The Predictive Role of Cognitive Flexibility and Cognitive Control on Aggression and Anger in Sports

Ömer Faruk YAZICI , Barış MERGAN

Tokat Gaziosmanpaşa University, Faculty of Sport Sciences, Tokat/Türkiye

Abstract

At the time of competition, athletes experience instant emotional change and stress in the face of both adaptation and change demands. Therefore, athletes need skills such as cognitive control and cognitive flexibility to control their aggression and anger during stress while competing. From this point of view, the research aims to determine the role of cognitive control over emotions, evaluation and coping flexibility in aggression and anger in sports and to examine their relationships according to some variables. The study group of the research consists of a total of 442 athlete students (Avg$_{age}$ =22,02±4,32), 205 females (46.4%) and 237 males (53.6%). "Competitive Aggressiveness and Anger Scale" and "Cognitive Control and Flexibility Scale" were used in the research. Descriptive statistics, MANOVA Test and Multiple Linear Regression (MLR) were used for data analysis. In the findings of the research, it was seen that the aggression mean scores of males were high, and anger and aggression mean scores were higher in athletes who smokes and used alcohol. Another important result of the study is that cognitive control over emotions and evaluation and coping flexibility explain 17% of the total variance in aggression and anger in sports. In particular, it can be said that cognitive control over emotions has a higher effect on determining aggression and anger in sports.

Keywords: Cognitive Flexibility, Cognitive Control, Aggression and Anger in Sports, Athlete Student

Corresponding Author:
Ömer Faruk YAZICI
omerfaruk.yazici@gop.edu.tr

Bilişsel Esneklik ve Bilişsel Kontrolün Sporda Saldırganlık ve Öfke Üzerindeki Yordayıcı Rolü

Öz

Rekabet anında sporcular gerek uyum, gerekse değişim talepleri karşısında anlık olarak duygusal değişim ve stres yaşamaktadır. Dolayısıyla sporcular, rekabet ederken stres anında saldırganlık ve öfkelerini kontrol altına alabilmek üzere bilişsel kontrol ve bilişsel esneklik gibi becerilere ihtiyaç duymaktadırlar. Buradan hareketle araştırmanın amacı sporda saldırganlık ve öfkede duyular üzerinde bilişsel kontrol, değerlendirme ve başa çıkma esnekliğinin rolünü belirlemek ve bazı değişkenlere göre ilişkilerini incelemektir. Araştırmanın çalışma grubunu 205 kadın (%46,4), 237'si erkek (%53,6) olmak üzere toplam 442 sporcu öğrenci (Ort$_{yaş}$=22,02±4,32) oluşturmaktadır. Araştırmada "Sporda Saldırganlık ve Öfke Ölçeği" ve "Bilişsel Kontrol ve Esneklik Ölçeği" kullanılmıştır. Verilerin analizi için betimsel istatistik, çoklu doğrusal regresyon ve MANOVA testi kullanılmıştır. Araştırma bulgularında erkeklerde saldırganlık ortalamalarının yüksek olduğu, alkol ve sigara kullanan sporcu öğrencilerde öfke ve saldırganlık ortalamalarının yüksek olduğu görülmüştür. Araştırmanın diğer önemli bir sonucu ise duyular üzerinde bilişsel kontrol ve değerlendirme ve başa çıkma esnekliği sporda saldırganlık ve öfkede toplam varyansın %17'sini açıkladığıdır. Özellikle duyular üzerinde bilişsel kontrolün sporda saldırganlık ve öfkeyi belirlemede etkisinin daha yüksek olduğu söylenebilir.

Anahtar kelimeler: Bilişsel Esneklik, Bilişsel Kontrol, Sporda Saldırganlık ve Öfke, Sporcu Öğrenci

Introduction

Individuals perceive stress in the face of events that they cannot foresee, control or consider as overloading throughout their life processes (Cohen et al., 1983). When individuals' physical, social, mental, emotional and spiritual environments change, they have to cope with the stress brought by this change (Coleman, 1993). One of the most stressful environments where the stress situation that all individuals perceive and have to cope with is undoubtedly the competition areas. The pressure evoked by all stakeholders such as managers, coaches, fans, family, and the press affects the athletes, who want to win by displaying their skills in the best way in front of thousands of spectators, to a significant extent biologically, psychologically, physiologically and environmentally at the time of competition.

The fact that today's understanding of sports is based on winning, and success also brings economic concerns to the fore (Görgüt and Tuncel, 2017), and may lead to the emergence of antisocial behaviours such as anger and aggression in sports fields. Uncontrolled anger and aggressive behaviours brought by the perception of winning at any cost in sports can lead to destructive results (Berrebi, 2018). Situations such as that perception of winning at any cost, and the desire to have more financial opportunities, prestige and fame may also cause the athletes to act with the pure sense of winning. Therefore, the athletes behaving with the perception of pure winning do not care about the values of sports with the effect of competition and may incline to damaging actions toward their opponents (Çağlayan et al., 2018).

Aggression, which is one of the most common behaviours against frustration (Cüceloğlu, 1994), includes the behaviours and attitudes of consciously, physically or emotionally harming any living thing (Ballard et al., 2004), and it is caused by the feeling of anger (Hubbard et al., 2010), In other words, aggression is defined as physical, verbal or symbolic actions used to harm the other person or to protect oneself, and which occurs due to some emotions such as anger, and fear or due to some actions like frustration (Özdevecioğlu and Yalçın, 2010). On the other hand, Tiryaki (2000) defines aggression as managing people, disrupting the work to always win, and as hostile, destructive, and coercive behaviour. On the contrary, anger is defined as an "adverse" and a "negative" emotional response to a perceived provocation (Berkout et al., 2019). Anger, which is a normal emotion in every human being, is an emotion that should be kept under control (Abrams, 2010). Otherwise, it can bring about aggression (Mowlaie et al., 2011).

When individuals encounter the desire for adaptation or change, they tend to cognitively evaluate their characteristics, their ability to overcome, and their knowledge and skills to respond to the demands of the environment (Lazarus and Folkman, 1984). At the time of competition, athletes

experience instant emotional change and stress in the face of both adaptation and change demands. Hence, it is thought that athletes need cognitive control and cognitive flexibility to maintain a fine line that will not show aggression and anger while competing. Gabrys et al. (2018) stated that cognitive control and cognitive flexibility are important features playing a role in an individual's ability to adapt to a constantly changing environment and in their goal-oriented actions. Cognitive control is defined as directing attention to a relevant situation or purposeful information while blocking information not related to that topic (Gabrys et al., 2018). Differently, cognitive control refers to the ability to reject irrelevant information while simultaneously drawing attention to the information necessary for a specific goal (Morton et al., 2011). Cognitive flexibility is the ability to change emotions and thoughts according to changing environmental conditions (Dennis et al., 2010). People with this ability can be considered as people who can put forward harmonious emotions and thoughts in a more balanced way instead of the feelings and thoughts that put them in trouble and incompatible, can develop alternatives and can overcome difficult situations more easily (Teasdale et al., 2001; Deveney et al., 2006). The cognitive flexibility process, which can also be expressed as a cognitive strategy includes the skills of gathering attention, controlling the information someone has, determining their reactions, setting goals and making plans in line with their goals, identifying changing conditions and possible mistakes, and making new plans regarding them (Bayram et al., 2021). It is observed that individuals with a high level of cognitive flexibility are flexible in terms of communication, have alternatives in the face of problems, are assertive, sensitive, self-confident, and tolerant of conflict and uncertainty (Martin and Anderson, 2001). Compared to individuals with high levels of cognitive flexibility, it can be said that individuals with low cognitive flexibility cannot evaluate the alternatives adequately, find it difficult to get different solutions and cannot solve problems in a functional way (Ateş and Sağar, 2021).

In the field of sports, controlling one's emotions is a necessary skill for effective performance. Besides the ability to examine and control and direct emotions is the main research focus in the field of sports (Hanin, 2000), understanding who the athletes at risk may be and thus providing better education and emotional regulation resources have importance (Maxwell et al., 2009). In addition, athlete students become role models for society and the youth as they are individuals who actively participate in sports. As a consequence, with some of the characteristics they will have, they will guide the actions of individuals who will actively or passively participate in sports in the future. In light of this information, the current study was handled in this context and it aimed to determine the effects of cognitive control and cognitive flexibility in stressful situations on competitive aggression and anger.

Materials and Methods

Research Design

This research was designed according to the relational screening method, in which the existence and degree of the relationship between the variables are determined. The relational screening method is used to determine the consistent changing pattern of two or more variables and the level of change (Creswell, 2012) and give an idea about the relationship between the variables (Fraenkel et al., 2012). The questionnaire method was used as a data collection technique in the study. Depending on the model of the research, The following questions guided the current study and answers to them were sought.
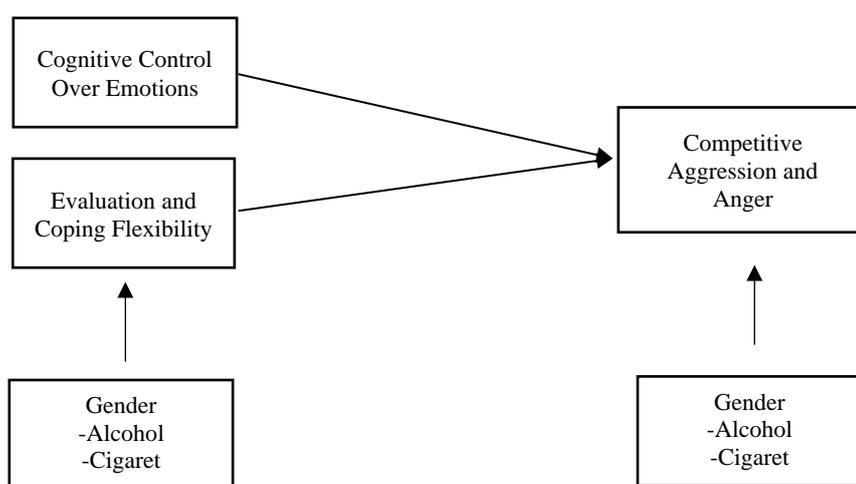

Figure 1. Conceptual diagram of the research model

1- Are cognitive control over emotions, evaluation and coping flexibility significant predictors of anger and aggression in sports?

2- Do gender, alcohol use and smoking affect cognitive control over emotions, evaluation and coping flexibility, anger and aggression in sports?

Study Group

The study group of the research consists of a total of 442 (Avg$_{age}$=22.02 ±4.32) athlete students, 205 females (46.4%) and 237 males (53.6%), who continue their sports life actively and also study at the faculties of sports sciences. When the sports age of the athlete students is examined, it is seen that 115 (26.0%) of them are 1-3 years, 108 (24.4%) are 3-5 years, and 219 (49.5%) are 5 years and above. In addition, 170 (38.5%) of the athlete students are interested in individual sports while 272 (61.5%) are interested in team sports. The group was selected with a convenient sampling technique, which is one of the improbable sampling methods.

Data Collection Tools

Cognitive Control and Flexibility Scale (CCFS)

This measurement tool, which measures an individual's ability to control intrusive, unwanted (negative) thoughts and emotions, and to cope flexibly with a stressful situation, was developed by Gabrys et al. (2018) and was adapted into Turkish by Demirtaş (2019). The measurement tool, which has two factors: "Evaluation and Coping Flexibility" (ECF) and "Cognitive Control over Emotions", (CCOE) consists of a total of 18 items with 9 items in both factors. The Cronbach Alpha reliability coefficients of the scale were 0.89 and 0.93 for the ECF factor, and it was reported as 0.90 for the CCOE factor. In the self-report-based measurement tool, participants were asked to report what they think, what they feel, and what they do in general when stressful situations trigger negative thoughts and emotions by using a 7-point Likert scale (1=Totally Disagree, 7=Totally Agree). The items 2, 4, 11, 15, 16, and 18 of the scale are reverse coded.

Competitive Aggressiveness and Anger Scale (CASS)

Competitive Aggressiveness and Anger Scale was developed by Maxwell and Moore (2007) and adapted to Turkish by Gürbüz et al., (2019). The scale consists of 2 sub-dimensions and a total of 12 items. Each sub-dimension consists of 6 items and the scale are in a 5-point Likert type between 1 (strongly disagree) and 5 (strongly agree). High scores got from the scale mean high aggression and anger. The Cronbach Alpha internal consistency coefficients calculated for the scale were found to be 0.79 for aggression, 0.79 for anger, and 0.83 for the total scale. There is no item to be reverse coded in the scale.

Data Analysis

SPSS 26.0 program was used to analyze and resolve the obtained data. First of all, the obtained data were transferred to the SPSS 26.0 program and made suitable for analysis. First of all, kurtosis and skewness coefficients were examined to determine whether the parametric tests met the basic assumptions or not (Tabachnick and Fidel, 2007). It is seen that the obtained scores meet the normality assumption. To evaluate the internal consistency of the answers, the Cronbach Alpha coefficient was calculated (Table 1). Then, the data were analyzed with descriptive statistics, MANOVA and the Multiple Linear Regression (MLR) test.

Ethics of Research

During the current research, it was acted within the framework of the "Higher Education Institutions Scientific Research and Publication Ethics Directive". Before each scale was filled by athletes, it adhered to a voluntary basis, and the rules to be followed were specified in detail. Data

collection tools were both delivered to the participants via Google Form by transferring to the online environment and applied by the researcher in the classroom by making an appointment with the instructor within face-to-face lesson hours.

Results

In this section, the findings reached in line with the general aims of the research are presented in tables, respectively.

Table 1

Distribution of CCFS and CASS Scales Scores (n:442)

Scales		Items	Mean±SD	Skewness	Kurtosis	Cronbach Alpha
CCFS	CCOE	9	3.56±1.06	-0.28	-0.14	0.77
	ECF	9	4.34±1.51	-0.26	-0.76	0.93
	Total	18	3.95±1.16	-0.65	-0.25	0.91
CASS	Anger	6	2.43±0.86	0.25	-0.37	0.85
	Aggression	6	2.07±0.83	0.49	-0.57	0.85
	Total	12	2.25±0.77	0.38	-0.30	0.90

CCOE: Cognitive Control Over Emotions
ECF: Evaluation and Coping Flexibility
CASS: Competitive Aggressiveness and Anger Scale
CCFS: Cognitive Control and Flexibility Scale

When the scores obtained from CCFS and CASS scales are examined, it was seen that the mean scores respectively were (3.56±1.06) for CCOE, (4.34±1.51) for ECF, and (3.95±1.16) for the total scale; (2.43±0.86) for anger, (2.07±0.83) for aggression, and (2.25±0.77) for the total scale. The kurtosis and skewness values also indicated that the data were normally distributed. In addition, the scale reliability coefficients were found to be high (Table 1).

Table 2

MANOVA Results of CCFS and CASS scores concerning Gender

Scales		Gender	N	Mean±SD	df	F	Sig.
CCFS	CCOE	Female	205	3.55±1.09	1-440	0.02	0.87
		Male	237	3.57±1.03			
	ECF	Female	205	4.30±1.46	1-440	0.26	0.61
		Male	237	4.38±1.56			
CASS	Anger	Female	205	2.38±0.86	1-440	1.12	0.29
		Male	237	2.47±0.85			
	Aggression	Female	205	1.90±0.80	1-440	18.00	0.00*
		Male	237	2.23±0.82			

*p<0.05

While MANOVA results on CCOE and ECF scores did not show a significant difference according to gender [λ=0.99, $F_{(2, 439)}$=0.15, $p>0.05$], MANOVA results on anger and aggression scores revealed that there were significant differences according to gender [λ=0.95, $F_{(2, 439)}$=11.89, $p<0.01$]. This finding indicates that the scores to be obtained from the linear component consisting of anger and aggression scores vary depending on gender. According to the one-way ANOVA results based on gender and the mean and standard deviation values of the scale for two factors, there was no significant difference between anger scores [$F(1, 440)$=1.12, $p>0.05$], while aggression scores showed a significant difference according to gender [$F(1, 440)$=18.00 $p<0.01$]. Aggression scores of male athlete students were higher than female students (Table 2).

Table 3

MANOVA Results of CCFS and CASS Scores Concerning Alcohol Use

Scales		Alcohol Use	N	Mean±SD	df	F	Sig.
CCFS	CCOE	Yes	111	3.70±1.14	1-440	2.79	0.09
		No	331	3.51±1.03			
	ECF	Yes	111	4.39±1.48	1-440	0.16	0.68
		No	331	4.33±1.52			
CASS	Anger	Yes	111	2.67±0.89	1-440	11.96	0.00*
		No	331	2.35±0.83			
	Aggression	Yes	111	2.30±0.89	1-440	11.98	0.00*
		No	331	1.99±0.79			

*p<0.05

While MANOVA results on CCOE and ECF scores did not show a significant difference according to alcohol use [λ=0.99, $F_{(2, 439)}$=1.74, $p>0.05$], MANOVA results, the main effect of the alcohol use variable on CASS was significant [λ=0.97, $F_{(2, 439)}$=7.20, $p<0.01$]. This finding pointed out that anger and aggression scores change depending on alcohol use. According to the ANOVA results, Anger [$F(1. 440)$=11.96, $p<0.01$] and Aggression [$F(1. 440)$=11.98 $p<0.01$] scores differed significantly according to alcohol use. In the dimension where a significant difference was detected, the mean scores of those who used alcohol were higher than those who did not use alcohol (Table 3).

Table 4

Distribution of CCFS and CASS Scores Concerning Smoking

Scales		Smoking	N	Mean±SD	df	F	Sig.
CCFS	CCOE	Yes	166	3.72±1.08	1-440	5.98	0.01*
		No	276	3.46±1.04			
	ECF	Yes	166	4.29±1.42	1-440	0.35	0.55
		No	276	4.38±1.57			
CASS	Anger	Yes	166	2.59±0.88	1-440	9.36	0.02*
		No	276	2.33±0.83			

Aggression	Yes	166	2.25±0.87	1-440	12.27	0.01*
	No	276	1.97±0.78			

*p<0.05

According to the MANOVA results, the main effect of the smoking variable on CCFS [λ=0.97, $F_{(2, 439)}$=6.84, p<0.01] and CAAS was significant [λ=0.97, $F_{(4, 439)}$=6.62 p<0.01]. These values indicated that CCOE, anger and aggression scores changed depending on smoking. According to the mean scores and standard deviation values of the factors of the scales and one-way ANOVA results based on the factor in terms of smoking, while CCOE [F(1. 440)=5.98, p=0.01], anger [F(1. 440)=9.36, p=0.02] and aggression [F(1. 440)=12.27 p=0.01] scores differed significantly according to alcohol use, there was no significant difference between ECF scores (p>0.05). The mean scores of smokers in the dimensions in which a significant difference was detected were higher than those of non-smokers (Table 4).

Table 5

Multiple Regression Analysis Results in The Prediction of Aggression and Anger in Sports

Variable	**B**	**Standard Error B**	**β**	**t**	**Sig.**	**Zero-order r**	**Partial r**
Constant	1.64	0.12	-	13.50	0.00	-	-
CCOE	0.38	0.04	0.52	9.39	0.00	0.31	0.40
ECF	-0.17	0.02	-0.34	-6.07	0.00	-0.01	-0.27

R= 0.40 R^2= 0.167
$F_{(2,439)}$=44.131   P= 0.000
Model: CASS= 1.65 + 0.38 * CCOE+ -0.17 * ECF

Zero-order correlation and partial correlation were examined in the multiple linear regression analysis performed to predict the CASS using the variables CCOE and ECF, and it was observed that there was a moderately positive correlation (r= 0.31) between CCOE and CASS, but the correlation between the two variables was r= 0.40 when the other variable was checked. It was determined that there was a low level of negative correlation (r=-0.01) between ECF and CASS, but when looking at the other variable, the correlation coefficient between the two variables was found to be r=-0.27. As a result of the analysis, it was found that a significant regression model F (2, 439) = 44, 131 p<0.00 and 17% of the variance in the dependent variable ($R^2_{adjusted}$ =0.167) was explained by the independent variables. According to the standardized regression coefficient (β), the relative order of importance of the independent (predictive) variable on the CASS is CCOE and ECF. In the T-test results regarding the significance of the coefficients, CCOE and ECF variables were found to be significant predictors of CASS (Table 5).

Discussion and Conclusion, Recommendations

This research tried to reveal the cognitive control, cognitive flexibility, competitive aggression and anger states of athlete students in stressful situations. Additionally, the predictive role of cognitive control and cognitive flexibility, which are thought to help them compete without resorting to aggression and anger, on aggression and anger was evaluated and comparisons according to some variables were examined.

The scale score distributions were investigated and it attracted the attention that cognitive control and flexibility were ranked between 1 and 7, the mean score was M=3.5, the CCOE scores of the athlete students were at an average level (M=3.56), and the ECF scores were M=4.34, and the total scale score was above the average (M=3.95). It was observed that the range of aggression and anger scores in sports was between 1 and 5, and the mean values were below the average (Table 1).

Considering the values of the CCFS and CASS dimensions, it was seen that the effect of gender on the aggression dimension was significant, while no significant difference was observed in the other dimensions. According to the findings, it was determined that the mean scores of aggression of male athlete students were higher than that of females (Table 2). Nevertheless, in the literature, some studies are showing different results. Many studies have shown that men behave more aggressively than women (Shields et al., 2007; Coulomb-Cabagno and Rascle, 2006; Kafalı et al.,2017; Maxwell, 2004). In their research, Güvendi and Keskin (2020) stated that there was no significant difference in the dimension of aggression in sports depending on the gender variable while in the anger dimension, a significant difference was detected that men had higher anger levels. Again in parallel with the results of the research, Demir et al. (2017) revealed that no significant difference was found in anger expression styles depending on the gender variable, Certel and Bahadır (2012) put forward in their research that being a male or female athlete does not make a significant difference between constant anger. Nonetheless, in Doğan (2001)'s study, it was found that the aggression levels of women were higher than that of men, and this fact shows that it differs from the current research results. Some studies concluded that the cognitive flexibility dimension does not differ depending on gender (Martin and Rubin, 1995; Zong et al., 2010; Sarrar et al., 2013; Plukaard et al., 2015). Both the results of the literature and the current study findings show that the cognitive flexibility of athlete students is similar. Consequently, in general, the current research results show similarities with the literature findings. Considering that in the society we live in, women are brought up to be more sensitive, fragile and polite while men are more extroverted and independent, it can be said that they tend to show more acts of aggression. Furthermore, it can be indicated that men are more likely to respond immediately and more harshly to provocation from the other side in a competitive environment.

According to another result, it was detected that the main effect of alcohol use on anger and aggression was significant (p<0.05), but not on cognitive control and cognitive flexibility. Namely, this finding indicates that anger and aggression scores change depending on alcohol use. Accordingly, it was determined that the mean scores of anger and aggression of the students who use alcohol were higher than those who do not use alcohol (Table 3). By the same token, the aggression scores of athletes who use alcohol were found to be high in some studies in the literature (Avcı, 2010; Yurttaş, 2016; Yorulmaz, 2019). Aronson et al. (1999) stated that alcohol use was one of the most important factors affecting aggression by causing behavioural disorders. Ekizoğlu and Acet (2021) reported in their study that destructiveness and passive aggression, which are the dimensions of aggression, differed depending on alcohol use. Substances containing alcohol cause aggressive and uncontrolled behaviours by revealing an intense energy state in individuals (Aksoy et al., 2018), and some people become aggressive and make wrong decisions when they use alcohol (McDuff and Baron, 2005). From this point of view, it can be said that students who use alcohol may have aggressive attitudes such as taking revenge against their opponent, desiring to injure their opponent, and becoming desensitized.

Another finding of the study indicates that the main effect of smoking on CCOE and anger and aggression was not statistically significant. Accordingly, the CCOE, aggression and anger of the athlete students change depending on smoking. It was observed that the CCOE, aggression and anger scores of the smoking athlete students were high (Table 4). Individuals who are deprived of nicotine, which is an active ingredient in cigarette addiction (Benowitz et al., 2009). state that they use cigarettes to relax when they feel angry, aggressive and nervous (Çelepkolu et al., 2014). In this sense, it can be said that the reason for the CCOE scores of smokers to be higher than non-smokers is due to their perception of smoking as a control and focusing tool. On the other hand, Seven and Dülger (2022) and Yörük (2020) remarked that the aggression scores of smokers were significantly higher. Al'absi et al. (2007) determined that individuals who experience anger constantly have a high smoking behaviour. In their many studies stating smoking and alcohol use are associated with violence and aggression, Reininger et al. (2005) pointed out that as the duration and frequency of substance use increases the tendency to violence also increases. Studies supporting the current research findings in the literature have found significant differences between smoking habits and physical anger, hostility and verbal aggression in favour of smokers (Yorulmaz, 2019; Yurttaş, 2016).

When the values of CCOE and ECF for the prediction of aggression and anger in sports were examined, it was determined that there was a moderately positive relationship between CCOE and CASS (r= 0.31), and a low negative relationship between ECF and CASS (r=-0.01) (Table 5). T-test for the significance of the regression coefficients showed that CCOE and ECF were significant

predictors of aggression and anger in sports. Moreover, the results found that the CCOE and ECF together explained 17% of the total variance in the CASS. In other words, it can be said that 17% of aggression and anger in sports can be explained by cognitive control over emotions and cognitive flexibility. Ohira et al. (2011) and Han et al. (2011) concluded in their research that individuals with high cognitive flexibility would have lower anger levels. Lack of cognitive control over emotions, evaluation and coping flexibility harms mental health and anxiety disorders; however, it also plays an important role in facilitating goal-oriented behaviours and regulating emotion (Gabrys et al., 2018; Liao et al., 2019). It is known that cognitive flexibility has a positive relationship with the well-being of individuals, and a negative relationship with mental problems (Koesten et al., 2009). Last but not least, studies in the literature have revealed that high cognitive control can contribute significantly to individuals' anxiety and coping with rumination (Robinson et al., 2010).

As a result of the research, the cognitive control, cognitive flexibility, anger and aggression scores of the athlete students were found above the average. The main effects of gender, alcohol use, and smoking on anger and aggression were found to be significant. In addition to the above-mentioned results, the main effect of smoking on cognitive control was found to be statistically significant. According to this, it was determined that the average aggression of male athlete students was higher. It was specified that the mean scores of anger and aggression in alcohol users were also high. In other respects, it was revealed that the cognitive control, anger and aggression levels of the students who smoke were also high. Another substantial result of the study is that cognitive control and cognitive flexibility explain 17% of the total variance in CASS as a significant predictor of aggression and anger in sports. It has been observed that the explanatory role of cognitive control over emotions is more.

For further studies, it is recommended to investigate the relationship between the dependent and independent variables in the current study and different sports branches or the branches in which the contact is more intense in the game and to examine the differences and similarities. Lastly, methodically the application of qualitative or mixed methods will add different aspects to the results to be reached on this subject.

Ethical Approval

Ethics evaluation committee: Tokat Gaziosmanpaşa University, Social and Human Sciences Ethics Committee
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Authors' Contribution

The first author contributed 60% and the second author contributed 40%.

Conflicts of Interest

The authors declare no conflict of interest.

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