

## The Effect of Sportsmanship on Aggression and Anger in Athletes

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### Abstract

The aim of this study is to examine the effect of sportsmanship on aggression and anger in athletes and to evaluate how these relationships differ according to demographic variables such as gender, age, and cigarette use. Designed using a correlational survey model based on quantitative research methods, the study included a total of 504 athletes over the age of 18 actively participating in various sports branches. Relationships between variables were examined using Pearson correlation, the predictive power of sportsmanship behavior on aggression and anger was tested using simple linear regression, and t-tests and one-way analysis of variance were applied for demographic variables with two or more categories. The findings revealed a positive and significant relationship between aggression and anger; however, there were negative and significant relationships between all sub-dimensions of sportsmanship orientation (conformity to social norms, respect for rules and management, commitment to responsibilities in sports, and respect for the opponent) and aggression and anger. In terms of demographic variables, gender, age, and sport branch were found to have a partial effect on sportsmanship orientation and aggression and anger, while smoking were not found to have a significant effect on sportsmanship orientation. The regression analysis results showed that aggression and especially anger levels were significant predictors of sportsmanship orientation. Our results indicate that sportsmanlike behavior towards opponents in sports environments increases respect for the opponent and the rules, while reducing tendencies towards aggression and violence. Accordingly, it is recommended that coaches integrate anger management and sportsmanship-focused mental training into their training programs.

**Keywords:** Sportsmanship, Sport, Aggression, Anger.

## Sporcularda Sportmenliğin Saldırganlık ve Öfke Üzerindeki Etkisi

### Özet

Bu çalışmanın amacı; sporcularda sportmenlik davranışlarının saldırganlık ve öfke üzerindeki etkisini incelemek ve bu ilişkilerin cinsiyet, yaş gibi demografik değişkenlere göre nasıl farklılaştığını değerlendirmektir. Nicel araştırma yöntemlerine dayalı ilişkisel tarama modelinde tasarlanan çalışmaya, farklı branşlarda aktif olarak spor yapan 18yaş üzeri toplam 504 sporcu dahil edilmiştir. Değişkenler arasındaki ilişkiler Pearson korelasyonu ile incelenmiş, Sportmenlik davranışlarına etkisinin saldırganlık ve öfkeyi yordama gücü basit doğrusal regresyon ile test edilmiş; iki ve daha çok kategorili demografik değişkenler için t-testi ve tek yönlü varyans analizi uygulanmıştır. Bulgular, saldırganlık ile öfke arasında pozitif yönlü ve anlamlı bir ilişki bulunduğunu; buna karşın sportmenlik yöneliminin tüm alt boyutları (sosyal normlara uyum, kurallara ve yönetime saygı, sporda sorumluluklara bağlılık ve rakibe saygı) ile saldırganlık ve öfke arasında negatif yönlü ve anlamlı ilişkiler olduğunu ortaya koymuştur. Demografik değişkenler açısından cinsiyet, yaş ve spor branşının sportmenlik yönelimi ile saldırganlık ve öfke üzerinde kısmen etkili olduğu belirlenirken, gelir düzeyi ve sigara kullanımının sportmenlik yönelimi üzerinde anlamlı bir etkisi bulunmamıştır. Regresyon analizi sonuçları ise saldırganlık ve özellikle öfke düzeylerinin sportmenlik yöneliminin anlamlı yordayıcıları olduğunu göstermiştir. Elde etmiş olduğumuz sonuçlar; spor ortamlarında sergilenen rakiplere karşı sergilenen sportmenlik davranışlarının rakibe ve kurallara saygıyı artırırken, saldırganlık ve şiddet eğilimlerini azalttığını göstermekte ve bu doğrultuda antrenörlerin antrenman programlarına öfke kontrolü ve sportmenlik odaklı zihinsel eğitimleri entegre etmesi önerilmektedir.

**Anahtar kelimeler:** Sportmenlik, Spor, Saldırganlık, Öfke.

## Introduction

Sport is a multifaceted activity that supports not only the physical development of individuals but also their moral, emotional, and social development (Yıldırım & Cengiz, 2018; Pekel et al., 2025). Instilling fundamental social values such as following rules, taking responsibility, acting fairly, and respecting the rights of others, sport is considered an important educational and socialization tool that supports character development (Gentile et al., 2022; Yoka et al., 2025). In addition, it is stated that sports contribute to social harmony by reducing individuals' tendencies towards aggression and violence (Fişek, 2003; Balçioğlu, 2003). However, today, due to increasing competition, professionalization, and a win-oriented approach, sports are noteworthy not only for their educational and developmental aspects but also as an area where ethical problems arise. Performance pressure, expectations of success, material rewards, and an intensely competitive environment can sometimes cause athletes to exhibit unsportsmanlike behavior, neglect ethical principles, and resort to aggressive behavior (Harwood et al., 2017; Mutz & Baur, 2009; Spaaij & Schailée, 2019). Such behaviors may undermine the potential of sport to foster moral values and may limit its educational function when appropriate ethical guidance and positive sporting environments are absent (Harvey et al., 2014; Spruit et al., 2019).

Indeed, it has been reported that tendencies towards moral deviation in sports show significant correlations with aggression, rule violations, and unsportsmanlike behavior (Kavussanu, 2008; Boardley & Kavussanu, 2009a). Two of the psychological variables frequently encountered in sports environments are aggression and anger. Today, these concepts are among the most researched topics in sports psychology (Omli & LaVoi, 2009; Robazzo & Bortoli, 2007). Aggression is defined as physical or psychological behaviors aimed at harming another individual or object (Boxer & Tisak, 2005; Martin et al., 2000; Ayub et al., 2020; Brugman et al., 2015), while anger is described as a natural, intense emotional response that arises when an individual perceives frustration, threat, or injustice, but which, if left unchecked, can escalate into aggressive behavior (Ramirez & Andreu, 2006). Studies have shown a significant positive correlation between anger and aggression (Hubbard et al., 2002; Orobio de Castro et al., 2005; Akdağcık et al., 2022), that angry thoughts increase aggressive behavior (White & Turner, 2014), and that chronic anger is a significant determinant of reactive aggression (Aydın & Akgün, 2014).

Furthermore, some studies have shown that athletes involved in individual sports may have higher levels of aggression (Kafalı et al., 2017). One of the most important concepts in reducing aggression and anger in sports environments is sportsmanship. Sportsmanship is a multi-dimensional structure encompassing ethical principles such as adhering to rules, respecting opponents and referees, adopting a fair play approach, and acting in accordance with the spirit of the game. Especially for children and young people, sports are considered an important educational

area where societal values are learned, and therefore sportsmanship is regarded as one of the fundamental components of an individual's character development (Shields et al., 2014; Yoka et al., 2026). At the same time, sportsmanship, based on honesty, fairness, and mutual respect, strengthens empathy, reduces prejudice, and supports social harmony (Simon et al., 2015; Bahadır et al., 2023). In the literature, sportsmanship is discussed in five basic dimensions: respect for the rules, respect for the opponent, respect for the referee, behavior in accordance with the spirit of the game, and avoidance of intentional fouls or unsportsmanlike conduct. Respect for the rules signifies athletes' internalization of the game's rules (Cosma et al., 2021), while respect for the opponent supports sportsmanship and character development (Abiş, 2022). Respect for the referee reflects trust in the justice system (Çemç et al., 2025), and behavior in accordance with the spirit of the game represents the concept of fair play (Krishnani & Kanade, 2025).

Avoiding intentional fouls, unfair practices, and unethical behaviors represents an important dimension of sportsmanship and reflects athletes' willingness to refrain from behaviors that may harm opponents or violate the principles of fair play (Burgueño & Medina-Casaubón, 2020). Thus, sportsmanship should not be viewed solely as a set of observable behaviors; rather, it can be conceptualized as a multidimensional ethical and psychosocial construct involving cognitive, emotional, and behavioral processes (Proios, 2012; Liu et al., 2023). From this perspective, the relationship between sportsmanship, aggression, and anger can be understood through the complementary contributions of Social Cognitive Theory, Moral Development Theory, and frustration–aggression and cognitive appraisal approaches.

According to Bandura's (1986) Social Cognitive Theory, behavior is shaped through observational learning, modeling, reinforcement, and self-regulatory processes. Within the sporting environment, athletes continuously observe and evaluate the behaviors of coaches, teammates, opponents, and other significant figures. When sportsmanlike behaviors are consistently modeled and reinforced, athletes may develop stronger self-regulatory capacities that enable them to control impulsive responses and regulate their behavior in challenging situations. Accordingly, sportsmanship may function as a behavioral expression of self-regulation, particularly when athletes encounter provocation, competition-related pressure, or conflict.

Moral Development Theory provides a complementary explanation for the cognitive and ethical dimension of this process. Kohlberg (1984) proposed that the development of moral reasoning increases individuals' capacity to evaluate behaviors in relation to principles such as justice, fairness, honesty, and respect for the rights of others. In sport, stronger moral reasoning may therefore facilitate the internalization of fair-play principles and encourage athletes to evaluate aggressive or unethical responses as inappropriate. In this sense, sportsmanship can be understood as an outcome of moral decision-making processes through which athletes regulate their behavior in

accordance with ethical standards, even in situations involving competition, frustration, or perceived injustice.

The emotional pathway can further be explained through the frustration–aggression hypothesis proposed by Dollard et al. (1939) and Lazarus’s (1991) cognitive appraisal perspective. Competitive sport frequently involves situations such as failure, defeat, provocation, perceived unfairness, and unmet performance expectations, which may generate frustration and anger. According to these perspectives, the behavioral consequences of such experiences depend partly on how individuals appraise and regulate the situation. When anger is poorly regulated, emotional arousal may increase the likelihood of aggressive responses. Conversely, athletes who possess stronger self-regulatory and moral resources may be better able to reinterpret frustrating situations, control emotional reactions, and choose responses consistent with sportsmanship principles.

Taken together, these theoretical perspectives provide an integrated framework for understanding the proposed relationships in the present study. Social Cognitive Theory explains how sportsmanlike behaviors can be learned and maintained through modeling and self-regulation; Moral Development Theory explains how moral reasoning and ethical decision-making may encourage athletes to reject unfair and aggressive responses; and frustration–aggression and cognitive appraisal perspectives explain how frustration and anger may create conditions in which aggressive behavior becomes more likely. Within this integrated framework, sportsmanship is positioned as a multidimensional psychosocial construct associated with athletes’ ability to regulate behavior, make ethical decisions, and manage emotional responses in competitive situations. Therefore, examining the dimensions of sportsmanship orientation in relation to aggression and anger may provide a more comprehensive understanding of the behavioral and emotional mechanisms underlying sportsmanship in athletes.

Although previous studies have examined sportsmanship, aggression, and anger separately or have investigated the relationships between these variables, studies examining the relationship between multidimensional sportsmanship orientation and both aggression and anger among athletes remain limited. In particular, there is a need for further research examining which dimensions of sportsmanship orientation are associated with athletes’ aggressive and emotional responses. Addressing this gap may contribute to a better understanding of the role of sportsmanship in promoting positive behavioral and emotional outcomes in sport.

The present study aims to examine the relationships between athletes’ multidimensional sportsmanship orientation, aggression, and anger. Specifically, the study investigates whether the dimensions of multidimensional sportsmanship orientation predict athletes’ levels of aggression and anger and whether aggression and anger are significantly related to each other. By examining these variables within the same research model, the study seeks to provide a more comprehensive

understanding of the behavioral and emotional dimensions of sportsmanship among athletes. The findings may contribute to the literature by clarifying the extent to which different aspects of sportsmanship are associated with aggression and anger and may provide useful implications for developing interventions aimed at promoting sportsmanship and reducing negative behavioral and emotional responses in sport.

Based on the theoretical framework and previous findings in the literature, the following hypotheses were formulated:

**H1.** The dimensions of athletes' multidimensional sportsmanship orientation significantly predict their levels of aggression.

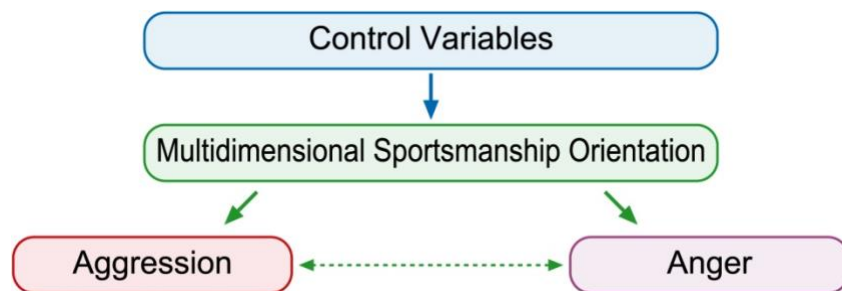
**H2.** The dimensions of athletes' multidimensional sportsmanship orientation significantly predict their levels of anger.

**H3.** There is a significant and positive relationship between athletes' levels of aggression and anger.

## Method

### Research Model

The research was designed according to a quantitative research model and utilized a descriptive and correlational survey method aimed at revealing the current situation (Büyüköztürk et al. 2012; Karasar 2016).

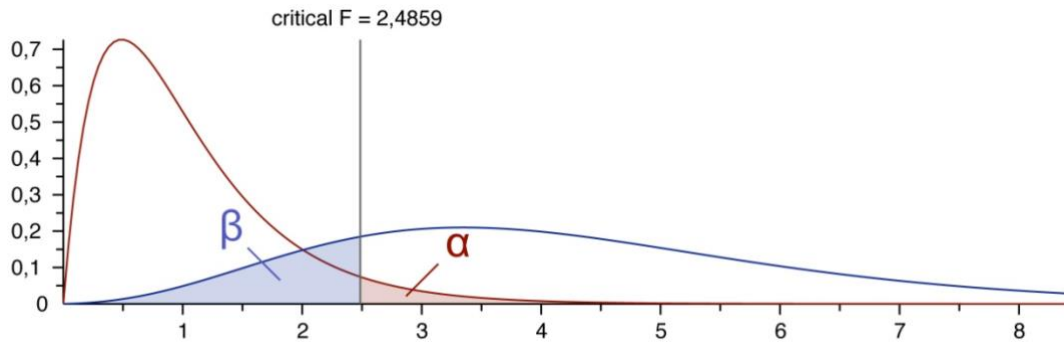


**Figure 1.** Research Model

### The Population and Sample of the Study

This study employed criterion sampling, a type of purposeful sampling method, to examine the effect of sportsmanship on aggression and anger in athletes. Criterion sampling is a method that allows the inclusion of individuals with specific characteristics in research (Michael Quinn Patton, 2014). Accordingly, the participants to be included in the study were determined as individuals living in Kayseri province who are professional athletes. Individuals who met the determined criteria and voluntarily participated in the study were included in the sample. To determine the appropriate sample size for the study, an a priori power analysis was performed using the G\*Power 3.1 program. The 'Linear Multiple Regression: Fixed Model,  $R^2$  deviation from zero' option was used within the scope of F-tests in the analysis. The effect size was determined as  $f^2 = .15$ , the significance level as  $\alpha = .05$ , the statistical power  $(1-\beta) = .80$ , and the number of predictor variables

as 4. As a result of the analysis, the minimum sample size required for the study was calculated as 85 participants (Cohen, 1988; Faul et al., 2009). It was determined that the sample size obtained in the study (504) met this value, and it was evaluated that the study had a high level of statistical power and that the analyses were performed with sufficient sensitivity.



**Figure 2.** G-power Analysis

### **Inclusion Criteria for the Study:**

- Must be 18 years of age or older
- Must have actively participated in organized sports training and competitions at the professional level within the last 12 months.
- Must have Turkish reading and writing skills
- Must agree to participate in the research voluntarily
- Must have a level of digital literacy that allows them to complete the online data collection tool accurately and consistently.

### **Data Collection Tool**

The survey method was used as a data collection tool. The survey consisted of three sections: the first section was a personal information form, the second section was the "Aggression and Anger in Sports Scale," and the third section was the "Multidimensional Sportsmanship Orientation Scale," all of which were used as data collection tools.

### **Demographic Form**

In creating the personal information form for this study, the personal information forms of studies on aggression, anger, and sportsmanship in the literature were reviewed, and a pool of characteristics to be examined in athletes was created. Then, with the help of statisticians, the personal information form was developed. This personal information form contains 4 questions aimed at obtaining information about the participants' age, gender, smoking status, sport branch.

### *Multidimensional Sportsmanship Orientation Scale (MSOS-25)*

The 'Multidimensional Sportsmanship Orientation Scale', developed by Vallerand et al. (1997) and adapted into Turkish by Balçıkanlı (2010), was used. While the original form of the scale consisted of 5 sub-dimensions and 25 items, the 'Negative Approaches' sub-dimension (items 5, 10, 15, 20 and 25), which was determined to be non-functional according to the factor analysis results of the Turkish adaptation study, was removed from the scale. Thus, the Turkish form of the scale acquired a 5-point Likert-type structure consisting of 4 sub-dimensions and 20 items: Conformity to Social Norms, Respect for Rules and Management, Commitment to Responsibilities in Sport, and Respect for the Opponent. Cronbach's Alpha internal consistency coefficients were calculated as follows: The scores were reported as follows: Conformity to Social Norms 0.86, Respect for Rules and Management 0.83, Commitment to Responsibilities in Sport 0.91, and Respect for Opponents 0.82. The possible scores for the sub-dimensions of the scale range from 5 to 25.

### *Aggression and Anger Scale in Sport (AASS)*

The Aggression and Anger in Sport Scale (AASS) was developed by Maxwell and Moores (2007). The scale consists of two sub-dimensions: anger (6 items) and aggression (6 items), for a total of 12 items. Its adaptation into Turkish was carried out by Gürbüz et al. in 2019. The Cronbach's alpha internal consistency coefficients of the Aggression and Anger in Sport Scale were found to be .79 for the aggression sub-dimension, .79 for the anger sub-dimension, and .83 for the total scale.

### **Data Analysis**

To determine the appropriate statistical tests for the analysis, the normality of the data was assessed using the Kolmogorov–Smirnov test, together with the skewness and kurtosis values. George and Mallery (2019) consider skewness and kurtosis values within the range of  $\pm 2$  to be acceptable for the assumption of normality. In the present study, the skewness values ranged from  $-1.470$  to  $0.657$ , while the kurtosis values ranged from  $-0.467$  to  $2.239$  across the study variables. Although the kurtosis value for the “Commitment to Responsibilities in Sports” sub-dimension was  $2.239$ , slightly exceeding the  $\pm 2$  criterion, the overall distributional characteristics were considered sufficiently close to normal for the planned parametric analyses. Accordingly, independent-samples *t*-tests and one-way analysis of variance (ANOVA) were used to examine differences in athletes' scores according to the relevant categorical variables. When a statistically significant difference was identified in the ANOVA results, the LSD post hoc test was used to determine the groups contributing to the difference. Pearson correlation analysis was conducted to examine the relationships between the study variables. In addition, multiple regression analysis was performed to determine the predictive effects of the multidimensional sportsmanship orientation sub-

dimensions on aggression and anger. All statistical analyses were conducted using IBM SPSS Statistics 26.

### Research Ethics

In this study, prior to our research, ethical approval was obtained from the Niğde Ömer Halis Demir University Ethics Committee with decision number 2021/28 dated 02.07.2021.

### Findings

Table 1

Descriptive Statistics and Frequency Values.

| Variable      | Category    | F   | %    |
|---------------|-------------|-----|------|
| Age           | 18 -20      | 52  | 10,3 |
|               | 21-23       | 344 | 68,3 |
|               | 24-26       | 70  | 13,9 |
|               | 27 and over | 38  | 7,5  |
| Gender        | Woman       | 243 | 48,2 |
|               | Male        | 261 | 51,8 |
| Smoking       | Yes         | 217 | 43,1 |
|               | No          | 287 | 56,9 |
| Sports Branch | Football    | 232 | 46,4 |
|               | Basketball  | 37  | 7,3  |
|               | Volleyball  | 111 | 21,8 |
|               | Tennis      | 33  | 6,5  |
|               | Swimming    | 33  | 6,5  |
|               | Others      | 58  | 11,5 |

Table 1 shows that 10.3% of the athletes are in the 18-20 age group, 68.3% are in the 21-23 age group, 13.9% are in the 24-26 age group, and 7.5% are 27 years and older. 43.1% of the athletes smoke, while 56.9% are non-smokers. Of the athletes, 232 actively participate in football, 37 in basketball, 111 in volleyball, 33 in tennis, 33 in swimming, and 58 in other sports (athletics, skiing, judo, etc.).

Table 2

Comparison of Multidimensional Sportsmanship Orientation and Aggression and Anger Scale Scores of Athletes According to Age Variable.

| Scale | Sub dimension                      | Age                      | N   | $\bar{x}$ | Ss    | F     | p     | Tukey | $\eta^2$ |
|-------|------------------------------------|--------------------------|-----|-----------|-------|-------|-------|-------|----------|
| AASS  | Aggression                         | 18 -20 <sup>a</sup>      | 52  | 11,90     | 5,050 | 6,984 | ,000* | a-d   | .040     |
|       |                                    | 21-23 <sup>b</sup>       | 344 | 11,78     | 5,085 |       |       | b-d   |          |
|       |                                    | 24-26 <sup>c</sup>       | 70  | 12,93     | 5,842 |       |       | c-d   |          |
|       |                                    | 27 and over <sup>d</sup> | 38  | 15,71     | 5,276 |       |       |       |          |
|       | Anger                              | 18 -20 <sup>a</sup>      | 52  | 13,69     | 3,281 | 5,161 | ,002* | a-b   | .030     |
|       |                                    | 21-23 <sup>b</sup>       | 344 | 15,39     | 5,288 |       |       | b-d   |          |
|       |                                    | 24-26 <sup>c</sup>       | 70  | 15,03     | 4,488 |       |       | c-d   |          |
|       |                                    | 27 and over <sup>d</sup> | 38  | 12,50     | 4,203 |       |       |       |          |
| MSOS  | Compliance with social norms       | 18 -20 <sup>a</sup>      | 52  | 21,94     | 2,704 | 2,677 | ,047* | a-b   | .016     |
|       |                                    | 21-23 <sup>b</sup>       | 344 | 20,88     | 4,300 |       |       | a-c   |          |
|       |                                    | 24-26 <sup>c</sup>       | 70  | 20,50     | 3,590 |       |       | d-b   |          |
|       |                                    | 27 and over <sup>d</sup> | 38  | 22,24     | 2,716 |       |       | d-c   |          |
|       | Respect for rules and regulations. | 18 -20 <sup>a</sup>      | 52  | 21,25     | 2,512 | 1,477 | ,220  |       |          |
|       |                                    | 21-23 <sup>b</sup>       | 344 | 21,04     | 3,429 |       |       |       |          |
|       |                                    | 24-26 <sup>c</sup>       | 70  | 20,57     | 3,553 |       |       |       |          |
|       |                                    | 27 and over <sup>d</sup> | 38  | 21,95     | 2,691 |       |       |       |          |
|       | Commitment to responsibilities     | 18 -20 <sup>a</sup>      | 52  | 22,75     | 2,558 | 1,261 | ,287  |       |          |
|       |                                    | 21-23 <sup>b</sup>       | 344 | 21,93     | 3,289 |       |       |       |          |

|                             |                          |     |       |       |       |              |     |
|-----------------------------|--------------------------|-----|-------|-------|-------|--------------|-----|
| <b>in sports.</b>           | 24-26 <sup>c</sup>       | 70  | 22,27 | 2,691 |       |              |     |
|                             | 27 and over <sup>d</sup> | 38  | 22,37 | 3,062 |       |              |     |
| <b>Respect the opponent</b> | 18 -20 <sup>a</sup>      | 52  | 20,35 | 4,740 | ,172  | ,915         |     |
|                             | 21-23 <sup>b</sup>       | 344 | 20,39 | 4,047 |       |              |     |
|                             | 24-26 <sup>c</sup>       | 70  | 20,37 | 4,414 |       |              |     |
|                             | 27 and over <sup>d</sup> | 38  | 20,89 | 5,224 | 2,677 | <b>,047*</b> | a-b |

\* $p < 0.05$ , \*\* $p < 0.01$  MSOS: Multidimensional sportsmanship orientation scale AASS: Aggression and anger scale in sports  $\eta^2 = 0.01$  = Small effect 0.06 = Medium effect 0.14 = Large effect.

Table 2 shows a statistically significant difference ( $p < .05$ ) between the age groups of athletes and the social norms compliance subscale scores on the multidimensional sportsmanship orientation scale. According to the results of the Tukey HSD post-hoc test, which was applied to determine which groups caused the difference, athletes aged 27 and over had significantly higher levels of social norms compliance compared to athletes in other age groups. However, no statistically significant difference was found in the other subscales of the multidimensional sportsmanship orientation scale based on age ( $p > .05$ ). When the scores obtained by athletes on the aggression and anger scale according to their age groups were examined, statistically significant differences were determined between the age variable and the aggression and anger sub-dimensions ( $p < .05$ ). The results of the Tukey HSD post-hoc test, conducted to determine the source of the difference, revealed that athletes aged 27 and over had significantly higher levels of aggression compared to other age groups, and athletes in the 21-23 age group had significantly higher levels of anger compared to other age groups. The effect size was also examined using eta squared ( $\eta^2$ ). The results indicated that age had a small effect on aggression ( $\eta^2 = .040$ ), anger ( $\eta^2 = .030$ ), and compliance with social norms ( $\eta^2 = .016$ ).

Table 3

Comparison of Multidimensional Sportsmanship Orientation and Aggression and Anger Scale Scores of Athletes According to Gender Variable.

| Scale       | Sub dimension                             | Gender | N   | $\bar{x}$ | Ss    | F      | T      | P            | Cohends d |
|-------------|-------------------------------------------|--------|-----|-----------|-------|--------|--------|--------------|-----------|
| <b>SSÖÖ</b> | Aggression                                | Woman  | 243 | 11,80     | 5,155 | ,383   | -1,842 | 0,53         |           |
|             |                                           | Male   | 261 | 12,67     | 5,405 |        |        |              |           |
|             | Anger                                     | Woman  | 243 | 14,19     | 4,390 | 10,267 | -3,296 | <b>0,00*</b> | 0,295     |
|             |                                           | Male   | 261 | 15,65     | 5,417 |        |        |              |           |
| <b>MSOS</b> | Compliance with social norms              | Woman  | 243 | 21,82     | 3,547 | 10,001 | 4,351  | <b>,002*</b> | 0,388     |
|             |                                           | Male   | 261 | 20,30     | 4,237 |        |        |              |           |
|             | Respect for rules and regulations.        | Woman  | 243 | 21,86     | 3,042 | 4,633  | 5,310  | <b>,032*</b> | 0,473     |
|             |                                           | Male   | 261 | 20,33     | 3,401 |        |        |              |           |
|             | Commitment to responsibilities in sports. | Woman  | 243 | 22,49     | 2,971 | 2,679  | 2,791  | ,102         |           |
|             |                                           | Male   | 261 | 21,72     | 3,232 |        |        |              |           |
|             | Respect the opponent                      | Woman  | 243 | 20,70     | 4,410 | 4,468  | 1,430  | <b>,035*</b> | 0,127     |
|             |                                           | Male   | 261 | 20,16     | 4,106 |        |        |              |           |

\* $p < 0.05$ , \*\* $p < 0.01$  MSOS: Multidimensional sportsmanship orientation scale AASS: Aggression and anger scale in sports Cohen's  $d = 0.20$  = Small effect, 0.50 = Medium effect, 0.80 or higher = Large effect.

Table 3 shows that statistically significant differences were found in the scores of the multidimensional sportsmanship orientation scale according to the gender variable in the sub-dimensions of conformity to social norms, respect for rules and management, and respect for opponent ( $p < .05$ ). These differences were found to be in favor of female athletes. In contrast, no

statistically significant difference was found according to gender in the sub-dimension of commitment to responsibilities in sports ( $p > .05$ ). When the aggression and anger scale scores of the athletes were examined according to the gender variable, no statistically significant difference was found in the aggression sub-dimension ( $p > .05$ ). In contrast, a statistically significant difference was found according to gender in the anger sub-dimension ( $p < .05$ ), and this difference was found to be in favor of male athletes.

Table 4

Comparison of Multidimensional Sportsmanship Orientation and Aggression and Anger Scale Scores of Athletes According to Smoking Variable.

| Scale | Sub dimension                             | Smoking | N   | $\bar{x}$ | Ss    | F      | t     | P            | Cohends<br>d |
|-------|-------------------------------------------|---------|-----|-----------|-------|--------|-------|--------------|--------------|
| SSÖÖ  | Aggression                                | Yes     | 217 | 13,34     | 5,678 | 14,012 | 4,074 | <b>,000*</b> | 0,366        |
|       |                                           | No      | 287 | 11,43     | 4,842 |        |       |              |              |
|       | Anger                                     | Yes     | 217 | 15,19     | 5,273 | 1,138  | ,965  | ,287         |              |
|       |                                           | No      | 287 | 14,76     | 4,778 |        |       |              |              |
| MSOS  | Compliance with social norms              | Yes     | 217 | 21,12     | 3,913 | ,006   | ,482  | ,939         |              |
|       |                                           | No      | 287 | 20,95     | 4,057 |        |       |              |              |
|       | Respect for rules and regulations.        | Yes     | 217 | 20,98     | 3,478 | ,906   | -,452 | ,342         |              |
|       |                                           | No      | 287 | 21,11     | 3,201 |        |       |              |              |
|       | Commitment to responsibilities in sports. | Yes     | 217 | 21,93     | 3,148 | ,047   | 1,019 | ,829         |              |
|       |                                           | No      | 287 | 22,21     | 3,122 |        |       |              |              |
|       | Respect the opponent                      | Yes     | 217 | 20,43     | 4,389 | ,205   | ,059  | ,651         |              |
|       |                                           | No      | 287 | 20,41     | 4,160 |        |       |              |              |

\* $p < 0.05$ , \*\* $p < 0.01$  MSOS: Multidimensional sportsmanship orientation scale AASS: Aggression and anger scale in sports Cohen's  $d = 0.20$  = Small effect,  $0.50$  = Medium effect,  $0.80$  or higher = Large effect.

Table 4 shows no significant difference between the variable of athletes' smoking status and the multidimensional sportsmanship orientation scale. While a significant difference was observed in the aggression sub-dimension according to athletes' smoking status, no significant difference was found in the anger sub-dimension. Furthermore, it was determined that this difference favored athletes who smoked.

Table 5

Comparison of Multidimensional Sportsmanship Orientation and Aggression and Anger Scale Scores of Athletes According to Sport Branch Variable.

| Scale | Sub dimension                | Sport branch            | N   | $\bar{x}$ | Ss    | F      | P             | Tukey | $\eta^2$ |
|-------|------------------------------|-------------------------|-----|-----------|-------|--------|---------------|-------|----------|
| SSÖÖ  | Aggression                   | Football <sup>a</sup>   | 148 | 13,52     | 5,429 | 17,582 | <b>,000**</b> | a-b   | 0,150    |
|       |                              | Basketball <sup>b</sup> | 46  | 16,33     | 4,467 |        |               | a-e   |          |
|       |                              | Volleyboal <sup>c</sup> | 87  | 13,06     | 5,423 |        |               | a-f   |          |
|       |                              | Tennis <sup>d</sup>     | 43  | 12,05     | 5,614 |        |               | b-c   |          |
|       |                              | Swimming <sup>e</sup>   | 53  | 9,94      | 4,204 |        |               | d-e   |          |
|       |                              | Others <sup>d</sup>     | 127 | 9,78      | 3,984 |        |               | d-f   |          |
|       | Anger                        | Football <sup>a</sup>   | 148 | 15,39     | 5,306 | 1,036  | ,395          |       |          |
|       |                              | Basketball <sup>b</sup> | 46  | 14,11     | 4,244 |        |               |       |          |
|       |                              | Volleyboal <sup>c</sup> | 87  | 14,39     | 4,357 |        |               |       |          |
|       |                              | Tennis <sup>d</sup>     | 43  | 14,63     | 4,203 |        |               |       |          |
|       |                              | Swimming <sup>e</sup>   | 53  | 14,51     | 5,235 |        |               |       |          |
|       |                              | Others <sup>d</sup>     | 127 | 15,41     | 5,405 |        |               |       |          |
| MSOS  | Compliance with social norms | Football <sup>a</sup>   | 148 | 20,41     | 3,997 | 2,656  | <b>0,02*</b>  | a-c   | 0,052    |
|       |                              | Basketball <sup>b</sup> | 46  | 21,49     | 4,167 |        |               | d-a   |          |
|       |                              | Volleyboal <sup>c</sup> | 87  | 21,55     | 3,990 |        |               | a-f   |          |

|                                           |                         |     |       |       |       |              |     |       |
|-------------------------------------------|-------------------------|-----|-------|-------|-------|--------------|-----|-------|
| Respect for rules and regulations.        | Tennis <sup>d</sup>     | 43  | 22,12 | 2,902 | 5,525 | <b>0,00*</b> |     | 0,014 |
|                                           | Swimming <sup>e</sup>   | 53  | 20,67 | 4,655 |       |              |     |       |
|                                           | Others <sup>d</sup>     | 127 | 21,84 | 3,665 |       |              |     |       |
|                                           | Football <sup>a</sup>   | 148 | 20,37 | 3,355 |       |              | a-e |       |
|                                           | Basketball <sup>b</sup> | 46  | 20,46 | 3,595 |       |              | a-f |       |
|                                           | Volleyboal <sup>c</sup> | 87  | 21,55 | 3,219 |       |              | c-a |       |
|                                           | Tennis <sup>d</sup>     | 43  | 22,27 | 3,024 |       |              | d-a |       |
|                                           | Swimming <sup>e</sup>   | 53  | 21,91 | 2,765 |       |              |     |       |
|                                           | Others <sup>d</sup>     | 127 | 22,14 | 2,988 |       |              |     |       |
|                                           | Football <sup>a</sup>   | 148 | 21,70 | 3,299 |       |              |     |       |
|                                           | Basketball <sup>b</sup> | 46  | 22,51 | 2,864 |       |              |     |       |
|                                           | Volleyboal <sup>c</sup> | 87  | 22,56 | 2,885 |       |              |     |       |
| Commitment to responsibilities in sports. | Tennis <sup>d</sup>     | 43  | 22,55 | 3,193 | 1,513 | 0,18         |     |       |
|                                           | Swimming <sup>e</sup>   | 53  | 22,12 | 2,713 |       |              |     |       |
|                                           | Others <sup>d</sup>     | 127 | 22,22 | 3,157 |       |              |     |       |
|                                           | Football <sup>a</sup>   | 148 | 19,94 | 4,478 |       |              |     |       |
|                                           | Basketball <sup>b</sup> | 46  | 20,19 | 3,799 |       |              |     |       |
|                                           | Volleyboal <sup>c</sup> | 87  | 20,71 | 3,855 |       |              |     |       |
| Respect the opponent                      | Tennis <sup>d</sup>     | 43  | 21,30 | 4,012 | 2,656 | <b>0,02*</b> |     |       |
|                                           | Swimming <sup>e</sup>   | 53  | 20,94 | 4,293 |       |              |     |       |
|                                           | Others <sup>d</sup>     | 127 | 21,14 | 4,403 |       |              | a-c |       |
|                                           | Football <sup>a</sup>   | 148 | 19,94 | 4,478 |       |              |     |       |
|                                           | Basketball <sup>b</sup> | 46  | 20,19 | 3,799 |       |              |     |       |

\* $p < 0.05$ , \*\* $p < 0.01$  MSOS: Multidimensional sportsmanship orientation scale AASS: Aggression and anger scale in sports  $\eta^2 = 0.01$  = Small effect 0.06 = Medium effect 0.14 = Large effect.

Table 5 reveals a significant difference in the aggression sub-dimension between the sports branches actively practiced by the athletes. This difference was found to be in favor of athletes who play basketball. Furthermore, no significant difference was found in the anger dimension. While significant differences were observed in the social norms and respect for rules and management sub-dimensions between the athletes' sports branches and their scores on the multidimensional sportsmanship orientation scale, no significant differences were found in other sub-dimensions. A significant difference was found in favor of athletes involved in tennis.

Table 6

Pearson Correlation Analysis between Athletes' Aggression and Anger Levels and Multidimensional Sportsmanship Orientation (n:504)

| Sub dimension                                          |   | 1       | 2       | 3      | 4      | 5      | 6 |
|--------------------------------------------------------|---|---------|---------|--------|--------|--------|---|
| Aggression <sup>1</sup>                                | R | 1       |         |        |        |        |   |
|                                                        | P |         |         |        |        |        |   |
| Anger <sup>2</sup>                                     | R | ,206**  | 1       |        |        |        |   |
|                                                        | P | ,000    |         |        |        |        |   |
| Compliance with social norms <sup>3</sup>              | R | -,155** | -,236** | 1      |        |        |   |
|                                                        | P | ,000    | ,000    |        |        |        |   |
| Respect for rules and regulations. <sup>4</sup>        | R | -,187** | -,348** | ,616** | 1      |        |   |
|                                                        | P | ,000    | ,000    | ,000   |        |        |   |
| Commitment to responsibilities in sports. <sup>5</sup> | R | -,207** | -,184** | ,512** | ,612** | 1      |   |
|                                                        | P | ,000    | ,000    | ,000   | ,000   |        |   |
| Respect the opponent <sup>6</sup>                      | R | -,230** | -,210** | ,438** | ,517** | ,603** | 1 |
|                                                        | P | ,000    | ,000    | ,000   | ,000   | ,000   |   |

\* $p < 0.05$ , \*\* $p < 0.01$

Pearson correlation analysis revealed statistically significant relationships between aggression, anger, and the dimensions of multidimensional sportsmanship orientation ( $p < .01$ ). Aggression was positively and weakly correlated with anger ( $r = .206$ ,  $p < .001$ ). Aggression was negatively and weakly correlated with compliance with social norms ( $r = -.155$ ,  $p < .001$ ), respect

for rules and regulations ( $r = -.187, p < .001$ ), commitment to responsibilities in sports ( $r = -.207, p < .001$ ), and respect for the opponent ( $r = -.230, p < .001$ ). Similarly, anger was negatively and weakly correlated with compliance with social norms ( $r = -.236, p < .001$ ), commitment to responsibilities in sports ( $r = -.184, p < .001$ ), and respect for the opponent ( $r = -.210, p < .001$ ), while a negative moderate relationship was observed between anger and respect for rules and regulations ( $r = -.348, p < .001$ ). Overall, the correlations were predominantly weak, with the exception of the moderate negative association between anger and respect for rules and regulations.

Table 7

Regression analysis of athletes' scores on the Aggression and Anger Scale and the Multidimensional Sportsmanship Orientation Scale (n=504)

| Scale sub-dimension                      | Non-standardized coefficients |              | Standardized Coefficients | t                         | p.   |
|------------------------------------------|-------------------------------|--------------|---------------------------|---------------------------|------|
|                                          | B                             | Std. Mistake | B                         |                           |      |
| Compliance with social norms             | -,025                         | ,075         | -,019                     | -,329                     | ,742 |
| Respect for rules and regulations        | -,084                         | ,099         | -,052                     | -,842                     | ,400 |
| Commitment to responsibilities in sports | -,126                         | ,104         | -,075                     | -1,218                    | ,224 |
| Respect the opponent                     | -,187                         | ,070         | -,150                     | -2,673                    | ,008 |
| <b>R=,250<sup>a</sup></b>                | <b>R<sup>2</sup>=,063</b>     |              | <b>F=8,338</b>            | <b>p=,000<sup>b</sup></b> |      |

a. Aggression

Table 7 shows that the multiple linear regression analysis conducted to determine the effect of the sub-dimensions of sportsmanship orientation on aggression is statistically significant ( $F = 8.338; p < 0.001$ ). Examining the explanatory power of the model, it was determined that the sub-dimensions of sportsmanship orientation together explained 6.3% of the total variance in aggression levels ( $R = 0.250; R^2 = 0.063$ ). When the regression coefficients were examined, it was found that the sub-dimensions of conformity to social norms ( $\beta = -0.019; p = 0.742$ ), respect for rules and management ( $\beta = -0.052; p = 0.400$ ), and commitment to responsibilities in sport ( $\beta = -0.075; p = 0.224$ ) were not statistically significant predictors of aggression ( $p > 0.05$ ). In contrast, the respect for opponent sub-dimension was found to negatively and significantly predict aggression ( $\beta = -0.150; B = -0.187; t = -2.673; p = 0.008$ ). This finding indicates that as athletes' levels of respect for opponents increase, their levels of aggression decrease. Considering the standardized regression coefficients ( $\beta$ ), it can be said that the respect for opponent sub-dimension is the only significant predictor of aggression.

Table 8

Regression analysis of athletes' scores on the Aggression and Anger Scale and the Multidimensional Sportsmanship Orientation Scale (n=504)

| Scale sub-dimension | Non-standardized coefficients |              | Standardized Coefficients | t | p. |
|---------------------|-------------------------------|--------------|---------------------------|---|----|
|                     | B                             | Std. Mistake | B                         |   |    |

|                                                 |                           |                 |                           |        |      |
|-------------------------------------------------|---------------------------|-----------------|---------------------------|--------|------|
| <b>Compliance with social norms</b>             | -,051                     | ,068            | -,041                     | -,747  | ,455 |
| <b>Respect for rules and regulations</b>        | -,513                     | ,090            | -,341                     | -5,687 | ,000 |
| <b>Commitment to responsibilities in sports</b> | ,137                      | ,094            | ,086                      | 1,447  | ,148 |
| <b>Respect the opponent</b>                     | -,079                     | ,064            | -,067                     | -1,237 | ,217 |
| <b>R=,356<sup>a</sup></b>                       | <b>R<sup>2</sup>=,127</b> | <b>F=18,110</b> | <b>p=,000<sup>b</sup></b> |        |      |

a: anger

Table 8 shows that the multiple linear regression analysis conducted to determine the effect of the sub-dimensions of sportsmanship orientation on anger is statistically significant ( $F = 18.110$ ;  $p < 0.001$ ). Examining the explanatory power of the model, it was determined that the sub-dimensions of sportsmanship orientation together explained 12.7% of the total variance in anger level ( $R = 0.356$ ;  $R^2 = 0.127$ ). When the regression coefficients were examined, it was determined that the sub-dimensions of conformity to social norms ( $\beta = -0.041$ ;  $p = 0.455$ ), commitment to responsibilities in sports ( $\beta = 0.086$ ;  $p = 0.148$ ), and respect for the opponent ( $\beta = -0.067$ ;  $p = 0.217$ ) were not statistically significant predictors of anger ( $p > 0.05$ ). In contrast, the sub-dimension of respect for rules and management was found to negatively and significantly predict anger ( $\beta = -0.341$ ;  $B = -0.513$ ;  $t = -5.687$ ;  $p < 0.001$ ). This finding indicates that as athletes' levels of respect for rules and management increase, their levels of anger decrease. Considering the standardized regression coefficients ( $\beta$ ), it can be said that the sub-dimension of respect for rules and management is the strongest and most significant predictor of anger. The other sub-dimensions of sportsmanship did not have a significant effect on anger.

## Discussion

The study first examined age as a sociodemographic variable. According to the analysis results, statistically significant differences were found between the age variable of the participants and their scores on the sub-dimensions of the aggression and anger scale. This finding is consistent with many studies in the relevant literature (Yavuz, 2015; Takar, 2022; Toksöz, 2022; Türkçapar and Yasul, 2021; Kurudirek, 2014; Belli et al., 2018; Afyon and Metin, 2015; Havadar and Kalkavan, 2022; Aydın and İnce, 2016; Akdağcık et al., 2022; Zengin, 2016; Çakır, 2014). However, there are also studies reporting no significant difference between age and aggression and anger (Tutkun et al., 2010; Birinci, 2019; Kırkbir, 2020; Bostancı et al., 2017; Ay, 2021; Demir, 2017; Altın, 2017). When the findings are evaluated, it can be assumed that young individuals may have different levels of aggression and anger due to their greater susceptibility to environmental factors, increased exposure to violent stimuli, and less developed impulse control mechanisms compared to adults, all influenced by their developmental stages. According to the research findings, there was no statistically significant difference between the gender variable of the athletes and aggression, however, it was determined that male athletes had higher aggression scores than female athletes. This finding can be associated with biological explanations suggesting that men

may be more prone to aggressive behavior due to the effect of the testosterone hormone (Dervent, 2007). The obtained result is similar to many studies reporting that men have higher levels of aggression than women (Borroni et al., 2014; Giles and Heyman, 2005; Tisak et al., 2021; Zeichner, Parrott and Frey, 2003; Toksöz, 2022; Erşan et al., 2009; Kurtyılmaz, 2005). However, there are also studies reporting no significant relationship between gender and aggression (Birinci, 2019; Shokoufeh, 2018; Yavuz, 2015; Güvendi and Keskin, 2020; Karabulut, 2013; Yıldırım and Abakay, 2015; Şahinler and Ulukan, 2010; Havadar and Kalkavan, 2022; Öztürk, 2003; Akdağcık et al., 2022; Doğan, 2016; Tutkun et al., 2010). A significant difference was found between the scores obtained by athletes on the anger subscale and the gender variable. This difference was observed to be in favor of male athletes. The relevant literature supports our findings (Araz, 2017; Zor, 2021; Balcı, 2019; Baykan, 2018; Güvendi and Keskin, 2020; Bozkurt, 2017).

According to the research findings, while there was a significant difference in aggression levels among athletes based on their smoking status, no significant difference was found in anger levels. The higher aggression scores among smoking athletes are consistent with the findings of Yazıcı (2021), Akdağcık et al. (2022), Yorulmaz (2019), Avcı (2010), Yurttaş (2016), Özgider et al. (2021), and Beşkat (2016). These results suggest that smoking may be a risk factor that can increase aggression levels. Considering that smoking negatively affects not only physical health but also psychological well-being, it is recommended that awareness training and preventive programs regarding the harms of smoking be widespread among athletes. According to the research findings, a significant difference was found in aggression levels among athletes based on their active sport, with this difference favoring basketball players. However, no significant difference was found in anger levels based on sport. This finding is consistent with many studies reporting a significant relationship between sport and aggression (Çakır, 2014; Güvendi and Keskin, 2020; Akdağcık et al., 2022; Zor, 2021). The literature shows that team sports and individual/contact sports yield different results in terms of aggression levels, and these differences are thought to stem from the structural characteristics of the sports branches, the level of competition, and the contact elements. On the other hand, there are also studies reporting a significant relationship between sport and anger (Türkçapar and Yasul, 2021) or studies that did not find a significant difference in terms of aggression (Havadar and Kalkavan, 2022). These differences are thought to stem from variations in sample characteristics, sports disciplines, and research groups. When the research findings were examined, it was determined that only the sub-dimension of conformity to social norms showed a significant difference according to the age variable in the total score and sub-dimensions of the athletes' multidimensional sportsmanship orientation ( $p < 0.05$ ). Further analyses revealed that this difference was in favor of athletes aged 27 and over. In contrast, no significant difference was found according to the age variable in the sub-dimensions of respect for rules and management,

commitment to responsibilities in sports, and respect for the opponent, as well as in the total sportsmanship orientation score ( $p>0.05$ ). This result shows that age can affect not all dimensions of sportsmanship orientation, but especially the behaviors of conforming to social norms. Possible reasons for this finding include athletes gaining experience with age, internalizing social rules more, and paying more attention to the ethical values of the sporting environment. In the literature, findings regarding the effect of the age variable on sportsmanship orientation appear inconsistent.

The findings of our study are partially parallel to the results obtained by Özsarı et al. (2018), Duygu (2022), Ataklı (2022), Uysal (2022), and Gürpınar and Kurşun (2013), who reported that age is effective in certain dimensions of sportsmanship orientation. In contrast, Zekioğlu and Tatar (2006), Elik (2017), Özkan (2021), Akdağcık et al. (2022), Güneşen (2022), Çavdar (2019), and Küçükatçeken (2019) reported that there was no significant difference in sportsmanship orientation according to the age variable. On the other hand, Bozdemir (2017) reached a different conclusion from the present study, stating that younger athletes exhibited higher levels of sportsmanship behavior. These differences observed between the studies are due to: It is thought that this may stem from various factors such as sample characteristics, age group distribution, the structure of sports branches, the level of competition among athletes, sports experience, and cultural differences. Consequently, the current research reveals that the age variable does not have a decisive effect on all dimensions of sportsmanship orientation, but it does create a significant difference in the dimension of conformity to social norms. This suggests that as age increases, athletes' awareness of social responsibility, adherence to ethical values, and level of conformity to social norms may also increase.

According to the research findings, while a significant difference was determined in favor of female athletes in the sub-dimensions of social norms, respect for rules and management, and respect for opponents on the Multidimensional Sportsmanship Orientation Scale according to the gender variable ( $p<0.05$ ), no significant difference was found in the sub-dimension of commitment to responsibilities in sports ( $p>0.05$ ). These findings indicate that female athletes embrace sportsmanship behaviors more than male athletes. The results obtained are consistent with many studies in the literature (Akdağcık et al., 2022; Ataklı, 2022, Özsarı, 2020; Duygu, 2022; Uysal, 2022; Altun and Güvendi, 2019; Gürpınar and Kurşun, 2013; Esentürk et al., 2015; Başaran, 2009; Zor, 2021; Lee et al., 2007; Christoforidis et al., 2010; Can, 2016; Koç and Güllü, 2017; Coulomb-Cabagno and Rasclé, 2006; Shields et al., 2014; Şenel and Yıldız, 2016).

According to the research findings, significant differences were determined in the sub-dimensions of social norm compliance and respect for rules and management among athletes in terms of the branch variable, while no significant difference was found in the sub-dimensions of

commitment to responsibilities in sports and respect for the opponent. These results indicate that the branch of sport may affect behaviors related to social norm compliance and respect for rules, but not all dimensions of sports orientation. The unique competitive structure of the branches, the rules of the game, the level of physical contact, whether it is a team or individual sport, and the differences in coach-referee interactions can be considered among the possible reasons for the differences observed in these dimensions of sports orientation. The research findings are consistent with studies in the literature that show that the branch of sport has an effect on sports orientation. Indeed, Uysal (2022), Dursun (2019), Zor (2021), Gürpınar and Kurşun (2013), Koç and Güllü (2017), Pepe (2019), Şenel and Yıldız (2016), Nia and Besharat (2010), and Kılınç (2020) have reported significant differences in sportsmanship orientation in general or in some sub-dimensions according to the sport branch. The findings of the current research support these studies and show that the sport branch can be a determining variable, especially in the dimensions of conformity to social norms and respect for rules. On the other hand, the lack of significant differences in the dimensions of commitment to responsibilities in sports and respect for the opponent may indicate that these behaviors are adopted at a similar level by athletes regardless of the sport branch.

According to the correlation analysis results, a positive and weak relationship was found between aggression and anger ( $r = .206, p < .001$ ). In addition, aggression was negatively and weakly correlated with compliance with social norms ( $r = -.155, p < .001$ ), respect for rules and regulations ( $r = -.187, p < .001$ ), commitment to responsibilities in sports ( $r = -.207, p < .001$ ), and respect for the opponent ( $r = -.230, p < .001$ ). Similarly, anger was negatively and weakly correlated with compliance with social norms ( $r = -.236, p < .001$ ), commitment to responsibilities in sports ( $r = -.184, p < .001$ ), and respect for the opponent ( $r = -.210, p < .001$ ), whereas a moderate negative relationship was found between anger and respect for rules and regulations ( $r = -.348, p < .001$ ). The dimensions of sportsmanship orientation were positively and significantly correlated with one another, with correlation coefficients ranging from  $r = .438$  to  $r = .616$  ( $p < .001$ ). Overall, the findings indicate that higher levels of sportsmanship orientation are associated with lower levels of aggression and anger. However, these correlations should be interpreted as associations rather than causal relationships. The findings are consistent with previous studies reporting a positive relationship between anger and aggression (Anestis et al., 2009; Conroy et al., 2001; Maxwell et al., 2007; Ahmadi et al., 2011; Kırkbir, 2020; Gündoğdu, 2010) and negative associations between sportsmanship and aggression and/or anger (Akdağcık et al., 2022; Yazıcı, 2021; Perry, 2014; Barkoukis et al., 2011; Yıldız, 2019; Altun and Güvendi, 2019; Chantal et al., 2005). These findings suggest that sportsmanship orientation is associated with lower levels of aggression and anger among athletes and highlight the potential relevance of sportsmanship-oriented approaches in interventions targeting these outcomes.

According to the regression analysis results, the dimensions of multidimensional sportsmanship orientation significantly predicted athletes' aggression levels. The overall regression model was statistically significant ( $R = 0.250$ ;  $R^2 = 0.063$ ;  $F = 8.338$ ;  $p < 0.001$ ) and explained 6.3% of the variance in aggression. Among the dimensions of sportsmanship orientation, only respect for the opponent was found to be a significant negative predictor of aggression. This finding suggests that athletes with higher levels of respect for their opponents tend to exhibit lower levels of aggressive behavior. Similarly, the regression model examining anger was also statistically significant ( $R = 0.356$ ;  $R^2 = 0.127$ ;  $F = 18.110$ ;  $p < 0.001$ ), explaining 12.7% of the variance in anger. Among the dimensions of multidimensional sportsmanship orientation, only respect for rules and regulations significantly and negatively predicted anger. This result indicates that athletes who demonstrate greater respect for rules and regulations tend to report lower levels of anger. These findings suggest that the dimensions of multidimensional sportsmanship orientation are associated with aggression and anger in different ways. While respect for the opponent appears to play a more important role in reducing aggressive behaviors, respect for rules and regulations appears to be more strongly related to anger control. Therefore, sportsmanship should not be considered a single and uniform construct; rather, its dimensions may contribute differently to athletes' behavioral and emotional outcomes. Previous studies provide partial support for these findings. YAZICI (2021) reported a negative and moderate relationship between anger and multidimensional sportsmanship orientation. Similarly, YILDIZ (2019) found that goal commitment explained approximately 6% of the variance in sportsmanship orientation, while UYSAL (2022) reported that some dimensions of sports leadership significantly predicted dimensions of multidimensional sportsmanship orientation. However, the present study differs from previous research by examining the specific contributions of multidimensional sportsmanship orientation dimensions to both aggression and anger within the same model. The findings contribute to the literature by demonstrating that different dimensions of sportsmanship orientation are linked to different negative behavioral and emotional outcomes. In particular, respect for the opponent emerged as an important factor associated with aggression, whereas respect for rules and regulations was associated with anger. These results provide a more detailed understanding of the mechanisms through which sportsmanship may influence athletes' behaviors and emotions. From a practical perspective, interventions designed to promote sportsmanship should include components aimed at strengthening respect for opponents, adherence to rules and regulations, anger management, and the reduction of aggressive behaviors. Such practices may contribute to the development of healthier, more ethical, and more positive sporting environments.

## Conclusion

The findings of this study provide evidence that multidimensional sportsmanship orientation is associated with athletes' aggression and anger, thereby extending the existing literature by examining these constructs within a common analytical framework. The regression analyses demonstrated that the dimensions of sportsmanship orientation explained 6.3% of the variance in aggression and 12.7% of the variance in anger. Specifically, respect for the opponent significantly and negatively predicted aggression, whereas respect for rules and regulations significantly and negatively predicted anger. These findings suggest that different dimensions of sportsmanship may be associated with aggression and anger in distinct ways, rather than sportsmanship functioning as a uniform construct across these outcomes. The main contribution of the present study is therefore its identification of dimension-specific relationships between sportsmanship orientation, aggression, and anger. Rather than considering sportsmanship as a single global characteristic, the findings indicate that respect for opponents may be particularly relevant to aggression, whereas respect for rules and regulations may be more closely associated with anger. This distinction contributes to the literature by providing a more nuanced understanding of the behavioral and emotional dimensions underlying sportsmanship among athletes. From a practical perspective, the findings suggest that interventions designed to promote sportsmanship should not focus solely on general ethical values. Programs may benefit from incorporating components specifically targeting respect for opponents, adherence to rules and regulations, anger management, and the reduction of aggressive responses. Such approaches may contribute to the development of more positive and ethically oriented sporting environments. Nevertheless, the explained variance indicates that aggression and anger are influenced by factors beyond sportsmanship orientation. Therefore, future research should examine additional psychological, social, and contextual variables that may contribute to these outcomes and should investigate these relationships across different sports, competitive levels, and athlete populations.

## Suggestions

1. It is recommended that sports clubs and youth training programs include practical training aimed at improving athletes' anger management, conflict resolution, and ethical decision-making skills, in addition to focusing solely on technical and physical development, in their season planning.
2. To identify at-risk groups with low sportsmanship orientation, it is recommended that athletes be given individual feedback at the beginning of the season by administering sportsmanship, anger, and aggression scales, and that support programs be created for athletes who need them.

## Ethics Committee Approval Information

Ethics review board: Niğde Ömer Halis Demir University Ethics Committee

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## Author Contributions Statement

This study was derived from the first author's doctoral dissertation. The first author carried out the research design, data collection, data analysis, and manuscript preparation. The second author contributed to developing the theoretical framework and reviewing and editing the manuscript. Both authors read and approved the final version of the manuscript.

## Conflict of Interest Statement

The authors declare that they have no conflicts of interest related to this research.

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