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## Examination of aggression levels and empathic tendency levels of secondary school students who involve or not involve in sports

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### Abstract

This study was conducted to examine the aggression levels and empathic tendency levels of secondary students who involve or not involve in sports. "Aggression Inventory" developed by Kiper (1984) and "Empathic Tendency Scale" developed by Dokmen (1998) were applied to a total of 514 secondary school students (consists of 266 males, 248 females) who had been studying in a secondary school in the city center of Corum province and had been randomly selected in the academic year of 2010-2011. "Multivariate Analysis of Variance (MANOVA)" and "One-Way Analysis of Variance (ANOVA)" were used for the analysis of data and as a result of these variance analyses; "The Scheffe's Test" was used in order to determine the source of the difference. According to the findings obtained, it has been observed that the students whose family members involve in sports found to have higher destructive, assertive and overall aggression scores when compared to the students whose family members do not involve in sports. It was found that assertive aggression scores of the students who involve in sports are higher than the students who do not involve in sports. It was found that empathic tendency scores of the students who are also national athletes are higher than the scores of students who are club athletes. As a result, the empathy level of people decreases with the increasing level of aggression. It can be argued that the passive aggression decreases with the increasing empathic tendency and assertiveness increases with the increasing empathic tendency.

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This study has been summarized from a portion of a Master's Thesis prepared for the Gazi University, Institute of Education Sciences, Department of Physical Education and Sports.

## 1. Introduction

Aggression is an instinct and impulse which is common in all living creatures. It has been dealt as a sub-instinct which combines aggression, feeding and protection and takes place under the instincts of sexuality (Balcioglu, 2001). Aggression is a behavior pattern emerging in different ways in humans. It is quite difficult to separate the reasons which stimulate this behavior from some behavior patterns. Because, aggression also emerges as aggregate behaviors in form of various verbal responses as well as attitudes such as destroying, injuring, suppressing, anger and hate. In addition, aggression is a concept used to describe and express some situations about attitudes including different responses and over-excitement (Koksal, 1991).

People with enhanced communication skills can understand the people with whom they are in contact with. In addition to this, people with poor communication skills cannot tell the other people their thoughts and opinions and also cannot understand the other people correctly. As a result of these deficiencies in communication lead to an increase in the tendency of individuals to have aggressive behavior. One of the necessary behavior patterns to improve the communication skills among people is the empathic pattern of behavior. It is believed that an individual with a developed empathic skill can understand the other people better and establish positive relationships. An individual requires establishing relationships with the others at every stage of life. His or her success in these relationships depends on the quality of communication between him or her and the others (Yuksel, 2004). Empathy is "ability or faculty of an individual to understand the emotions and thoughts of others correctly by putting him/herself into another people's places" (Dokmen, 2009).

Nowadays, schools have the feature of not only being institutes which equip children and young people with knowledge, skills and abilities for them to overcome problems which may arise in their future professional lives but also institutes which get them adopt behaviors and habits appropriate for them. Children and young people learn the rules and awareness of being tolerant, democratic, open heart, sharer and humanitarian in schools (Orhun, 1992).

Sports are social activity areas that support the physical, mental, emotional and social development of individuals. One of the most important reasons that lead people to sports is the body perception which means to be happy with their physical appearance. That people to be satisfied with their physical appearance is one of the basic sources of self-confidence and sense of self-esteem and self-complacency. In addition, it is the most effective activity way that gives chance to people to prepare themselves to life in the psychological aspect (Yalcin, 2009).

In the light of this information, this study aimed at determining the aggression levels and empathic tendency levels of secondary school students who involve in sports and do not involve in sports.

## 2. Method

The study population consists of students studying in secondary education institutes under the Ministry of National Education located in the city center of Corum in academic year of 2010-2011. The sample of the study consists of a total of randomly selected 514 secondary school students (266 males, 248 females) of which 247 of them involve in sports (48.1%) and 267 of them do not involve in sports (51.9%) who were studying in secondary schools in the city center of Corum. "Personal Information Form" developed by the researcher was intended to gather information about gender, sports involvement behavior, sportiveness level of the participants and family members who involve in sports.

### 2.1. Aggression inventory

"Aggression Inventory" of which the validity and the reliability studies were conducted by the researcher that consists of 30 items and developed by Kiper (1984) was used in this study. The Inventory contains three sub-tests for destructive aggression, assertiveness and passive aggression, respectively. Cronbach's Alpha coefficient for the entire inventory was calculated as .83 (Derwent, 2007).

2.2. Empathic tendency scale (ETS)

Empathic Tendency Scale (ETS) was developed by Dokmen (1988) in order to measure the empathy development potentials of individuals in daily life. The ETS is a Likert-type scale consisting of 20 items and there are degrees from 1 to 5 against each item. The correlation between the scores obtained from the items with odd sequence numbers and items with even sequence numbers of the scale was found .86 (Dokmen, 1988).

2.3. Statistical analysis:

Frequency (f) and percentage (%) were calculated in evaluation of information related to the students. "Multivariate Analysis of Variance (MANOVA)" was used to determine whether the groups differ in terms of dependent variables more than one. "One-Way Analysis of Variance (ANOVA)" was used for the variance analysis of groups for which significant differences had been found according to the results of the MANOVA. "The Scheffe's Test" was used in order to determine the source of the difference that had been found as the result of the One-Way Analysis of Variance. The statistical significance level for the statistical analyses was found 0.05 and 0.01.

3. Results

Table 1. Characteristics of the study sample

Variables		f	%
Distribution of students by gender	Female	248	48.2
	Male	266	51.8
	Total	514	100.0
Distribution of students by their sports involvement behavior	Yes	247	48.1
	No	267	51.9
	Total	514	100.0
Distribution of Students who involve in sports by their sportiveness level	Athlete who participates in school team	151	61.1
	Club athlete	93	37.7
	National athlete	3	1.2
	Total	247	100.0
Distribution of Students by the status whether there is a family member involves in sports	Yes	154	30.0
	No	360	70.0
	Total	514	100.0

51.8% of the study sample were male and 51.9% were not involving in sports and 61.1% were participating in school teams and 70.0% of them had at least one family member who involves in sports.

Table 2. Multivariate analysis of variance (manova) test results with regard to the aggression levels and empathic tendency levels of secondary school students in terms whether they involve in sports

Variables	Involving in Sports	N	X ± Ss	Sd	F	p
Destructive aggression	Yes	247	43.33±10.53	1-512		
	No	267	42.06±11.79			
Empathy	Yes	247	67.63±8.81	1-512		
	No	267	66.14±10.17			
Assertive aggression	Yes	247	56.28±8.68	1-512	6.371	.012*
	No	267	54.27±9.35			
Empathy	Yes	247	67.63±8.81	1-512	3.124	.078
	No	267	66.14±10.17			
Passive aggression	Yes	247	39.19±11.45	1-512		
	No	267	39.24±12.42			
Empathy	Yes	247	67.63±8.81	1-512		
	No	267	66.14±10.17			
Overall aggression	Yes	247	138.81±23.15	1-512		
	No	267	135.57±25.62			
Empathy	Yes	247	67.63±8.81	1-512		
	No	267	66.14±10.17			

\*p<.05

The results of MANOVA Test conducted on destructive aggression (Wilks' Lambda ( $\Lambda$ )= .989,  $F(2.511) = 2,868$   $p= .058 > .05$ ), passive aggression (Wilks' Lambda ( $\Lambda$ )= .994,  $F(2.511) = 1.576$ ,  $p= .208 > .05$ ), overall aggression (Wilks' Lambda ( $\Lambda$ )= .989,  $F(2.511) = 2.735$ ,  $p= .066 > .05$ ) and empathic tendency demonstrated that there is no significant difference by the variable of "involving in sports", ( $p > .05$ ). When assertive aggression levels and empathic tendency levels were associated with each other, it was revealed that there is significant difference according to the variable of "involving in sports" (Wilks' Lambda ( $\Lambda$ )= .986,  $F(2.511) = 3.666$ ,  $p= .026 < .05$ ). Assertiveness scores of students who involve in sports ( $56.28 \pm 8, 68$ ) were found higher than the students who do not involve in sports ( $54.27 \pm 9.35$ ). The scores of empathic tendency did not show any significant difference according to the variable of "involving sports" ( $F(1.512)=3.124$ ,  $p=.078 > .05$ ).

Table 3. Multivariate analysis of variance (manova) test results with regard to the aggression levels and empathic tendency levels of secondary school students according to the variable whether there is at least one family member who involves in sports

Variables	At least one family member who involves in sports	N	X ± Ss	Sd	F	p
Destructive aggression	Yes	154	44.73 ± 9.79	1-512	7.491	.006*
	No	360	41.79 ± 11.6			
Empathy	Yes	154	67.87 ± 9.35	1-512	2.490	.115
	No	360	66.42 ± 9.63			
Assertive aggression	Yes	154	56.75 ± 8.50	1-512	6.131	.014*
	No	360	54.59 ± 9.26			
Empathy	Yes	154	67.87 ± 9.35	1-512	2.490	.115
	No	360	66.42 ± 9.63			
Passive aggression	Yes	154	40.21 ± 11.44	1-512		
	No	360	38.79 ± 12.16			
Empathy	Yes	154	67.87 ± 9.35	1-512		
	No	360	66.42 ± 9.63			
Overall aggression	Yes	154	141.69 ± 22.06	1-512	7.733	.006*
	No	360	135.17 ± 25.25			
Empathy	Yes	154	67.87 ± 9.35	1-512	2.490	.115
	No	360	66.42 ± 9.63			

\* $p < .05$

The results of MANOVA Test conducted on destructive aggression (Wilks' Lambda ( $\Lambda$ )= .977,  $F(2.511) = 5.945$ ,  $p= .003 < .05$ ), assertive aggression (Wilks' Lambda ( $\Lambda$ )= .987,  $F(2.511) = 3.380$ ,  $p= .035 < .05$ ) and overall aggression (Wilks' Lambda ( $\Lambda$ )= .980,  $F(2.511) = 5.199$ ,  $p= .006 < .05$ ) demonstrated that there is significant difference by the variable of "at least one family member who involves in sports" The destructive, assertive and overall aggression scores of the students who have at least one family member involving in sports were found higher than the scores of the students who do not have any family member involving in sports.

Table 4. Multivariate analysis of variance (manova) test results with regard to the aggression levels and empathic tendency levels of secondary school students according to the variable of sportiveness level

Variables	Sportiveness Level	N	X ± Ss	Sd	F	p
Destructive Aggression	School Team Athlete	151	43.13±10.82	2-244	1.291	.277
	Club Athlete	93	43.96±10.02			
	National Athlete	3	34.33±9.71			
Empathy	School Team Athlete	151	68.53±8.41	2-244	5.318	.005*
	Club Athlete	93	65.81±9.11			
	National Athlete	3	78.67±3.21			
Assertive Aggression	School Team Athlete	151	56.88±8.00	2-244	.940	.392
	Club Athlete	93	55.38±9.77			
	National Athlete	3	54.33±1.53			
Empathy	School Team Athlete	151	68.53±8.41	2-244	5.318	.005*
	Club Athlete	93	65.81±9.11			
	National Athlete	3	78.67±3.21			
Passive Aggression	School Team Athlete	151	39.44±12.13	2-244	1.150	.318
	Club Athlete	93	39.12±10.33			
	National Athlete	3	29.33±6.35			
Empathy	School Team Athlete	151	68.53±8.41			

	Club Athlete	93	65.81±9.11	2-244	5.318	.005*
	National Athlete	3	78.67±3.21			
Overall Aggression	School Team Athlete	151	139.44±23.63			
	Club Athlete	93	138.45±22.47	2-244	1.283	.279
	National Athlete	3	118.00±12.17			
	School Team Athlete	151	68.53±8.41			
Empathy	Club Athlete	93	65.81±9.11	2-244	5.318	.005*
	National Athlete	3	78.67±3.21			

\*p<.05

The results of MANOVA Test conducted on destructive aggression (Wilks' Lambda ( $\Lambda$ )= .954,  $F(4.486) = 2.880$ ,  $p = .022 < .05$ .) assertive aggression (Wilks' Lambda ( $\Lambda$ )= .952,  $F(4.486) = 3.018$ ,  $p = .018 < .05$ .) passive aggression (Wilks' Lambda ( $\Lambda$ )= .952,  $F(4.486) = 3.049$ ,  $p = .017 < .05$ .) and overall aggression (Wilks' Lambda ( $\Lambda$ )= .950,  $F(4.486) = 3.178$ ,  $p = .014 < .05$ .) revealed that there is significant difference according to the sportiveness levels of students. There is significant difference between empathic tendency scores of the students who are club athletes and the students who are national athletes. The empathic tendency scores of students who are national athletes ( $78.67 \pm 3.21$ ) were found higher than the students who are club athletes ( $65.81 \pm 9.11$ ) (One – way ANOVA / The Scheffe's Test). The scores of destructive aggression ( $F(2.244) = 1.291$ ,  $p = 0.277 > 0.05$ .), assertive aggression ( $F(2.244) = .940$ ,  $p = .392 > .05$ .), passive aggression ( $F(2.244) = 1.150$ ,  $p = .318 > .05$ .) and overall aggression ( $F(2.244) = 1.283$ ,  $p = 0.279 > 0.05$ .) do not show any significant difference according to the sportiveness level.

#### 4. Discussion and conclusion

This study was conducted to examine the aggression levels and empathic tendency levels of secondary students who involve or not involve in sports.

Dervent (2007) founded that students who involve in students are more assertive than those who do not involve in sports as a result of his study that he conducted to examine the aggression levels and the participation levels of high school students to sports activities and Bilge (1990) revealed that there is no significant difference between aggression needs of national athletes and those who are not athletes as a result of his study which he examined the psychological needs of athletes. As a result of the study of Yıldız (2009); a significant difference could not be found between overall aggression levels of secondary school students who involve in sports and those who do not involve in sports. A significant difference could not be found between secondary school students who involve in individual sports and those who involve in team sports in terms of characteristics of aggression according to the studies of Dervent (2007) and Yıldız (2009). As a result of the study conducted by Ersan et al.; statistically significant difference could not be found between the scores of students of the school of physical education and sports who involve in individual sports and the students who involve in team sports. Erkmén (2007) concluded that empathic tendency of students of the school of physical education and sports increases with their increasing time period of doing sports. This result shows parallelism with our research. Filiz (2009) concluded that empathic tendency scores of different secondary school students decreases with the increasing aggression level of them. This result shows parallelism with our research.

Aggression in sports can be said to be usually caused by frustration. This kind of frustration emerges as a result of frustration of instincts and impulses such as being successful, gaining power and strength, recognition, prestige, superiority and sovereignty. Various situational factors experienced in the sports environment may cause to aggressive behaviors by raising the level of frustration (Dervent, 2007). Sports are a tool of canalizing aggression and also keep it under control. Today, when describing sports, mostly said that it eliminates aggression and gives the possibility of easing anger outbursts (Sahin, 2003).

It was founded as a result of studies conducted to compare those who involve in sports and do not involve in sports that those who involve in sports founded more livingness, extroverted, more industrious, more patient, ready to establish social relationships, emotionally balanced and more conformist in new situations when compared to the others who do not involve in sports (Tiryaki et al., 1991). These characteristics and traits got brought to those who involve in sports make them more assertive when compared to the others who do not involve in sports. Kiper (1984) defined all behaviors which make an individual to assert and exercises his/her rights by accepting and assuming the other people's rights and makes him or her tells and expresses his or her emotions without being possessed by

anxiety in order to protect his or her own rights as the assertiveness. Individual should not ignore the other people's rights while expressing his/her thoughts and feelings about his rights according to the definition of the assertiveness. That athlete use his/her physical power is evaluated as the assertiveness and a boxer who takes down his opponent by a punch in accordance with the rules is not considered to be impulsive but considered to be assertive (Dervent, 2007).

The empathy level of people decreases with increasing aggression levels. Demonstration of emotions and feelings such as resentment, anger, hate, and hostility etc. of people in case of aggression and therefore, frustration of communication between individuals may be explained with aggression because aggression might be adversely affecting empathy. The elimination of violence and aggression in society must start in the family which is the first education environment for an individual and communication skills such as mutual understanding, tolerance, empathy etc. can be gained to people by the relevant ministry, institutions and organizations through various activities. Empathy lessons must be included in the curriculum and all programs studied in education and training institutions in order to reduce and eliminate violence and aggression and to develop mutual understanding and tolerance or at least empathy may be taught through other courses and can be contributed to the development of unity and solidarity of society.

In addition, some social, sportive and cultural activities can be organized aimed to make students who are shy, timid, unsocial and have difficulty in expressing themselves participate in sports activities and they may be turned into assertive students who can defend their rights.

## References

- Balcioglu, I. (2001). *Violence and Society*. (1st Edition). Istanbul: Bilge Publications, p.36.
- Bilge, F. (1990). *Psychological Needs of Athletes*. Master's Thesis, Hacettepe University, Institute of Social Sciences, Ankara.
- Dervent, F. (2007). *The aggression levels of high school students and the relationship between the aggression levels of them and their participation to sports activities*. Master's Thesis, Gazi University, Institute of Education Sciences, Ankara.
- Dokmen, U. (1988). *Measurement of empathy based on a new model and development of empathy with psychodrama*. Ankara University, Journal of Education Sciences. 21(1-2), 155-190.
- Dokmen, U. (2009). *Communication Conflicts and Empathy in Arts and Daily Life*. (5th Edition), Istanbul: Remzi Bookstore. p.157.
- Erkmen, G. (2007). *Comparison of empathic tendency levels of physical education and sports school students studying in Selcuk University with their leader behaviors that they prefer in sports*. Master's Thesis. Selcuk University, Institute of Health Sciences, Konya.
- Ersan, E.E., Dogan, O., Dogan, S. (2009). *Evaluation of aggression levels of physical education and sports school students from the socio-demographic perspective*. Cumhuriyet Journal of Medicine. 31,321-238.
- Filiz, A. (2009). *Examination of the levels of empathic tendency and aggression for students studying in different types of high schools*. Master's Thesis, Yeditepe University, Institute of Education Sciences, Istanbul.
- Kiper, I. (1984). *The relationship between aggression types and various economic, social and academic variables*. Master's Thesis, Ankara University, Institute of Social Sciences, Ankara.
- Koksal, F. (1991). *The relationship between the locus of control (LOC) and aggressive behavior*. PhD Thesis, Ataturk University, Institute of Social Sciences, Erzurum.
- Orhun, A. (1992). *Fair play is an education policy in a sport school*. Hacettepe University, Sports Sciences 2nd National Congress, Ankara.
- Sahin, M.H. (2003). *Violence and Aggression in Sports*. Ankara, Nobel Publication and Distribution.p.102
- Tiryaki, S., Erdil, G., Acar, M., Emlek, Y. (1991). *Personality traits of young peoples who are athletes or non-athletes*. Journal of Sports Medicine. 26, 19-23.
- Yalcin, Y. (2009). *Effect of the sport satisfaction on stress and aggression levels of athletes: an application in Antalya province aimed at determining the role of gender for coaches*. Master's Thesis, Erciyes University, Institute of Social Sciences, Kayseri.
- Yıldız, S. (2009). *Examination of the aggression levels of secondary school students who involve in or not involve in sports*. Master's Thesis, Selcuk University, Institute of Health Sciences, Konya.
- Yuksel, A. (2004). *Effect of the empathy training program on the elementary school students' empathic skills*. Uludag University, Journal of Faculty, 17(2), 341-354.