

Analysis of Aggression Levels in Individual and Team Athletes

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KEYWORDS Aggression. Anxiety. Athletes. Sports Man. Stress

ABSTRACT This study is conducted with the purpose of comparing the aggression levels of individual and team athletes who continue their active sport life. 142 individual athletes and 181 team athletes constitute the research group. "Aggression scale" developed by Kiper (1984) is used in the collection of research data. Descriptive statistics, Mann Whitney U for dual groups, Kruskall Wallis for multiple groups and Spearman's rho tests to establish the relationship between two variables are used in the analysis of data obtained in the research. At the end of the research, it is found that while no difference is observed between the aggression levels of individual and team athletes, the destructive and passive aggression points of women and the assertiveness points of men in the research group who engage in individual and team sports is found to be high. In addition, no difference is found in individual athletes in terms of the age variable.

INTRODUCTION

Aggression is physical or verbal behavior, it is not an attitude or emotion, it involves harm or injury. Aggression is defined as any behavior directed toward intentionally harming or injuring another living being (Sahin and Abakay 2015).

We are faced with increasing aggression in both our daily lives and sports. Yet, sport is generally defined with its ability to eliminate aggression and to de-escalate anger outbursts (Caki 1998). Since the success in sports depends on the prevention of the rivalry, it is practiced depending upon rules (Russell 1978). The rules of the sport branch and the intent and malice of conduct determine the limitations of aggression in sports activities. The same conduct is evaluated differently in different sports branches. The likelihood of aggression also rises with the increase in the frequency of body contact (Tiryaki 1996).

Aggressive conduct is mostly identified in the case of breach in the rules and conduct with the aim of harming the opponent.

Increase in physical fatigue, the anxiety caused by the changelessness in the score, the physical strength and high performance of the

rival team and, most importantly, the intolerance of the rival's constant aggressive conduct by the referee and the spectators conditions the formation of aggressive behaviors (Tiryaki 1996).

The term "aggression" is used in various meanings in sports and exercise. In general terms, two concepts which are "good" aggression and "bad" aggression are defined. The term automatically evokes some associations and produces positive and/or negative standards of judgment and emotional responses (Gill 2000). When sport psychologists discuss aggression in general, they are referring to what many people would call "bad" aggression (Sahin and Abakay 2015)

However, the most aggressive behaviors in sports and physical activity do not appear naturally as if it is conducted willingly or non-willingly, instead; the good or bad nature of the behavior seems more to be based on interpretation. For example, in ice hockey, two people who watch a tough but excellent move may not agree on whether the shot could be categorized as good aggression or bad aggression. If you prefer to be neutral by ignoring the good-bad duality, it becomes even easier to talk about "aggression" as a type of behavior which we try to comprehend (Gill and Williams 2008).

Researchers propose certain statements on aggression which inherently exists in the set of sport (Widmeyer et al. 2002). Athletes behave aggressively in these specific situations:

- ♦ If s/he is behaved aggressively by someone else,
- ♦ If the opposing team makes him/her angry.

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- ♦ If the athlete has more high ego-oriented but low moral development,
- ♦ If the athlete wants to show how tough s/he is,
- ♦ If the athlete believes this is a part of his/her duty,
- ♦ If the athlete feels group pressure to be aggressive.

According to another finding, the aggression of teams more likely occurs if they start competing more frequently (Widmeyer and McGuire 1997). It is stated that social learning theory conceptualizes aggression as a learned behavior. In this context, aggression as a learned behavior is theoretically claimed to be acquired by reinforcements and taking someone as an example. The trainer, team mates and family of the athlete; therefore, constitutes his/her reference framework. In addition, pressure of trainers on players in order to let them behave more aggressively is a current fact. In most cases, this is found "appropriate" in the sportive environment (Cobanoglu 2006).

As in every field of profession, athletes also value for promotion, making a career, earning more money, becoming famous and reinforcing their position in the profession they are in. If the athlete contributes to the success of his/her team with aggressive behavior during the match, s/he is supported by the administrators and supporters of the team even though s/he is penalized by the referee. The aggression behavior of the player who gained the acclaim of the administrators and supporters in such a manner is thus reinforced. This situation causes the reinforcement of aggression in the athlete. The player will continue to exhibit aggression in the following matches for the continuation of success and acclaim (Kabak 2009).

Although the philosophy of sport asserts peace as the ultimate goal, currently everything is indexed to winning in practice. The established rules intend the continuation of competitions, enjoyment of athletes and not to bore the spectators. In case of non-compliance with these necessities, certain sanctions are implemented. Still, athletes face with these sanctions and demonstrate aggressive behaviors, accordingly. Especially in sports which require physical struggle, it can be said that referees' decisions not to pause the contest in order to continue the play reinforce aggression (Sarkin 2012).

This study aims to determine the aggression levels of individuals who engage in individual and team sports. In line with this purpose, answers of following questions are elaborated;

1. What are the aggression levels of people engaging in individual and team sports?
2. Aggression level;
 - 2.1. Does it vary in individual athletes according to gender?
 - 2.2. Does it vary in team athletes according to gender?
 - 2.3. Does it vary in individual athletes according to age groups?
 - 2.4. Does it vary in team athletes according to age groups?
 - 2.5. Does it vary in individual athletes according to national status?
3. At which level is the correlation level of sub-dimensions of aggression within individual athletes?
4. At which level is the correlation level of sub-dimensions of aggression within team-athletes?

METHODOLOGY

This research is categorized as descriptive survey model which deals with the aggression behavior of athletes engaging in individual and team sports. In this study, quantitative data is collected by utilizing the "Aggression Scale".

The data collected from the athletes is analyzed according to age, gender, national status and branch status (Individual/Team) variables and is reported, accordingly. SPSS 22.0 software is used in statistical analyses. 323 active athletes are selected randomly in order to designate the study group. The profile of these athletes is as follows; 142 of these athletes engage in individual sports and 181 of them engage in team sports. Accordingly, the branch distribution of the selected athletes are; Swimming 6, Athletics 24, Judo 26, Table Tennis 14, Weight Lifting 30, Badminton 12, Taekwondo 16, Arm Wrestling 10, Wrestling 4, Hokey 18, Handball 26, Volleyball 50, Basketball 28, Football 59. Lastly, the personal characteristics related to the study group are presented in Table 1. This study, at the season 2014-2015, the athletes who join the competitions at the relevant branch and also licensed athletes is limited assessment applications in Ankara.

Data Collection

Aggression Scale is used in order to collect data for this research: This scale is developed by Kiper (1984) and it consists of three sub-dimensions as destructive aggression, assertiveness and passive aggression. This scale consists of 30 items and each item is evaluated on a Likert type scale varying between 1-7. Cronbach alpha values related to the sub-dimensions of this study are observed as Destructive aggression .75, assertiveness .72, passive aggression .68 respectively. The fewest points which could be scored in each sub-dimension is 10 and the highest is 70. Kolmogorov-Smirnov and Shapiro-Wilk normalcy tests are carried out to determine whether the research data exhibits normal distribution or not. Kurtosis-Skewness values are checked for data sets not exhibiting normal distribution and the data are observed as not exhibiting normal distribution if scores are not in the bracket of +2/-2. Mann Whitney U for dual groups,

Kruskall Wallis for multiple groups and Spearman's rho Correlation analyses are used to establish the relationship between two variables.

FINDINGS

In Table 2, comparison of points scored by the research group in the aggression scale sub-dimensions in terms of the gender variable is presented. Significant differences ($p < 0.05$) are discovered in terms of the points scored by the individual and team athletes in all sub-dimensions of the aggression scale according to the gender variable. According to this data,

In the destructive aggression sub-dimension, it is found that women engaging in individual and team sports score higher points.

In the assertiveness sub-dimension, it is found that men engaging in individual and team sports have higher assertiveness points. In the passive aggression sub-dimension, women athletes engaging in individual and team sports are found to have higher points.

Table 1: Characteristics of the study group which are addressed in the study

Variables	Groups	Individual (n=142)		Team (n=181)	
		n	%	n	%
Age	16-18 age	50	35.2	26	14.4
	19-21 age	60	42.3	76	42.0
	22-24 age	28	19.7	42	23.2
	25+	4	2.8	37	20.4
Gender	Female	70	49.3	93	51.4
	Male	72	50.7	88	48.6
National	Yes	32	22.5	-	-
	No	110	77.5	181	100.0

Source: Self-organized in this study

Table 2: Comparison of points individual and team athletes scored in the aggression scale sub-dimensions in terms of the gender variable

Branch status	Sub-dimensions	Gender	N	Mean rank	Sum of ranks	MNU	Z	p
Individual	Destructive Aggression	Female	70	87.33	6113.00	1412.000	-4.526	.000
		Male	72	56.11	4040.00			
	Assertiveness	Female	70	61.84	4329.00	1844.000	-2.763	.006
		Male	72	80.89	5824.00			
	Passive Aggression	Female	70	78.79	5515.00	2010.000	-2.084	.037
		Male	72	64.42	4638.00			
Team	Destructive Aggression	Female	93	107.35	9984.00	2571.000	-4.322	.000
		Male	88	73.72	6487.00			
	Assertiveness	Female	93	73.30	6817.00	2446.000	-4.681	.000
		Male	88	109.70	9654.00			
	Passive Aggression	Female	93	98.33	9145.00	3410.000	-1.938	.043
		Male	88	83.25	7326.00			

Source: Self-organized in this study

In Table 3, comparison of points scored by the research group in the aggression scale sub-dimensions in terms of the age variable is presented. While no difference is observed in terms of the points individual athletes scored in the sub-dimensions of the aggression scale according to the gender variable, differences are found in all sub-dimensions for the individuals engaging in team sports. According to this data, it is found that those in the 16-18 age group and 19-21 age group score higher points in the destructive aggression sub-dimension. Those in the

above 25 age group score higher than all other groups. Accordingly, those in the 22-24 age group score higher points than those in the 19-21 and 16-18 age group in the Assertiveness sub-dimension. Lastly, those in the 16-18 age group score higher than the ones in the 22-24 and above 25 age groups and the ones in the 19-21 age group score higher than the above 25 age group in the passive aggression sub-dimension.

In Table 4, comparison of points research group scored in the aggression scale sub-dimensions in terms of the national status of indi-

Table 3: Comparison of points individual and team athletes scored in the aggression scale sub-dimensions in terms of the age variable

Branch status	Sub-dimensions	Age groups	N	Mean rank	χ^2	df	p	Significant difference
Individual	Destructive Aggression	16-18 age	50	75.76	4.677	3	.197	
		19-21 age	60	72.53				
		22-24 age	28	58.39				
		25+	4	94.50				
	Assertiveness	16-18 age	50	71.50	.356	3	.949	
		19-21 age	60	69.73				
		22-24 age	28	74.29				
		25+	4	78.50				
	Passive Aggression	16-18 age	50	74.70	7.465	3	.058	
		19-21 age	60	73.90				
		22-24 age	28	55.71				
		25+	4	106.00				
Team	Destructive Aggression	16-18 age	26	107.04	9.770	3	.011	1-3, 1-42-3, 2-4
		19-21 age	76	103.19				
		22-24 age	42	87.21				
		25+	37	77.19				
	Assertiveness	16-18 age	26	75.85	14.893	3	.002	3-1, 3-2 4-1, 4-24-3
		19-21 age	76	73.32				
		22-24 age	42	91.82				
		25+	37	114.48				
	Passive Aggression	16-18 age	26	110.65	11.680	3		1-3, 1-42-4
		19-21 age	76	101.76				
		22-24 age	42	90.37				
		25+	37	70.50				

Source: Self-organized in this study

Table 4: Comparison of points individual athletes scored in the aggression scale sub-dimensions in terms of the national status variable

Sub-dimensions	National	N	Mean rank	Sum of ranks	MNU	z	p
Destructive Aggression	Yes	32	101.44	3246.00	802.000	-4.682	.000
	No	110	62.79	6907.00			
Assertiveness	Yes	32	63.56	2034.00	1506.000	-1.242	.214
	No	110	73.81	8119.00			
Passive Aggression	Yes	32	87.50	2800.00	1248.000	-2.503	.012
	No	110	66.85	7353.00			

Source: Self-organized in this study

vidual athletes is presented. Significant difference is found in the destructive aggression and passive aggression sub-dimension in terms of the national status of individual athletes. According to this data, it is found that, individual nationals score higher points in the destructive aggression sub-dimension. Individual nationals also score higher points in the passive aggression sub-dimension.

In Table 5, comparison of points scored by the research group in the aggression scale sub-dimensions in terms of the branch status is presented. No difference is found in terms of the research group's being individual or team athletes related to the points scored in the aggression scale sub-dimensions.

In Table 6, the results of the Spearman's rho test which is used to establish the correlation between the research group's aggression scale sub-dimensions are presented. Significant correlations are found between aggression sub-

dimensions. According to this data, it is found that there is a weak, negative correlation between the destructive aggression points and assertiveness points of individual athletes. There is a strong, positive correlation between the destructive aggression points and passive aggression points of individual athletes. There is a weak, negative correlation between the assertiveness points and passive aggression points of individual athletes. There is a medium-level, negative correlation between the destructive aggression points and assertiveness points of team athletes. There is a medium-level, positive correlation between the destructive aggression points and passive aggression points of team athletes. There is a medium-level, negative correlation between the assertiveness points and passive aggression points of team athletes.

DISCUSSION

This study is conducted to analyze the aggression levels of individual and team athletes. Correspondingly, the following results have been found:

It is observed that in terms of the gender variable, the destructive and passive aggression points for women engaging in both individual and team sports scored are significantly high while in assertiveness points, men have significantly high points. When the assertiveness levels of the research group are examined, it is found that destructive aggression and passive aggression points are at medium level and the assertiveness points are very high.

Table 6: Correlation between the points individual and team athletes scored in aggression scale sub-dimensions

			Asserti- veness	Passive aggression
<i>Individual</i>	<i>Destructive Aggression</i>	r	-.208*	.741**
		p	.013	.000
	<i>Assertiveness</i>	r		-.176*
		p		.036
<i>Team</i>	<i>Destructive Aggression</i>	r	-.426**	.592**
		p	.000	.000
	<i>Assertiveness</i>	r		-.427**
		p		.000

*p<0.05, **p<0.01, individual_n=142, team_n=181

Table 5: Comparison of points individual and team athletes scored in the aggression scale sub-dimensions in terms of the branch status

Sub-dimensions	Branch status	Gender	N	Mean rank	Sum of ranks	MNU	Z	p
<i>Female</i>	<i>Destructive Aggression</i>	Individual	70	87.36	6115.00	2880.000	-1.258	.208
		Team	93	77.97	7251.00			
	<i>Assertiveness</i>	Individual	70	80.40	5628.00	3143.000	-.376	.707
		Team	93	83.20	7738.00			
	<i>Passive Aggression</i>	Individual	70	84.10	5887.00	3108.000	-.493	.622
		Team	93	80.42	7479.00			
<i>Male</i>	<i>Destructive Aggression</i>	Individual	72	78.36	5642.00	3014.000	-.529	.597
		Team	88	82.25	7238.00			
	<i>Assertiveness</i>	Individual	72	76.17	5484.00	2856.000	-1.073	.283
		Team	88	84.05	7396.00			
	<i>Passive Aggression</i>	Individual	72	80.78	5816.00	3148.000	-.069	.945
		Team	88	80.27	7064.00			

Source: Self-organized in this study

In one of the conducted study, it is found that people who engage in sports are more assertive than those who do not engage in sports (Dervent 2007). Athlete's use of his/her physical strength within the rules of the game is evaluated as assertiveness. For example, a boxer who knocks-out an opponent by conforming to the rules is; therefore, considered as assertive and not aggressive. Kiper (1984) defines all behaviors which ensure the individual's open telling of emotions to protect his/her interests without being anxious and use of his/her own rights by accepting the rights of others as assertiveness. In assertiveness, the individual does not disregard the rights of his/her opponent as well as expressing his/her own rights, feelings and thoughts.

While no difference is found between the aggression points of individual athletes in terms of the age variable, significant differences are found in team athletes. In case of team athletes, it is found that those in the 16-18 age group and 19-21 age group scores higher points in the destructive aggression sub-dimension than the ones in the 22-24 and above 25 groups. In assertiveness sub-dimension those in the 22-24 and above 25 age group score higher than the 16-18 and 19-21 age group. And those in the above 25 group scores higher than the ones in the 22-24 age group. In the passive aggression sub-dimension, those in the 16-18 age group score higher than the ones in the 22-24 and above 25 age groups and the ones in the 19-21 age group scored higher than the above 25 age group.

In his study on footballers, Ozdemir (2014) finds out that destructive aggression points of footballers in the 17-19 age group is higher than the footballers above the age of 23. Topuz (2008) and Atkinson (1999) state that aggression tendency decreases in line with age. In his study which is conducted on wrestlers, Ersoy (2012) finds out that the age variable has no effect on aggression. In the studies of Yilmaz (2013) and Solak (2011), aggression points are found to decrease as the sport age increases. In the study conducted by Kizmaz (2004), it is stated that the characteristics of recognizing the rights of others, having self-confidence, avoiding harm to others of the social maturity and social skill aspect is developed as the sport engagement year of athletes increases. As the sport engagement year of the individual would increase with his/her age, these findings support my study. Based

on these results, we can state that destructive and passive aggression points decrease while assertiveness points increase in sportive individuals in line with age. Besides this, Ferguson (2015) points out that A Meta-Analysis of Video Game Influences on Children's and Adolescents' Aggression, Mental Health, Prosocial Behavior, and Academic Performance: the analysis of 101 studies suggest that video game influences on increased aggression ($r = .06$). This analysis shows that; game environment influences childhood increased aggression (Ferguson 2015).

In terms of the national status variable, significant difference is found in the destructive aggression and passive aggression sub-dimensions of individual athletes. National athletes are found to have higher points in both sub-dimensions. Since there are no national athletes among the team athletes in the study group, the effect of this variable on team athletes could not be considered.

In terms of branch status, no difference is found in the aggression points of individual and team athletes. Therefore, it can be stated that engaging in individual or team sports has no effect on aggression levels. No statistically significant difference is found between the individuals engaging in team and individual sports in terms of aggression characteristics in the study conducted by Dervent (2007) either.

When the correlation analysis results obtained from the aggression scale sub-dimensions of individual and team sports is examined, a weak and negative correlation is discovered between the destructive aggression points and assertiveness points of individual athletes. Therefore, it can be stated that assertiveness points of individual athletes decrease while their destructive aggression points increase.

A strong and positive correlation is found between the destructive aggression points and passive aggression points of individual athletes. Therefore, it can be stated that passive aggression points of individual athletes increase as their destructive aggression points increase.

In addition, a weak and negative correlation is found between the assertiveness points and passive aggression points of individual athletes. Therefore, it can be stated that passive aggression points of individual athletes decrease as their assertiveness increase.

Moreover, a medium-level, negative correlation is found between the destructive aggres-

sion points and assertiveness points of team athletes. Therefore, it could be stated that assertiveness points of team athletes decrease as their destructive aggression points increase.

Accordingly, a medium-level, positive correlation is found between the destructive aggression points and passive aggression points of team athletes. Therefore, it can also be stated that passive aggression points of team athletes increase as their destructive aggression points increase.

A medium-level, negative correlation is found between the assertiveness points and passive aggression points of team athletes. Therefore, it could be stated that passive aggression points of team athletes decrease as their assertiveness increase.

According to the correlation analysis, the conclusion that assertiveness points decrease in cases where destructive and passive aggression points increase. It is also found that passive aggression also increases in cases where destructive aggression increases for both groups. In various studies, a strong and positive correlation is found between the destructive and passive aggression points (Ersan and Dogan 2002; Ozdemir 2014; Yildirim and Abakay 2015).

In order to categorize aggression, the behavior first needs to be occurred and accordingly it needs to carry a harmful and offensive intent. Lastly, harm and offence also needs to be realized. This could be physical or psychological. For example, swearing and saying bad words to someone is aggression as much as hitting and kicking (Tiryaki 2000).

In their study, Aktas et al. (2004) reach the conclusion that in case of the replies of a player who exhibits such behavior to the aggression questionnaire, his/her positive answers to items measuring the passive aggression used as a tool to reach a certain goal and to items measuring the destructive aggression conducted to cause pain and harm to a person are natural.

CONCLUSION

In conclusion, destructive and passive aggression points of women in the research group engaging in individual and team sports are found to be high while the assertiveness points of men are found as high for both branches. It is found that while no difference is discovered in individ-

ual athletes in terms of the age variable, the decrease of destructive and passive aggression points and the increase of assertiveness points as the ages of individuals engaging in team sports increased. Moreover, destructive and passive aggression points of national athletes engaging in individual sports are found to be higher than that of those who are not national athletes. No difference is observed between the aggression levels of individual and team athletes. To conclude, while positive correlation is observed between destructive aggression and passive aggression, the conclusion that there is negative correlation between destructive aggression and passive aggression, and assertive points.

RECOMMENDATIONS

The following proposals are regarded in the light of acquired data: Carrying out awareness raising studies about aggression for young sportsmen. In this study, branches are categorized as individual and team sports. Carrying out studies in which sport branches will be compared are by one to reach more detailed results. Carrying out relational studies as state of stress and anxiety which affect aggression and sporting performance.

Study results due to related literature point that generally male display in higher frequency aggression than females. According to acquired data, female athletes' disruptive and passive aggression scores are high. Carrying out further-going qualitative and quantitative studies for female athletes.

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Paper received for publication on June 2015
Paper accepted for publication on January 2016