

Full Length Research Paper

Comparison of sports sciences and education faculty students' aggression scores

Tülin Atan

University of Ondokuz Mayıs, Yaşar Doğu Sports Sciences Faculty, Samsun-Turkey.

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The aim of this study was to compare the aggression scores of Sports Sciences Faculty and Education Faculty students and also to examine the effects of some demographic variables on aggression. Two hundred Sports Sciences Faculty students (who engage in sporting activities four days a week for two hours) and 200 Education Faculty students (who do not engage in sports) participated in the study. The Aggressiveness Inventory was used to determine the aggression scores which has three sub-dimensions, such as disruptive aggression (DA), assertiveness (AS) and passive aggression (PA). General Aggression Scores (GAS) was examined. DA, PA and GAS scores were not found to be significantly different between two faculties ($p>0.05$); only the AS scores of Physical Education students were higher than the scores of Education Faculty students ($p<0.05$). In conclusion, participation in sports increases assertiveness but the level of aggression does not change because of gender. Assertiveness levels increased as the educational class study increased. Smoking and drinking increased the levels of DA and GA.

Key words: Sports, aggression, assertiveness.

INTRODUCTION

Aggression is defined as a hostile, offending, battering, agonizing and painful behavior in order to triumph over someone, to rule someone or to disrupt or invalidate something. On the other hand, aggressive behaviors are goal-oriented behaviors and they can be directed at a person, group or society (Tiryaki 2000). Aggression is the physical or verbal behavior of people which are conducted to hurt other persons (Arkonac 1998). Researchers have examined and grouped aggression into various types. The three major types of aggression are disruptive, assertive and passive aggression. Disruptive aggression

involves the display of undesired behavior, assertive aggression presents desired behavior, while passive aggression involves the presentation of desired behavior (Kiper 1984). Lorenz stated that aggression originated from the instinct of fighting which occur among entities. The aggressive energy is generated in each person at varying rates. The appearance of aggression depends on the accumulated energy and the presence and strength of the aggression-inducing stimulus. Lorenz further stated that experiencing aggression was right and necessary to balance the tendencies of hostility and violence and to

E-mail: takman@omu.edu.tr.

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turn them into harmless activities. Aggression is inevitable and sometimes it can be discharged spontaneously (Ikizler 1993).

While some scientists want to explain aggression as an instinct to kill in human nature, some try to define it as a controllable and predictable, learned social behavior (Kabak 2009). In addition, Lorenz assessed aggression in two different ways, acceptable and unacceptable. While war is an unacceptable act to show human aggression, sport is an acceptable act (Tiryaki 2000). Sport competitions and competitive circumstances form a suitable basis for aggression displays. However, we cannot describe every behavior that harms the opponent as aggression.

The limits of aggression in sport activities are determined by the intention and deliberateness of the action done by the rules of the related sports branch (Ikizler et al., 1997). Some sport psychologists agree that aggression facilitates performance outcome, whereas others feel it does not (Deepika and Jain 2015). Aggression in sports is a way to discharge. A person can eliminate the aggressive behavior forbidden by the society through sports. Human beings have this ambition and aggressive behavior in sport activities instead of riots, such as rebelling against authority and arguing against pressure. These people are satisfied by beating their opponents mentally and physically through sports. However, some people argue that they cannot discharge their desires for aggression through sports; on the contrary they argue that their desire increases through sports (Sahin, 2003). Sports participation may, in some instances, accentuate the relationship between alcohol and violence. Nonetheless, there is scant research directed specifically at alcohol-related violence in the sport context (Sonderlund et al., 2014). The purpose of this study was to compare the aggression levels of students who participate in sports activities and those who do not and to find out the effect of sports on aggression. Also, the effects of some demographic variables on aggression were examined.

METHODOLOGY

Study group

Data were collected from a sample of 400 participants. Two hundred were students from the Sports Faculty (who participate in sports at least four days a week for two hours) and 200 were students from the Education Faculty (who do not sport). They were instructed that the survey was being conducted by a university-affiliated researcher and there was no monetary incentive for participating. Participants were required to be university students over the age of 18. The average age of the Sports Faculty participants was 20.80 (SD = 1.94) years and Education Faculty students was 20.19 (SD = 1.89) years. Demographic data questionnaire and Aggressiveness Inventory were used for data collection. The questionnaire used in this study consisted of 6

items. The items focused on demographic details, including faculty, age, gender, educational class, smoking and alcohol status.

The aggressiveness inventory

The inventory developed by Kiper (1984) was used for determining the aggression scores. The inventory consisted of 30 questions with three sub dimensions which are disruptive aggression (DA), assertiveness (AS) and passive aggression (PA). The inventory rated the feelings of the subjects using a seven-point Likert type scale (-3 to +3) ranging from "it suits me" to "it does not suit me". The score of each sub-test in the inventory is 1 at minimum and 61 at maximum. The subject responding in the form of 'it does not suit me,' for each question of the inventory has -30 points for each sub-test; 'it suits me a lot' takes +30 points for each sub-test. However, since it is not statistically possible to use negative points as they are (by Kiper) because the number zero can create a problem, number 31 was added to each point in order to eliminate the number zero so that each sub-test score will be 1 at minimum and maximum, 61. Through, the help of the total scores of each of the three subscales, a general aggression (GA) score was obtained for each subject, although not all three facet scores for each subject on the basis of the overall score were obtained (Kiper 1984; Cetin et al., 2013).

Statistical analysis

The SPSS 19 package software was used for the statistical analyses of data. The possibility that the data managed a normal distribution was scanned with the Kolmogorov-Smirnov test. Non-parametric tests were used since data sets are not usually distributed. Mann Whitney-U test and Kruskal Wallis test were used for the statistical analysis. The level of significance was set at 0.05 and 0.01 but when the comparison number was three, in each Bonferroni corrected Mann Whitney U tests, the level of significance taken into account was $0.05/3=0.0167$.

RESULTS

Table 1 shows the aggression scores of two different faculty students. The DA, PA and GAS scores were not found to be significantly different among the Sports Sciences and Educational Faculty students ($p>0.05$). AS scores of Physical Education students were higher than the scores of Education Faculty students ($p<0.05$). Table 2 shows the aggression scores of female and male students. DA, AS, PA and GAS scores were not found to be significantly different between female and male students ($p>0.05$). Table 3 shows the aggression scores according to Educational Classes. DA, PA and GAS scores were not found to be significantly different between classes ($p>0.05$). The AS scores of the 3rd class students were higher than the scores of the 1st class students ($p<0.0167$). Table 4 shows the aggression scores according to smoking or not. DA and GA scores were higher in smokers than non-smokers ($p<0.05$). AS and PAS scores were parallel between smokers and non-smokers ($p>0.05$). Table 5 shows the aggression scores for alcohol usage. The DA and GA scores were higher in

Table 1. Aggression scores of the students.

Parameter	Faculty	n	Median	Min	Max	Z	p
Disruptive aggression	Sports sciences	200	31.50	6.00	60.00	-0.463	0.643
	Education	200	32.50	9.00	53.00		
Assertiveness	Sports sciences	200	49.50	22.00	61.00	-2.14	0.032*
	Education	200	45.00	20.00	61.00		
Passive aggression	Sports sciences	200	27.50	6.00	61.00	-0.659	0.510
	Education	200	26.00	3.00	53.00		
General aggression score	Sports sciences	200	106.50	43.00	172.00	-0.419	0.675
	Education	200	105.00	47.00	152.00		

*p<0.05.

Table 2. Aggression scores of female and male students.

Parameter	Gender	n	Median	Min	Max	Z	p
Disruptive aggression	Female	183	32.00	8.00	50.00	-0.834	0.405
	Male	217	32.00	6.00	60.00		
Assertiveness	Female	183	45.00	20.00	61.00	-1.144	0.253
	Male	217	48.00	20.00	61.00		
Passive aggression	Female	183	27.00	7.00	48.00	-0.313	0.755
	Male	217	26.00	3.00	61.00		
General aggression score	Female	183	104.00	43.00	144.00	-0.970	0.332
	Male	217	107.00	54.00	172.00		

Table 3. Aggression scores according to educational classes.

Parameter	Class	n	Median	Min	Max	Chi-Square	p
Disruptive aggression	1	152	30.50	8.00	52.00	1.698	-
	2	132	36.00	6.00	53.00		
	3	116	32.50	8.00	60.00		
Assertiveness	1	152	45.00	20.00	61.00	6.871	1<3*
	2	132	48.00	22.00	61.00		
	3	116	49.00	28.00	61.00		
Passive aggression	1	152	25.00	8.00	58.00	3.891	-
	2	132	29.50	3.00	61.00		
	3	116	26.00	6.00	55.00		
General aggression score	1	152	99.50	47.00	160.00	3.854	-
	2	132	109.50	43.00	151.00		
	3	116	105.50	61.00	172.00		

*p<0.0167.

Table 4. Comparison of aggression scores for smoking.

Parameter	Smoking	n	Median	Min	Max	Z	p
Disruptive aggression	Yes	165	37.00	6.00	53.00	-3.164	0.002**
	No	235	31.00	8.00	60.00		
Assertiveness	Yes	165	49.00	20.00	61.00	-1.048	0.295
	No	235	46.00	22.00	61.00		
Passive aggression	Yes	165	27.00	3.00	61.00	-0.694	0.488
	No	235	26.00	6.00	55.00		
General aggression score	Yes	165	110.00	64.00	160.00	-2.602	0.009**
	No	235	102.00	43.00	172.00		

**p<0.01.

Table 5. Comparison of aggression scores according to using alcohol or not.

Parameter	Alcohol	n	Median	Min	Max	Z	p
Disruptive aggression	Yes	156	39.00	6.00	53.00	-3.844	0.000**
	No	244	30.00	8.00	60.00		
Assertiveness	Yes	156	49.00	22.00	61.00	-1.576	0.115
	No	244	46.00	20.00	61.00		
Passive aggression	Yes	156	27.00	5.00	58.00	-.581	0.561
	No	244	26.00	3.00	61.00		
General aggression score	Yes	156	111.50	54.00	160.00	-2.910	0.004**
	No	244	102.00	43.00	172.00		

**p<0.01.

students who take alcohol ($p<0.01$), while the AS and PAS scores were similar between students who take alcohol or not ($p>0.05$).

DISCUSSION

This study examined the aggression scores of students studying at faculties of Sports Sciences and Education. The effects of some demographic variables on aggression were also examined. In our study, the DA, PA and GAS aggression scores of the students studying at two different departments were similar. For the AS scores, that of the students in the faculty of Sports Sciences were found to be higher than those in the Faculty of Education. This finding coincides with the results of previous studies (Dervent et al., 2010; Solak 2011; Gokcicek, 2015). Assertiveness is defined as an individual's ability to

express his feelings clearly without anxiety for his own benefits. Also, every behavior allows the use of the individual's own rights by accepting the rights of others. In assertiveness, an individual does not ignore his rights. An athlete's using his physical strength within the rules of the game can be considered as assertiveness, a boxer who knocks down his opponent with a proper fist is considered as not aggressive, but assertive (Kiper, 1984).

Dervent (2010) in his study titled "The aggression levels of high school students and the association between these levels and their participation in sportive activities" found that the students who did sports showed more assertiveness than those who did not; however, no difference was found in other aggression characteristics. In his study, Solak (2011) concluded that the assertiveness scores of the students who did sports were higher than those who did not. In a previous study, the aggression levels of university students were examined in

terms of demographic variables. The students at the faculty of Sports Sciences were found to have higher assertiveness levels when compared with disruptive and passive aggression (Kaya et al., 2010). Zubic et al. (2013) concluded that the students of Physical Training department had higher levels of aggression when compared with the students of Electronic Engineering. When aggression levels of students of Physical Training department and other departments were examined, it was concluded that the students of Physical Training department would prefer to use physical strength to seek their rights against injustice (Bostan et al., 2008).

Yildiz (2009) in his study named "Examination of the aggression levels of secondary school students who do and do not do sports", did not find any differences between the general aggression and assertiveness of the students who do and do not do sports. However, a significant difference was found in the disruptive behaviors of the students who did sports. There was a significant difference in the passive aggression of the students who do not engage in sports. Gokcicek (2015) showed that the students who did sports were more assertive than those who did not. It can be said that the students who did sports were found to be more assertive because they were in continual communication with their trainers and referees and they knew what to do, when they faced situations they had to defend themselves and also because their communication skills were developed through sports. Conversely, our results are different from the results of previous studies which reported that athletes are not more assertive. In a particular study, no significant difference was found between the aggression levels of the students of Physical Education and Sports School students in terms of whether they do sports or not in a licensed way (Cetin et al., 2013). According to the results of Oda's (2014) study, no significant difference was found in students' aggression scores in terms of their state of doing sports.

When the literature was reviewed, no significant difference was found between genders in general in terms of aggression levels. The results of our study were in line with the literature. No difference was found between general aggression scores in terms of the variable of gender. This finding coincides with the results of previous studies. In their study, Crick and Grotpeter (1995) systematically examined how aggression is expressed between genders. They found no difference between the aggression levels of girls and boys and that they had the same level of aggression scores. They found that girls and boys showed the same level of aggression and expressed their anger in different ways, boys were more extroverted about aggression, while the girls were more introverted and they showed a more social aggression. For aggression levels of athletes involved in team or individual sports, it was concluded that there were no significant differences in

terms of the variable of gender (Guner, 2006). Karatas (2005) examined the association between parent aggression and high school students' aggression and concluded that there were no significant differences between the variable of gender and aggression.

For the analysis conducted for the sub dimensions of general aggression and disruptive aggression, no significant difference was found between male and female subjects (Yildiz, 2009). In a group of 129 high school students, differences in aggression in terms of gender were analyzed and it was established that their verbal aggression did not differ in terms of gender, while men were found to use physical aggression (Scharf, 2000). Insignificant differences between groups can be explained by the close results of the groups since they had similar life styles, leanings and behaviors towards events, and the expression of students who participate in sports and who do not, were analyzed regardless of gender (Gokcicek 2015). The association between aggressive behavior in men and women and the 'monoamine oxidase A' (MAO-A) enzyme were examined. In line with these results, they emphasized that the reasons for their aggressive behavior were not due to lack of social skills but by the problems in the release of the MOA-Aenzyme controlled by the gene of crime and by some other problems (Eisenberger et al., 2007). On the other hand, our results are different from the results of some previous studies which reported significant differences between aggression scores of genders. Cakir (2014) found that men were more aggressive than women. In one study, the girls who did sports were more assertive than men who did sports and the other aggression features were close (Derwent et al., 2010). In Keskin's (2015) study, it was found that men had higher disruptive aggression score than women and the women's assertiveness was higher when compared with men.

The association between aggression and focus of control was examined in 580 high school students; according to the results of the study, average aggression scores of male students were significantly higher than those of female students (Efilti, 2008). The prevalence of violence and aggression among a total of 3007 people between the ages 15 and 60 was examined. According to the results of the study, males between the ages of 15 and 24 were found to be more aggressive (Duque, 2003). In a research on the association between gender and aggression in adolescents, it was concluded that male students were more inclined to show aggressive behaviors when compared to female students (Giles, 2005). In the study of Cetin et al. (2013), the disruptive aggression and assertiveness levels of female students appear to be significantly higher than male students. In our study, the first, second and third year students' aggression scores were compared and the assertiveness levels of students in their third year were found

to be higher than those of the students in their first year.

Ersan et al. (2009) found the differences in the aggression scores of the second and fourth year students at the Physical Training Teaching department to be statistically significant. The results of the study are parallel with our results in terms of the variable of educational class. In a study on high school students, it was determined that the mean aggression score of students in the 10th and 11th grades were higher than the mean aggression score of students in 9th grade (Kurtoglu, 2009).

In this study, DA and GA levels of smokers and those who drink were found to be higher. It was stated that the consumption of cigarette and alcohol contributes to the increase in their scores (Bayram, 2012). Having a habit like smoking was one of the effective factors in the emergence of intensity (Karaoglu et al., 2006). Alcohol consumption was found to cause aggressive behaviors by causing an increase in anger and post-traumatic stress disorder levels (Eckhardt, 2007). Based on the studies reviewed, alcohol consumption, violence and sports participation appear to be connected. Further, the available evidence indicates a higher rate of alcohol consumption and violence in athlete populations than non-athlete populations, suggesting a moderating effect of sports participation in the positive relationship observed between alcohol use and violence (Sonderlund et al., 2014).

Conclusions

In conclusion, it can be said that participation in sports increase assertiveness, but gender does not influence aggression level. Assertiveness levels increase as the educational class study increase; in addition, smoking and drinking increase the levels of DA and GA.

Conflict of interest

The author has not declared any conflict of interest.

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