

Research of Aggressive States of Student Athlete Participating in Inter High School Competitions*

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ABSTRACT The research is aimed at finding out aggressive states of athletes student participating in the inter-high school competitions and to determine the relationship between sport and aggressiveness in many aspects as well. The data comprises 490 student athletes from 26 high schools participating in the inter high school competitions in the academic year 2013-2014 in Rize. The random cluster sampling method was used. Personal Information Form (PIF) developed by the researcher and Aggressiveness Inventory (AT) developed by Ipek Ilter (Kiper) were used as data collection tools. Regarding the distribution of data, primary normality test (Kolmogorow-Smirnov D test) was applied. Distribution of the student athletes and their percentages were determined through descriptive statistics. In comparing aggressiveness states according to variables such as gender, type of school and sport of student athletes, Independent Sample t test was applied at $\alpha=0.05$ significance level. In comparing aggressiveness states according to age variable (4 groups), One Way ANOVA was applied at $\alpha=0.05$ significance level. Tukey HSD, a second-level test, was used for differences between groups found significant. Microsoft Excel 2003 was used to input data into the computer and to draw graph; SPSS 20.0 was used to analyse data. As a result of the analyses, according to variables such as age, gender, type of school and sport of student athletes, significant differences were detected at all sub-dimension aggressiveness scores except assertiveness.

INTRODUCTION

Sport is a kind of occupation, which combines sport and competition; awards the winners having more kinesthetic ability; high-level game necessitating race and heavy muscle training (Acet et al. 2006). A sport entails some activities including kinaesthesia (body-and-necessity-oriented), pleasure (joy, joke, challenging oneself, gaining specific experience), performance (self-performance-oriented) and standardization (adjusted to values, aims and rules) (Voigt 1998). Physical and mental health contains physiology and psychology (Su et al. 2014).

However, education can be defined as a period of change in human behavior by way of living, transfer of knowledge, skills and values to next generation, and achieving a decent life for individuals and society (Yetim 2011).

Education and sports have two-dimension relation: Education for sports and sports for education. In education for sports, education is an important tool for realizing a top-level sports. Education of sportsmen, trainers, spectators, referees and sport managers are at stake. In sports for education, sports is one of means used to achieve targets of education, in addition, it is

entertaining and the most effective if used accurately (Afacan 2001).

Sports has positive effect on physical and psychological education. Besides, it helps individuals to know and present themselves, and secure their place within the society. A sport is both a tool and is aimed at educating the individual and the society. A sport has direct effect on individual's physical and spiritual health. It helps people to be mentally vigilant, disciplined and conscious (Yetim 2011).

Aggression occurs in certain kinds. Destructive aggression can be considered synonymous to hostility. Recklessness is defined as individual's clearly expressing his feelings without considering own profit, and exercising his own right while looking after other's rights. Passive aggression can be considered as indirect type of aggression, and defined as harm caused by not acting instead of acting (Tutkun et al. 2006).

Aggression can vary verbally, physically and economically among individuals, organizations or states (Benard 2013). Thereby, it is important to analyze aggression in sports. Researchers of social sciences claim that sports is a reflection of the society. Although, aggression is a great element of society, it is a little sample of sports.

Unfortunately, aggressive behavior of sportsmen and spectators are more dominant today (Rahimizadeh et al. 2011).

It is so clear that aggression and violence in sports is not such a problem that can be overlooked and delayed. Unsuccess of solution tries in the short-term discourage possible long term tries and studies (Gumusgul et al. 2014)

Definitions of aggression in sports reflect the ones in basic psychology. For instance, aggression is defined as individual's psychologically or physically harming himself or others either. Some researchers claim that tendency to harm, is one of the elements defining aggressive actions. However, others exclude tendency to harm from aggression in sports (Grange and Keer 2010). Sports-related violence continues to attract media attention and public concern in many societies (Spaaij 2014).

In literature, the notion of aggression is generally described as intentional behavior to destruct something or harm somebody physically or verbally (Acet 2005). In another explanation, aggressive behavior is defined as destructive physical response or threat verbally or non-verbally against things, others or himself (Visser et al. 2014). Almost all the psychologists assert that aggression cannot be related to inherent factors, on the contrary, learning has significant effect on the type and level of aggressive behavior (Ozerkan 2004).

Violence and aggression in sports is a complicated problem. The limits of aggression in a game are specified through intention and purpose of the action in line with the related sport types. The nature of sportsman is dynamic, and it changes like that of an individual. Aggression can be explained by neither personal nor situational factors (Konter 2006).

There are two important points emphasized in sports. First one is related to aim and purpose of the attack and the second one is the target of the attack. Games and conditions of the rivalry and games requiring spectators pave the way for aggression. However, every behavior harming the opponent (hit) cannot be termed as aggression (Acet 2005).

In addition to physical and physiological capacity, a sportsman joins the game psychologically. Uncontrolled anger may have negative results on sportsmen. As a result, this leads to increase in aggressive and violent events (Birinci et al. 2006).

One of the important reasons for aggression in sports is that it will increase both performance and success. Many sport managers, coaches, trainers, sports columnists and spectators talk about aggressive sportsmen and teams; encourage charging; display rewarding attitude and behavior who are involved in violent and aggressive attacks. People, who think that violent and aggressive behaviors have fruitful results are in the majority. In this context, accepting and supporting behaviors towards violent and aggressive events facilitate the emergence of violence and aggressiveness (Konter 2006).

There are different reasons of aggressive behaviors during a game. The idea of winning at all costs is the source of unfavorable things in sports. This idea is common in all kinds of sport requiring close touch. Utter physical exhaustion, escalation of tension due to no scoring, superiority of physical power and performance of the opponent team, and most importantly either referee or spectators' welcoming of ongoing aggressive behaviors of the opponent are main sources of aggressive behaviors (Afyon and Ozkan 2006).

In puberty, a youngster widens his social environment outside the family, and needs to establish relationship with his peers. Even though peers are important in sports, there are few studies on this matter, and support in terms of sport is followed by social development. Sports constitutes an important element of self-perspective thus, is very significant in terms of sports and public ethics (Buruner et al. 2014).

Aggressiveness is one of the important subjects of youth. Youngsters do not have the ability to control their own aggressive behaviors; can easily violate customs and values of the society they live in (Rahimizadeh et al. 2011).

Students and youngsters are more prone to interpret others' behaviors as aggressive. Aggressive behavior of young players as a reaction to opponents' behavior is more frequent than that of adult players. The aggressive behavior is gradually used for his own profit. Based on this information, its trainer's mission to put forth clearly the conditions of player behaviors. Special rules and norms of sport are compared with daily life experiences. Thus, it is aimed to prevent misinterpretation of aggressiveness (Baunman 1994).

Also, the vast majority of research shows that sport participation, and particularly participation in team sports, is associated with in-

creased rates of hazardous drinking (Sonderlund et al. 2014).

In this case, the research is aimed at finding out aggressive states of athletes student participating in the inter high school competitions and to determine the relationship between sport and aggressiveness in many aspects as well.

METHODOLOGY

High school students, who took part in the tournament in the academic year 2013-2014 in Rize, constituted the population of the research. 490 students from 26 high schools (10 vocational high schools, and 16 general high schools), who were selected by random cluster sampling method, constituted the sample of the research.

An information form, prepared by researchers and composed of 16 articles, to collect socio-demographic information of the student athletes and Kiper Aggressiveness Inventory containing 30 questions developed by Ipek Ilter (1984) is used. Inventory contains three sub-tests as follows: destructive aggressiveness, recklessness and passive aggressiveness. Every sub-test is defined by 10 questions. They are likert-type questions to be answered between the ends of 'totally unacceptable' and 'perfectly acceptable.' Theoretically, the person answering 'perfectly acceptable' gets 30 points; if answering 'totally unacceptable' gets -30 points in every sub-test. Since negative points cannot be used statistically and 0 point would be problem in statistical analysis, 31 points are added to total score. Thus, 1 is the lowest, 61 is the highest score in every sub-test. A general aggressiveness score is obtained for every subject from total scores of every three sub-tests (Guner 2006). The lowest score is 3 whereas the highest one is 183 to be obtained from general aggressiveness score.

There are so many studies concerning validity and reliability of the inventory. Validity and reliability test coefficients formulized by Senyuzlu in 2013 form the basis of the study. In the study carried out by Senyuzlu (2013), Cronbach's alpha coefficient of internal consistency concerning sub-dimension of inventory's 'destructive aggressiveness' is 0.833, Cronbach's alpha coefficient of internal consistency concerning 'recklessness' sub-dimension is 0.805, and Cronbach's alpha coefficient of internal consistency concerning 'passive aggressiveness' is

0.800. As regards to coefficient of internal consistency of the whole, inventory is found to be 0.931 (Senyuzlu 2013).

Microsoft Excel 2003 was used for designing graphics and data entry; SPSS 20.0 software for analyzing data; Microsoft Office 2007 for typing the study. Normality test (Kolmogorow-Smirnov D test) was used in data distribution, and it had normal distribution. Distribution of student athletes and their percent were defined by Descriptive Statistics. Independent Sample t test in $\alpha=0.05$ meaningfulness level was applied in comparing aggressiveness condition as per gender, school and sport types of student athletes. One Way ANOVA test in $\alpha=0.05$ meaningfulness level was applied in comparing aggressiveness condition as per ages (4 groups). Second level test, Tukey HSD, was used for differences which was found meaningful between groups.

RESULTS

Distribution of Student Athletes

Age proportion of student athletes in the study was as follows: 22.4 percent of them was 15 year olds, 37 percent of 16 years, 31.4 percent of 17 years, 9.2 percent of 18 year olds. As per gender: 57.8 percent of them are boys; 42.2 percent of girls. As per school types: 55.9 percent of them was of general high schools, 44.1 percent of vocational high school. As per sport types: 52 percent of them did team sport, 48 percent did individual sport (See Table 1).

Aggressiveness Scores of Student Athletes as per Ages

One Way Anova test on $\alpha=0.05$ meaningfulness level was applied to determine whether there was significant difference between aggressiveness level of student athletes as per age. Depending on age, test results showed that differences in the scores of destructive aggressiveness ($F(3,464)=8.819; p<0.05$) passive aggressiveness ($F(3,464)=5.391; p<0.05$), general aggressiveness ($F(3,464)=7.279; p<0.05$) was significant, while difference between the scores of recklessness ($F(3,464)=0.240; p>0.05$) was not. Tukey HSD as second level test was applied to specify between which groups there was determined meaningful difference.

Test results exhibited that general aggressiveness scores (119.44 ± 25.513) of 18 year-old stu-

Table 1: Distribution of student athletes

	Age	N	Mean	Std. deviation	Minimum	Maximum	F	Sig.
<i>Destructive Aggressiveness</i>	< 15 age	104	28.13	10.578	3	55	8.819	0.000
	16 age	172	32.63	11.397	6	57		
	17 age	146	34.34	12.330	7	61		
	18 age >	43	37.47	11.705	5	56		
	Total	465	32.61	11.842	3	61		
<i>Recklessness</i>	< 15 age	104	45.85	8.182	27	61	0.240	0.868
	16 age	172	46.11	8.768	18	61		
	17 age	146	46.29	7.882	24	61		
	18 age >	43	47.09	8.411	22	59		
	Total	465	46.20	8.314	18	61		
<i>Passive Aggressiveness</i>	< 15 age	104	26.84	11.088	3	50	5.391	0.001
	16 age	172	27.88	12.708	1	61		
	17 age	146	30.04	11.928	2	57		
	18 age >	43	34.88	11.953	9	56		
	Total	465	28.97	12.217	1	61		
<i>General Aggressiveness</i>	< 15 age	104	100.82	21.499	46	156	7.279	0.000
	16 age	172	106.63	24.662	36	163		
	17 age	146	110.67	23.709	60	165		
	18 age >	43	119.44	25.513	36	165		
	Total	465	107.78	24.247	36	165		

dent athletes are meaningfully higher than 16 year-olds (106.63 ± 24.662) and 15 year-olds (100.82 ± 21.499), respectively; general aggressiveness scores of 17 year-old student athletes (110.67 ± 23.709) are also meaningfully higher than those of 15 year-olds (100.82 ± 21.499). General aggressiveness scores of 18, 17, 16 year-olds are more than those of 17, 16, 15 year-olds, respectively, but it was not found significant nonetheless (See Table 2).

Aggressiveness Scores of Student Athletes as per Genders

Independent sample t-test on $\alpha=0.05$ meaningfulness level was applied for two indepen-

Table 2: Aggressiveness scores of student athletes as per ages

Groups	N	% Within
< 15 age	104	22.4%
16 age	172	37.0%
17 age	146	31.4%
18 age >	43	9.2%
Total	465	100%
Male	269	57.8%
Female	196	42.2%
Total	465	100%
General high schools	260	55.9%
Vocation high schools	205	44.1%
Total	465	100%
Team sports	242	52.0%
Individual sports	223	48.0%
Total	465	100%

dent groups to determine whether there was significant difference between aggressiveness scores of student athletes as per genders. Depending on genders, test results showed that difference between the scores of destructive aggressiveness ($t_{.05(463)}=3.924$; $p<0.05$) passive aggressiveness ($t_{.05(463)}=2.277$; $p<0.05$), general aggressiveness ($t_{.05(463)}=2.823$; $p<0.05$) was significant, while difference between the scores of recklessness ($t_{.05(463)}=0.664$; $p>0.05$) was not.

Test results informed that general aggressiveness scores (110.47 ± 23.866) of boys are meaningfully higher than those of girls (104.09 ± 24.341) (See Table 3).

In like manner, according to Gumusgul and friends' study, significant difference of Destructive Aggressiveness Sub-dimension scores related to gender variable has been determined in ($t_{.05}=2.076$; $p=0.039$; $p<0.05$). There is also significant difference between Passive Aggressiveness Sub-dimension scores and gender ($t_{.05}=3.221$; $p=0.002$; $p<0.05$). On the other hand, there is not significant difference between Assertiveness Sub-dimension scores and gender ($t_{.05}=-1.841$; $p=0.067$; $p>0.05$) (Gumusgul et al. 2014).

Aggressiveness Scores of Student Athletes as per School Types

Independent Sample t-test on $\alpha=0.05$ meaningfulness level was applied for two independent groups to determine whether there was

Table 3: Aggressiveness scores of student athletes as per genders

	Genders	N	Mean	Std. deviation	t	Sig
<i>Destructive Aggressiveness</i>	Male	269	34.42	11.410	3.924	0.000
	Female	196	30.12	12.001		
<i>Recklessness</i>	Male	269	45.98	8.382	-0.664	0.507
	Female	196	46.50	8.232		
<i>Passive Aggressiveness</i>	Male	269	30.07	11.714	2.227	0.023
	Female	196	27.47	12.753		
<i>General Aggressiveness</i>	Male	269	110.47	23.866	2.823	0.005
	Female	196	104.09	24.341		

significant difference between aggressiveness scores of student athletes as per school types. Depending on school types, test results showed that difference between the scores of destructive aggressiveness ($t_{.05(463)}=2.300$; $p<0.05$), passive aggressiveness ($t_{.05(463)}=3.722$; $p<0.05$), general aggressiveness ($t_{.05(463)}=2.926$; $p<0.05$) was significant, while difference between the scores of recklessness ($t_{.05(463)}=0.191$; $p>0.05$) was not.

Test results indicated that general aggressiveness scores (111.46 ± 25.752) of student athletes in vocational high schools are meaningfully higher than those in general high schools (104.88 ± 22.623) (See Table 4).

Aggressiveness Scores of Student Athletes as per Sport Types

Independent Sample t-test on $\alpha=0.05$ meaningfulness level was applied for two indepen-

dent groups to determine whether there was significant difference between aggressiveness scores of student athletes as per sport types. Depending on sport types, test results displayed that difference between the scores of destructive aggressiveness ($t_{.05(463)}=2.914$; $p<0.05$), passive aggressiveness ($t_{.05(463)}=3.929$; $p<0.05$), general aggressiveness ($t_{.05(463)}=3.394$; $p<0.05$) was significant, while difference between the scores of recklessness ($t_{.05(463)}=0.016$; $p>0.05$) was not. Test results indicated that general aggressiveness scores (111.40 ± 25.367) of student athletes doing team sport are meaningfully higher than those doing individual sport (103.85 ± 22.371) (See Table 5).

DISCUSSION

The research is aimed at finding out aggressive states of athletes student participating in

Table 4: Aggressiveness scores of student athletes as per school types

	School types	N	Mean	Std. deviation	t	Sig
<i>Destructive Aggressiveness</i>	General high schools	206	31.49	11.342	-2.300	0.022
	Vacation high schools	205	34.02	12.330		
<i>Recklessness</i>	General high schools	206	46.27	8.300	0.191	0.849
	Vacation high schools	205	46.12	8.351		
<i>Passive Aggressiveness</i>	General high schools	206	27.13	11.521	-3.722	0.000
	Vacation high schools	205	31.32	12.693		
<i>General Aggressiveness</i>	General high schools	206	104.88	22.623	-2.926	0.004
	Vacation high schools	205	111.46	25.752		

Table 5: Aggressiveness scores of student athletes as per sport types

	School types	N	Mean	Std. deviation	t	Sig
<i>Aggressiveness</i>	Team sport	242	34.13	12.039	2.914	0.004
	Individual sport	223	30.96	11.422		
<i>Recklessness</i>	Team sport	242	46.19	8.371	-0.016	0.988
	Individual sport	223	46.21	8.271		
<i>Passive Aggressiveness</i>	Team sport	242	31.08	12.207	3.929	0.000
	Individual sport	223	26.69	11.839		
<i>General Aggressiveness</i>	Team sport	242	111.40	25.367	3.394	0.001
	Individual sport	223	103.85	22.371		

the inter high school competitions and to determine the relationship between sport and aggressiveness in many aspects as well. According to the study results, the older student athletes have more aggressiveness scores. Aggressiveness level increases together with age. It is possible to say that excessive desire of winning the game, media's stirring effect, and social environment factors have increasing effect on destructive aggressiveness of student athletes. In addition, their feeling anxious about future and valuable as a result of their success in the society have direct effect on aggressiveness depending on their age and experience. Excessive expectations and valuing success instead of virtuous behaviors put pressure on student athletes in their adolescent period. Pressure and negative feelings with aging trigger destructive and destroying behaviors of student athletes.

The study Tekin et al. (2011) carried out on kick-boxers supports this study (Tekin et al. 2011). Mcconville et al. (2003) found out in their study that as the secondary school students get older, they become more aggressive (Mcconville and Cornell 2003). Normally, it is expected that age and experience have inverse proportion with aggressiveness level. Yet, the findings of this study showed just the contrary.

According to the findings, boys were more aggressive than girls. The reason why aggressiveness scores of boys were high can be explained with personality developed depending on gender. This is due to socio-cultural structure that girls are more sharing, naïve and altruistic, whereas boys are more ill-tempered, protective and loving show of force. Boys can be claimed to get aggressive easier than girls due to the fact that sport activities are competitive, and stronger side is more likely to win. Boy student athletes become more aggressive than girls, depending on many reasons that there are many sport competitions predominantly for boys in our country, big prizes for achievements and several environmental factors.

There are studies supporting our findings and vice versa. Tucker and Parks (2001) found in their studies that boys had more aggressive scores than those of girls (Tucker and Parks 2001). Bayram (2012) and Senyuzlu (2013) found out in their studies on high school and university students, respectively that boys were more aggressive than girls (Bayram 2012; Senyuzlu 2013). Contrary to the findings above, Dervent et al.

(2010) and Tutkun et al. (2010) found out that girls were more aggressive than boys (Dervent et al. 2010; Tutkun et al. 2010).

In addition, student athletes in vocational high schools are more aggressive than those in general high schools. General high school students have confidence in their parents while choosing their future jobs, while vocational high school students already completed their self-confidence development due to early selection of their future jobs. This is the reason why student athletes in vocational schools are more determined, clearer on reaching their targets. As a result, they are more enthusiastic about winning the game and also more aggressive in doing this. High schools in Turkey receive students in terms of their academic scores. It is clear that vocational school students are academically less successful than general high school students. If, academically less successful students are considered to be lazy, irresponsible, mischievous, they can be more aggressive in competitions. In addition to this, student athletes in vocational schools develop different personality compared to their counterparts in general high schools in that their school programs are different; they have internship and practice fields. Besides, with the effect of various environmental and social factors, student athletes develop different characteristics during the games; vocational high school students display more determined and clear behavior to win, so they can be said to be more aggressive than general high school students.

The results also informed that students engaged in team sport were more aggressive than those doing individual sports. Whether successful or not, a student partaking in individual sport takes all responsibility. The way to succeed in sport is to work systematically with self-confident to achieve a common group goal. Though sometimes, an individual athlete exhibit more aggressive behaviour if his opponent is superior to him or her. On the other hand, success comes from collective and regular work in team sport. The student athlete in aggrieve mood would put blame on the referee or his teammate when his team loses the game. Being in fear of losing his place in the team, the student athlete may be aggressive to his team mates or opponents. In addition, sport types affect profiles of athletes. Those engaged in individual sport are at the forefront with their personalities, and also success

or failure. Thus, these athletes should be more careful and controlled since they are the only ones for their teams in terms of responsibility. Those doing team sport take less responsibility since they share responsibility with teammates. Irresponsible actions of athletes doing team sport affect team success less than those doing individual sport. It can be ascertained that student athletes engaged in team sport are far more aggressive than those doing individual sport. In addition facts in sport, trainers and executives expect absolute success, request everything to succeed, which makes them aggressive. For instance, it is a typical behavior observed in team sport that a player tends to injure his opponent that comes face to face with the goalkeeper and has high chance of scoring, though knowing to be sent off. This is due to the fact that his team will benefit from this behavior. Aggressiveness in individual sport is more indirect due to the fact that athletes are more passively aggressive because of their heavy responsibility. Apart from the reasons mentioned above, student athletes, participating in team sport are more aggressive than those in individual sport owing to the fact that those athletes are much more affected by spectators, and they motivate their team mates to win the game.

CONCLUSION

The present study researched on aggressive states of student athlete participating in inter high school competitions. When aggressive states of student athletes' analyzed according to ages, genders, school types and sport types. In this study it was found that there was significant difference between age and gender variable and aggressive levels.

In conclusion, there was also significant difference between school types and sport types on aggressive states of student athlete participating in inter high school competitions.

RECOMMENDATIONS

1. It is going to be valuable to carry out similar studies in different parts of Turkey to define student athlete profiles.
2. Violence and aggressiveness should be one of the subjects of physical education and sports classes in schools, and student athletes should be informed well enough.

3. Considering cultural features of our country, a scale concerning different aspects of aggressiveness in sports should be developed.
4. Everybody should be inculcated that a sport is a competition in peace, brotherhood and friendship, and everybody should behave accordingly.
5. Media, especially newspapers and sport programs, should be sensitive and remain aloof from news, images or press releases containing aggressiveness and violence in the society.
6. Parents of student athletes should be briefed about aggressiveness and violence, which will eventually contribute to healthy and sophisticated future generations.

REFERENCES

- Acet M 2005. *Sporda Saldırganlık ve Sıddet. (Aggression and Violence in Sport)*. Istanbul: Morpa Publication.
- Acet M, Kalkavan A, Koc H, Demirel P, Sinoforoğlu OT 2006. Okullar Arası Yarışmalarda Dereceye Giren Sporcu Erkek Öğrencilerin Sporda Saldırganlık ve Sıddet ile İlgili Görüşlerinin Araştırılması (Researching the Opinions of Sportmen with Aggressivity and Violence in Sport who to Place in Inter-school competitions). *The 9th International Sports Sciences Congress, Congress Proceedings*. Muğla, 3-6 November 2006: Istanbul: Nobel Publication, pp. 899-903.
- Afacan E 2001. *Futbolcuların Profesyonellik Anlayışları Üzerine Sosyolojik Bir Çözümleme (Manisa Örneği) (The Sociological Analysis on Professional Mentality of Footballers (Manisa Example))*. Master Thesis, Unpublished. Isparta: Suleyman Demirel University.
- Afyon YA, Özkan H 2006. Futbolcularla Güreşçilerin Saldırganlık Düzeylerinin Karşılaştırılması. (The Comparison of Aggressiveness Level of Football Players and Wrestlers). *The 9th International Sports Sciences Congress, Congress Proceedings*. Muğla, 3-6 November 2006. Istanbul: Nobel Publication, pp. 769-771.
- Baunman S 1994. *Uygulamalı Spor Psikolojisi (Applied Sport Psychology)*. Istanbul: Alfa Publication.
- Bayram Y 2012. *Spor Yapan ve Yapmayan 14-18 Yaş Grubu Öğrencilerin Saldırganlık Tutumlarının İncelenmesi. (Examining Aggression Attitudes of Students at Between 14 and 18 Ages Who Do Physical Exercise and Who Don't Do Physical Exercise)*. Master Thesis, Unpublished. Kutahya: Dumlupınar University.
- Benard S 2013. Reputation systems, aggression, and deterrence in social interaction. *Soc Sci Res*, 42: 230-245.
- Birinci R Sivrikaya AH, Erhan SE 2006. Farklı Spor Branşlarındaki Erkek Sporcuların Ofke ve Anksiyete Düzeylerinin İncelenmesi. (Female Athletes in Different Sports Branches and Anxiety Levels of

- the Temperance Investigation). *The 9th International Sports Sciences Congress, Congress Proceedings*. Mugla, 3-6 November 2006. Istanbul: Nobel Publication, pp. 912-914.
- Buruner MW, Boardley ID, Cote J 2014. Social identity and prosocial and anti-social behavior in youth sport. *Psyc Sport Exer*, 15: 56-64.
- Dervent F, Aslanoglu E, Senel O 2010. Lise öğrencilerinin saldırganlık düzeyleri ve sportif aktivitelere katılımla ilişkisi (Istanbul ili örneği). (Aggressivity levels of the high school students and relation with their participation to sport activities (Sample of Istanbul)). *International Journal of Human Sciences*, 7(1): 521-533.
- Grange P, Kerr JH 2010. Physical aggression in Australian football: A qualitative study of elite athletes. *Psyc Sport Exer*, 11: 36-43.
- Gumusgul O, Acet M, Isik U, Bisgin H 2014. An examination of aggression level of taekwondo trainers in Turkey according to different variables. *International Conference for Academic Disciplines Vienne/Austria*, April 6-10 2014.
- Gumusgul O, Acet M, Ersoy A 2014. As Part of Aggression and Violence in Sports: Hooliganism. *13th International Sport Sciences Congress*, Konya, Turkey, November 7-9 2014.
- Guner BC 2006. *Takim Sporlari ve Bireysel Sporlar Yapan Sporcularin Saldirganlik Duzeylerinin Incelenmesi*. (Examination of the Level of Aggression of Individuals Participating Team and Individual Sports). Master Thesis, Unpublished. Samsun: Ondokuz Mayıs University.
- Konter E 2006. *Spor Psikolojisi El Kitabı (Handbook of Sport Psychology)*. 6th Edition. Ankara: Nobel Publication.
- Mcconville DW, Cornell DG 2003. Aggressive attitudes predict aggressive behavior in middle school students. *J Emot Behav Disord*, 11(3): 179-187.
- Ozerkan KN 2004. *Spor Psikolojisine Giriş (Introduction to Sport Psychology)*. Istanbul: Nobel Publication.
- Rahimizadeh M, Arabnarmi B, Mizany M, Shahbazi M, Bidgoli ZK 2011. Determining the difference of aggression in male and female, athlete and non-athlete students. *Soc Behav Sci*, 30: 2264-2267.
- Senyuzlu E 2013. *Universite Ogrencilerinde Spora Katilimin Saldirgan Davranislar Uzerine Etkilerinin Incelenmesi*. (Analysis of the Effects of Sports Participation on Aggressive Behaviour among University Students). Master Thesis, Unpublished. Kutahya: Dumlupinar University.
- Sonderlunda A, O'Brien K, Kremer P, Rowland B, De Groot F, Staigera P, Zinkiewicz L, Millera PG 2014. The association between sports participation, alcohol use and aggression and violence: A systematic review. *Journal of Science and Medicine in Sport*, 17: 2-7.
- Spaaij R 2014. Sports crowd violence: An interdisciplinary synthesis. *Aggression and Violent Behavior*, 19: 146-155.
- Su CL, Lee CJ, Shinger HS 2014. Effects of involvement in recreational sports on physical and mental health. *Quality of Life of the Elderly Anthropologist*, 17(1): 45-52.
- Tekin A, Tekin G, Eliaz M 2011. Kick-boksörlerin cesitli degiskenlere gore ofke ve saldirganlik duzeylerinin arastirilmesi. (Examining the aggressiveness and anger levels of kick-boxers considering some variables). *Turkish Kick Boxing Federation Journal of Sport Science*, 4(1): 34-47.
- Tucker LW, Parks JB 2001. Effects of gender and sport type on intercollegiate athletes' perceptions of the legitimacy of aggressive behaviors in sport. *Soc Sport J*, 18(4): 403-413.
- Tutkun E, Guner BC, Agaoglu SA 2006. Takim Sporlari ve Bireysel Sporlar Yapan Sporcularin Saldirganlik Duzeylerinin Incelenmesi. (Examination of the Level of Aggression of Individuals Participateint Team and Individual Sports). *The 9th International Sports Sciences Congress, Congress Proceedings*. Mugla, 3-6 November 2006. Istanbul: Nobel Publication, pp. 1068-1072.
- Tutkun E, Guner BC, Agaoglu SA, Soylu R 2010. Takim sporlari ve bireysel sporlar yapan sporcularin saldirganlik duzeylerinin degerlendirilmesi. (Evaluation of aggression levels of individuals participating in team and individual sports). *Journal of Sports and Performance Researches*, 1(1): 23-29.
- Visser EM, Berger HJC, Prins JB, Valk HMJVS LD, Teunisse JP 2014. Shifting impairment and aggression in intellectual disability and autism spectrum disorder. *Res Dev Disabil*, 35: 2137-2147.
- Voigt D 1998. *Spor Sosyolojisi (Sociology of Sport)*. Istanbul: Alkim Publication.
- Yetim AA 2011. *Sosyoloji ve Spor (Sport Sociology and Sport)*. Ankara: Berikan Publication.