sports for 7-10 years and 14.6% of licensed participants do sports for 10+ years.

**Table 2. Descriptive Statistics Regarding Participants' Aggression Levels**

N	Minimum	Maximum	X	Ss
300	35	109	72,35	16,502

According to Table 2, it is seen that participants have a normal aggression level.

**Table 3. Comparison of Participants' Aggression Levels According tograde Variable**

	Class			Kruskal Wallis H Test			Paired Comparison
	n	Average	Ss	Average	Chi-Square	p	
1 <sup>st</sup> grade	84	77,54	15,630	181,14	17,973	,000	1-2, 1-4
2 <sup>nd</sup> grade	53	67,43	10,782	134,00			
3 <sup>rd</sup> grade	61	73,95	20,086	155,75			
4 <sup>th</sup> grade	102	69,69	16,190	130,70			

According to Table 3, it is seen that aggression score of the participants who study at 1<sup>st</sup> grade is 77,54±15,630, aggression score of the participants who study at 2<sup>nd</sup> grade is 67,43±10,782, aggression score of the participants who study at 3<sup>rd</sup> grade is 73,95±20,086 and aggression score of the participants who study at 4<sup>th</sup> grade is 69,69±16,190. There is a significant difference in aggression levels statically ingradees. (p <0.05). Difference came into sight because 1st grade students' aggression levels are higher than 2<sup>nd</sup> and 4<sup>th</sup> grade students' aggression levels.

**Table 4. Comparison of Participants' Aggression Levels According to Branch Variable**

	Branch			Kruskal Wallis H Test			Paired Comparison
	n	Average	Ss	Average	Chi-Square	p	
Physical Education Teacher	149	71,26	16,622	147,23	12,065	,007	1-3, 2-3, 3-4
Coaching	72	71,46	17,580	142,03			
Directorate	38	81,42	14,643	195,00			
Recreation	41	69,49	13,189	136,01			

Average aggression score of participant who study in Physical Education Teacher branches is 71,26±16,622, average aggression score of participants who study in Coaching branches is 71,46±17,580, average aggression score of participants who study in Directorate branches is 81,42±14,643 and average aggression score of participants who study in Recreation branches is 69,49±13,189. There is a significant difference in aggression levels statically in branches (p <0.05). Difference came into sight because aggression levels of participants who study in Directorate branches are higher than aggression levels of participants who study in Physical Education Teacher, Coaching and Recreation branches.

**Table 5. Comparison of Participants' Aggression Levels According to Gender**

	Gender			Mann Whitney U Test		
	n	Average	Ss	Average	U	p
Male	205	75,21	16,177	164,89	6787,0	,000
Female	95	66,19	15,559	119,44		

According to Table 5, it is seen that aggression levels of male participants are significantly higher than aggression levels of female participants (p <0.05).

Being mostly male of aggressive perpetrators' genders draws attention to the relationship between aggressive behavior and sex hormone. It was reached various research findings that different sex hormones impact aggression level, testosterone and dopamine hormones enhance aggression, serotonin hormones have a reducing effect. (Ramirez, Andreu & Fujihara , 2003; Cashdan, 2003). According to researches that were conducted abroad, men display more aggressive behaviors than women (Rabiner, Coie, Johnson, Boykin & Lochman, 2005; Scharf, 2000; Storr, 1968). According to research results that were conducted in Turkey, men display more aggressive behaviors than women (Cobanoglu, 2006; Tuzgol, 1998).

**Table 6. Comparison of Participants' Aggression Levels According to Age Groups**

Age	Age Groups			Kruskal Wallis H Test		
	n	Average	Ss	Ort.	Chi-Square	p
20-22 years old	107	72,34	17,834	153,03		
23-25 years old	112	73,52	15,259	160,10	4,441	,109
25+ years old	81	70,77	16,398	133,89		

It is seen that participants who are 23-25 years old have the highest aggression level, but participants' aggression levels are not significantly different statically according to age groups ( $p>0,05$ ).

**Table 7. Comparison of Participants' Aggression Levels According to Having Disease**

	Situation of having disease			Mann Whitney U Test		
	N	Average	Ss	Ort.	U	p
No	21	70,00	15,691	135,38		
Yes	279	72,53	16,575	151,64	2612,0	,407

According to Table 7, it is seen that average aggression level of participants who do not have disease is higher than participants who have disease, but participants' aggression levels are not significantly different statically according to situation of having disease ( $p>0,05$ ). Schizophrenia, paranoia and antisocial personality traits which are psychiatric disorders constitute major risk groups. Considering psycho-biologically, antisocial personality disorder that controls both autonomous and central nervous system activities is defined as a chronic pathological forms. Insensitivity to punishment of people who have antisocial personality disorder might be described with the same approach (Peker, 2007). Basoglu (1998) found in his research that individuals who shows aggressive behavior have lower total cholesterol, high density lipoprotein and triglyceride levels compared to healthy individuals. There is a significant relationship between low plasma cholesterol and triglyceride levels with aggressive and violent behavior.

**Table 8. Comparison of Participants' Aggression Levels According to Place Where They Stay**

	Places Where They Stay				Kruskal Wallis H Test		
	n	Average	Ss	Sıra Ort.	Chi-Square	P	Paired Comparison
With family	122	70,16	15,460	142,85			
Dormitory (state)	30	90,33	11,090	239,83			
Dormitory (private)	5	97,20	1,095	276,50	48,655	,000	1-2, 1-3, 2-4, 3-4
With friends	143	69,58	15,578	133,88			

According to Table 8, it is seen that there is a significant difference statically in aggression levels according to place where they stay ( $p>0,05$ ). Difference came into sight because aggression levels of participants who stay in dormitory are higher than aggression levels of participants who stay with their families and friends.

Being positive behaviors in society is possible with a healthy interaction and communication within the family. According to social learning theory, aggression is acquired by mimicking and taking someone as a model. Despite positive attitude of parents and healthy family communication, individuals may show aggressive behavior due to the environmental factors. It is thought that especially boys enter a friends groups that have aggressive behaviors as a result of superiority efforts, finding a place in the group or manifesting themselves. According to research result by Sears (1961), children might show aggression depending on interaction with environmental factors.

**Table 9. Comparison of Participants' Aggression Levels According to Sports Type**

	Sports Type			Mann Whitney U Test		
	n	Average	Ss	Ort.	U	P
Amateur	182	74,05	15,696	160,26	8962,5	,015
Professional	118	69,74	17,418	135,45		

According to Table 9, it is seen that amateur participants' aggression levels are significantly higher than professional participants' ( $p>0,05$ ). Sports allow to discharge aggressive impulses, destructive power in a non-destructive way (Kayaoglu, 2004; Kuru & Var, 2009). Sports, done by individuals consciously and systematically, based on scientific basis, no matter what age they are, plays an important role in keeping the morale high, being healthy, happy and successful all their life. (Yalcinkaya, Saracaloglu and Varol, 1993). According to U.S. Department of Health and Human Services (2000), physical activity and participation in sports improve social, physical and mental well-being alongside teamwork, self-discipline, sportsmanship, leadership and socialization skills of young people.

**Table 10. Comparison of Participants' Aggression Levels According to Situation of Doing Sports Regularly**

	Situation of Doing Sports Regularly			Mann Whitney U Test		
	n	Average	Ss	Ort.	U	P
Yes	159	70,26	16,055	140,60	9635,5	,036
No	141	74,72	16,735	161,66		

Aggression levels of participants who don't do sports regularly are significantly higher than aggression levels of participants who do sports regularly ( $p>0,05$ ).

**Table 11. Comparison of Participants' Aggression Levels According to Period of Doing Sports**

	Period of doing sports				Kruskal Wallis H Test		
	n	Average	Ss	Ort.	Chi-Square	p	Paired Comparison
1 hours	30	78,47	14,493	103,50	16,379	,000	1-3, 2-3
2 hours	49	73,71	16,023	87,95			
3 + hours	80	65,06	14,903	66,32			

Table 11 shows that aggression levels of participants who do sports 1 hour per week and 2 hours per week are significantly higher than aggression levels of participants who do sports 3+ hours per week ( $p>0,05$ ). It was reported that regular and well-planned exercise played an important role in delta sleep, which enabled resting, that serotonin transmitters also released after physical exercise, thus the fact that people, who had physical exercise, enjoyed a relaxing sleep was associated with serotonin release, but not with tiredness, (45) that sports ("45 sports branches") especially had positive impact on neurovegetative neural system balance, which was associated with adjustment of overexcitement, nervousity, and anxiety, and strengthening personal will (Kalyon, 1994). Erdogdu (2010) found in his study that students' aggressive tendencies show a significant difference in doing regular sports. According to research findings it is possible to interpret that doing regular sports activities reduce the tension that exists especially in adolescence period, reduce aggression tendencies due to the factors such as manifesting himself, taking place in a group. Studies which is about doing sports and aggression give different results. According to researches, individuals who do sports who seagg resion items are intense, often display more aggressive behavior in non-sports life and in another study individuals who do these sports control aggressive behavior easily in non-sports life, so findings stated that they display less aggressive behavior (Eripek, 1993). According to research by Derventa (2007), there is no significant difference in students' aggression tendencies who do sports and do not do sports.

**Table 12. Comparison of Participants' Aggression Levels According to Situation of being licensed**

	Situation of being licensed			Mann Whitney U Test		
	n	Average	Ss	Ort.	U	P
Licensed	206	70,81	16,880	141,74	7877,0	,010
Unlicensed	94	75,74	15,183	169,70		

According to Table 12, it is seen that unlicensed participants' aggression levels are significantly higher than licensed participants' aggression levels statistically ( $p > 0,05$ ). In a study which was conducted to reveal whether sports is effective in coping with psychological trauma which is the result of violence, it was found that doing sports which is compatible with their interests and skills in their spare times, is effective in changing students' sense of self in a positive way that exposed to violence, increasing adaptation levels and coping with trauma. So it is stated that feeling good increases the necessity of coping with loved branch and amusement, being expressed of negative emotions that revealed by violence is the result of achievement sense and seeing people who have similar experiences (Koc, 2007).

**Table 13. Comparison of Participants' Aggression Levels According to Period of Doing Sports as Licensed**

	License Period				Kruskal Wallis H Test		
	n	Average	Ss	Ort.	Chi-Square	p	Paired Comparison
2-6 years	68	75,82	17,855	122,24	12,961	,002	1-2
7-10 years	107	66,22	16,176	89,44			
10+ years	30	71,67	14,719	107,73			

There is a significant difference statistically in aggression levels of participants who do sports as licensed ( $p < 0,05$ ). Difference came into sight because aggression levels of participants who do sports for 2-6 years are higher than aggression levels of participants who do sports for 7-10 years.

#### 4. Conclusion And Recommendations

According to research results, it is seen that participants have normal aggression level. There is a significant difference statistically between grade variable and aggression level ( $p < 0,05$ ). Average aggression score of participant who study in Physical Education Teacher branches is  $71,26 \pm 16,622$ , average aggression score of who study in Coaching branches is  $71,46 \pm 17,580$ , average aggression score of who study in Directorate branches is  $81,42 \pm 14,643$  and average aggression score of who study in Recreation branches is  $69,49 \pm 13,189$ . It is seen that male participants' average points ( $75,21 \pm 16,177$ ) is significantly higher than female participants' average points ( $p < 0,05$ ). It is seen that participants in the 23-25 age group have the highest aggression score ( $73,52 \pm 20,98$ ), but there is no significant difference in participants aggression score according to age groups. There is no significant difference in aggression score statistically according to situation of having any disease ( $p > 0,05$ ). Aggression levels of participants who stay in state dormitory are significantly higher than aggression levels of participants who stay with their families and friends ( $p < 0,05$ ), aggression levels of participants who stay in private dormitory are significantly higher than aggression levels of participants who stay with their families, with their friends and in state dormitory ( $p < 0,05$ ). Amateur participants' aggression score ( $74,05 \pm 15,696$ ) is significantly higher than professionals' aggression score ( $p < 0,05$ ), aggression score of participants who do sports 1 hour per week ( $78,47 \pm 14,493$ ) are significantly higher than aggression levels of participants who do sports 2 hours and 3+ hours per week ( $p < 0,05$ ), unlicensed participants' aggression scores are significantly higher than licensed participants' aggression scores ( $p < 0,05$ ). By taking into consideration the research results, this study might contribute more in this field when it is conducted different scales and groups.

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