

## The Impact of Taekwondo Athletes' Aggression and Anger Levels on Fair Play Behaviors: An Educational Perspective\*

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### Abstract

This study aimed to investigate the impact of taekwondo athletes' education on aggression and anger levels on their fair play behaviors, considering various demographic and situational variables. The variables examined included gender, age, family economic status, educational background, years of athletic experience, frequency of weekly training, and personality traits. The sample consisted of 497 athletes (317 females and 180 males) competing at different levels in teams based in Eskişehir province. Data were collected using the "Aggression and Anger Scale in Sport," adapted into Turkish by Gürbüz et al. (2019), the "Multidimensional Sportsmanship Orientation Scale," translated into Turkish by Sezen and Balçıklanlı (2010), and a personal information form. The analysis revealed significant differences in the athletes' aggression and anger scores based on gender, educational background, frequency of weekly training, and personality traits ( $p < 0.05$ ). However, no significant differences were observed concerning age, economic status, or years of athletic experience. Regarding the sportsmanship scale, no statistically significant differences were found based on gender or years of athletic experience ( $p > 0.05$ ). Conversely, significant differences were identified for variables such as age, economic status, educational background, frequency of weekly training, and personality traits ( $p < 0.05$ ). In conclusion, aggression, anger, and sportsmanship behaviors are closely interconnected in sports. The findings suggest that aggression and anger levels may vary depending on certain demographic and situational factors.

**Keywords:** Aggression, Anger, Fair Play, Taekwondo Education

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Taekwondo, as a sport, is known for emphasizing fundamental values such as discipline, morality, and respect through its training process. Its recognition as an Olympic discipline highlights that taekwondo is not merely a physical activity but also a significant domain for mental and emotional development. However, it is an undeniable fact that factors such as anger and aggression, which sometimes exceed acceptable limits, play a role in shaping athletes' emotional states and behavioral patterns within competitive environments. In this context, examining the psychological dynamics influencing athletes' fair play behaviors can provide critical insights into the aspects of sports education that require attention.

Fair play refers to the preservation of ethical principles in sports, respect for opponents, and adherence to rules. This concept holds significance not only in the athlete's identity but also in their societal role (Kavussanu & Boardley, 2009). Various studies have indicated that emotional states like aggression and anger can have either positive or negative impacts on fair play behaviors (Maxwell et al., 2009; Todorovich, 2016). In contact sports such as taekwondo, these effects become more pronounced. Therefore, fostering athletes' emotional intelligence and anger management skills during sports training processes becomes crucial for enhancing both individual achievements and the ethical standards of sports (Duda & Nicholls, 1992).

Taekwondo training processes aim to instill not only technical skills but also ethical values and emotional control competencies. How athletes manage emotions such as anger and aggression in competitive settings directly influences their fair play behaviors. Thus, the purpose of this study is to evaluate, from an educational perspective, the effects of taekwondo athletes' levels of anger and aggression on their fair play behaviors.

The literature reveals that studies examining the relationship between athletes' fair play behaviors and emotional states have predominantly focused on sports such as football and basketball (Shields & Bredemeier, 2007; Kavussanu, 2006). However, there is noticeably less research addressing this relationship in individual and contact sports like taekwondo. This gap underscores the importance of a detailed examination of the unique circumstances and educational approaches associated with taekwondo athletes. For instance, factors such as age, gender, and experience level of athletes are significant research topics regarding their effects on levels of anger and aggression (Hodge & Lonsdale, 2011).

### **Fair Play: A Conceptual Framework and Its Development in Turkey**

Fair play, or "fair game," emerges as a concept that constitutes the cornerstone of ethical values in sports. According to Pehlivan (2004), fair play is defined as "an approach that prioritizes fair and honest play, adherence to rules, respect for opponents, the defense of justice against unfair advantages, and the enjoyment of the game rather than benefiting from unjust disadvantages." This definition has contributed to framing the ethical behavior of individuals in sports.

When examining the historical development of the concept of fair play, it is evident that the term is rooted in a sports philosophy grounded in moral values. Yıldırım (1992) highlights that the notion of fair play was shaped by values such as justice and honesty during the Victorian era in 19th-century England. This perspective is expressed as "sports representing the moral compass in the life of a gentleman." Moreover, fair play is based on the

principle of respect for opponents and the rules of the game. The socio-cultural dynamics that evolved during this period laid the foundations of the modern understanding of fair play.

In its 1974 declaration, the International Fair Play Committee defined fair play as “a perspective on life that involves respect for oneself, opponents, teammates, referees, spectators, and the public” (Pehlivan, 2004; Şahin, 1998). This definition underscores a sportsmanship ethic that emphasizes the shaping of the desire to win within ethical boundaries.

The concept of fair play can be analyzed under two main categories: formal and informal fair play. Formal fair play refers to an athlete’s strict adherence to the rules of the game, whereas informal fair play goes beyond competing under equal conditions and includes actions aimed at rectifying an opponent’s unfair situations (Ateşoğlu, 1974). This distinction allows for a deeper understanding of the ethical dimensions of fair play.

In Turkey, the concept of fair play has historically been equated with notions of sportsmanship and gentlemanly conduct. Yıldırım (2002) states that fair play was officially introduced into Turkish sports in 1981 with the establishment of the Fair Play Committee under the Turkish National Olympic Committee. This committee organized various events to promote ethical values in sports and recognized athletes for their fair play behaviors. A notable milestone in Turkey’s fair play history occurred in 1983 when Derbentspor’s goalkeeper İsmet Karababa informed the referee of a goal against his own team, marking Turkey’s first international fair play achievement (Yıldırım, 2002).

The development of fair play in Turkey gained momentum in 1994 with the publication of "Virtue in Sports: Fair Play" by the Ministry of Youth and Sports. This publication was a significant step in shaping the concept of fair play in Turkish sports, facilitating its adoption as "virtue in sports" (Yıldırım, 2004).

### **The Role of Taekwondo in Training Individuals for Physical, Mental, and Social Development**

Taekwondo, as an Olympic sport, offers both individual and philosophical discipline. Historically, this martial art, with thousands of years of tradition, aims to train the harmony of body and spirit, enabling individuals to gain the strength and peace necessary to defend themselves without weapons (Karademir et al., 2022). In this context, taekwondo stands out not only as a physical combat sport but also as a life practice that supports an individual's mental and moral development.

Taekwondo involves barehanded techniques, including offensive and defensive movements directed toward an opponent, requiring strategy and coordination. Maintaining sportsmanship and ethical principles are among its core characteristics. In this discipline, individuals aim not only to engage in physical competition but also to surpass their personal limits. The primary goal of the athlete is to control their body more effectively by using imagination and intelligence. This process contributes to the development of endurance, flexibility, and overall physical fitness (Tel, 2008).

Taekwondo fosters virtues such as respect, patience, loyalty, trustworthiness, humility, courage, kindness, and responsibility, which have positive impacts on personality

development. Although it requires rigorous training, this discipline addresses individuals' mental, physical, and spiritual efforts holistically. The fundamental teachings of taekwondo include righteousness, a strong moral compass, humility, and respect, while principles such as honesty, self-control, perseverance, and an indomitable spirit contribute to the personal and social development of its practitioners (Choi, 1991; Lewis, 1996; Brecher, 1998; Firat, 2022).

Taekwondo plays a significant role in enhancing individuals' social skills, fostering self-discipline, and facilitating integration into society. By instilling a sense of honesty and responsibility, this sport aids both children and adults in developing a healthy body, mind, and spirit. Furthermore, it contributes to improving quality of life and cultivating positive habits. In these aspects, taekwondo is regarded as a valuable tool for not only strengthening an individual's physical and mental abilities but also enabling them to lead a harmonious life within their social environment (Precision Martial Arts Academy, 2021; Firat, 2022).

### **The Educational Dimension of Taekwondo**

In the modern world, taekwondo is recognized not only as a physical sport but also as a multidimensional educational tool that contributes to individuals' mental and social development. Beyond the development of physical skills, taekwondo supports individuals in adopting values such as discipline, self-control, respect, and responsibility (Lee, 2016). At its core, taekwondo significantly contributes to individuals' physical health. This sport, which requires advanced cardiovascular endurance, flexibility, and muscular strength, enhances physical capacity (Kim & Zhang, 2020). It has been observed that individuals who receive taekwondo training during childhood and adolescence experience faster development of motor skills, which positively impacts their daily life activities (Gökçe & Yılmaz, 2022).

Moreover, physical activity not only supports physical health but also promotes mental well-being. The positive effects of dynamic sports like taekwondo on stress management have been substantiated by various studies (Park et al., 2017). Taekwondo also plays a significant role in supporting participants' mental development. One of its fundamental principles, self-control, enables individuals to act more disciplined and organized not only in sports but also in other aspects of life (Chung, 2018). The repetitive practice of techniques in taekwondo helps individuals develop values such as patience and perseverance.

Particularly in children, it has been observed that taekwondo training increases attention spans and focus. This improvement positively contributes to their academic performance (Lakes & Hoyt, 2004). Furthermore, taekwondo training helps individuals build resilience against stress and enhances their ability to cope with challenging situations. Taekwondo also plays an effective role in developing individuals' social skills. This sport teaches participants how to function within a team and understand group dynamics. Additionally, taekwondo classes and tournaments encourage individuals to meet and interact with people from diverse cultural backgrounds (Fong & Ng, 2011).

Social skills such as respect and empathy are central to taekwondo. Respect for opponents is a crucial component of both training and competitions. This emphasis on respect supports individuals in becoming more tolerant and understanding toward others in their daily lives (Moenig, 2015). Taekwondo serves as an important tool for instilling moral values. Principles such as discipline, self-respect, perseverance, and respect for others are integral to taekwondo and contribute to individuals' character development (Kim, 2014).

The concept of "Do" in taekwondo helps individuals understand their ethical and moral responsibilities. "Do" represents a lifelong guiding philosophy that transcends technical skills. It has been observed that this teaching positively influences individuals' moral decisions and actions (Ko, 2010).

### **Aggression and Anger in Sports: Behavioral Effects, Management Strategies, and Psychological Aspects**

Aggression is a concept defined in various ways in the literature and is generally accepted as a form of behavior aimed at causing harm or pain to another person. Psychologists, physiologists, and philosophers have different views on whether aggression is an innate, instinctive phenomenon or a learned behavior (Gültekin et al., 2000). "At the core of aggression lies the obstruction of behaviors aimed at fulfilling an individual's needs; as a result of this obstruction, anger arises, and the individual may exhibit aggressive behaviors alongside this anger" (Acet, 2001). Aggression is commonly understood as behavior aimed at causing physical or verbal harm to others (Arkonaç, 1998). "Aggression is a form of behavior that manifests itself through harmful, destructive, and hostile actions towards others" (Köknel, 1986). In sports, aggression typically aims to harm the opponent's game and is often directed at altering the outcome of the competition (Yeter, 2006).

In sports, aggression can be defined as actions that violate the rules of the sport and are intended to cause harm to others, often under the influence of psychological, biological, and social factors (Dervent, 2007). However, not all actions that cause harm to an opponent in sports are considered aggression. Aggression refers only to actions that violate the rules and serve a specific purpose (İkizler, 1993). For example, actions like limiting the opponent's body movements in wrestling and boxing or interfering with the ball in sports like football or basketball, are part of the inherent competition in sports.

Anger is a strong emotional response that arises from various situations throughout a person's life and is a natural part of human nature. "Anger is a universal emotion that develops when an individual's expectations are not met or when an undesirable outcome occurs" (Aydoğan & Özkan, 2018). The intensity and nature of anger vary based on cultural, individual, and environmental factors (Manap & Kış, 2019). Particularly, individuals who are exposed to violence during childhood are more likely to experience anger issues and exhibit aggressive behaviors in later stages of life (Tathhoğlu & Karaca, 2013). Uncontrolled expression of anger not only creates a negative impact on the individual's psychology but also harms social relationships (Yılmaz & Tuzgöl Dost, 2015). "While anger is solely an emotional feeling, aggression can be defined as a form of behavior" (Belli et al., 2018).

In sports activities, anger and aggression are interrelated emotional and behavioral processes. High levels of anger can negatively affect athletes' performance, influencing their tactical decisions and in-game actions (Doğan, 2005; Filiz, 2002). Managing anger in sports not only helps to maintain individual health but also contributes to more efficient and healthy performance in a competitive environment (Nay, 1995).

Based on the literature studies mentioned above, the main research question for this study has been identified as: "What is the effect of aggression and anger levels of Taekwondo athletes on fair play behaviors in terms of different variables?"

To address this problem, the following sub-problems have been developed:

1. For Taekwondo athletes: What is the effect of aggression and anger levels on fair play behaviors in terms of the following variables?

- Age
- Gender
- Economic status
- Educational level
- Duration of participation in sports
- Number of weekly training sessions
- Personality traits

## **Methodology**

### **Research Design**

This research is a quantitative study based on a descriptive relational survey model. A survey is a research model aimed at identifying an existing situation, whether in the past or present, as it is (Karasar, 2017). The aim of the research is to observe and document the current state, and in this context, it is essential to examine and observe the situation accurately. The relational survey model is a research model designed to determine the relationships between multiple variables and the degrees of interaction between these variables. This model identifies whether variables change together and how the changes occur (Karasar, 2017). This study was conducted using the relational survey model as it investigates how the aggression and anger levels of athletes are influenced by various variables.

### **Population and Sample**

The population of the study consists of athletes practicing taekwondo in various clubs in Eskişehir. The sample was selected from licensed athletes who have reached a level of blue belt or higher and have participated in competitions in different clubs in Eskişehir. A total of 497 athletes from 5 different clubs in Eskişehir participated in the study. All of these athletes are licensed and have reached a level of participation in competitions.

### **Data Collection Tool**

#### ***Personal Information Form***

The personal information form was developed by the researcher and advisor to collect demographic information about the athletes participating in the study. The form includes general information such as the athletes' age, gender, family economic status, educational background, duration of taekwondo practice, weekly training frequency, and how they describe themselves in daily life.

#### ***Sport Aggression and Anger Scale***

In this study, the Turkish adaptation of the "Sport Aggression and Anger Scale" was used to assess the levels of anger and aggression among Turkish athletes. This scale, developed by Maxwell and Moores (2007), consists of 12 items, with 6 items measuring the anger subscale and 6 items measuring the aggression subscale. The scale uses a 5-point Likert-type format. The scale was adapted into Turkish by Gürbüz et al. (2019), and the Cronbach's alpha

internal consistency coefficient was found to be 0.79 for the aggression subscale, 0.79 for the anger subscale, and 0.83 for the overall scale. In this study, the Cronbach's alpha value for the data was found to be 0.833.

### Data Collection and Analysis

The study included a total of 497 athletes, 317 women and 180 men, who are licensed and have reached the level of participation in competitions in Eskişehir. The data collection process was conducted through face-to-face applications by the researcher between October and December 2023. Participants were administered the "Sport Aggression and Anger Scale" adapted into Turkish by Gürbüz et al. (2019). Data analysis was performed using SPSS 26.0 software, and the Kolmogorov-Smirnov test was used to assess the normality of the data. Based on the test results, although the data did not show normal distribution, the skewness values were within the range of -3 to +3, indicating that the data was considered to have a normal distribution (Jondeau & Rockinger, 2003). Parametric tests, including independent samples t-tests, were used, and for variables consisting of three or more categories, one-way analysis of variance (One-way ANOVA) was applied. In cases where homogeneity of variance was not met, the Welch test was used. As a second-level test, Tukey and Games-Howell tests were applied. The results were evaluated at a significance level of 0.05.

### Findings

#### The Impact of Aggression and Anger Levels of Taekwondo Athletes on Fair Play Behavior According to Age Groups

Under this title, the effects of aggression and anger levels of Taekwondo athletes on fair play behavior have been analyzed according to age groups.

**Table 1**

*Total and Sub-Dimensions of the Aggression and Anger Scale in Sports According to Age Variable*

	Age	N	Mean	Std. Deviation	F	p	Post-Hoc
<b>Anger</b>	10-12	276	14,61	5,655	7,592	<b>0,000*</b>	a
	13-15	110	16,69	5,528			b
	16-18	91	16,73	5,487			b
	19 and over	20	18,80	6,254			b
	10-12	276	11,85	4,043			0,681
13-15	110	11,25	3,486	a			
16-18	91	11,79	4,046	a			
19 and over	20	11,30	4,305	a			
10-12	276	21,51	3,295	2,325	0,081	a	
13-15	110	21,25	3,608			a	
16-18	91	21,74	3,076			a	
19 and over	20	22,90	1,971			a	

\* $p < 0,05$ ; Post-Hoc: There is no significant difference between groups that share the same letters in multiple comparisons. \*\*Average Total Scores of Sport Aggression and Anger Scale

According to Table 1, when examining anger scores based on age, it is evident that the average scores for the anger subscale tend to increase as age progresses. The results of the one-way analysis of variance (ANOVA) show that the differences between age groups are statistically significant ( $p < 0.001$ ). According to the Tukey post hoc test, significant differences were found between the 10-12 age group and the other groups, while no significant difference was observed among the other groups. When examining the aggression subscale scores, the average values across the groups show similarities, and the results of the one-way ANOVA indicate no significant difference between the groups ( $p = 0.564$ ). When comparing the group mean values for the total scores on the sport-related aggression and anger scale, participants aged 19 and above again have the highest averages. However, the results of the Welch test indicate that there is no significant difference between the age groups ( $p = 0.081$ ).

### The Effect of Taekwondo Athletes' Aggression and Anger Levels on Fair Play Behaviors According to Gender

Under this title, the effect of Taekwondo athletes' aggression and anger levels on fair play behaviors is analyzed based on gender.

**Table 2**

*Total Scores and Subscales of Sport Aggression and Anger Scale According to the Gender Variable*

	Gender	N	Mean	Std. Deviation	t	p
Anger	Male	180	15,911	5,406	0,830	0,407
	Female	317	15,467	5,913		
Aggression	Male	180	12,878	4,800	4,687	<b>0,000*</b>
	Female	317	11,006	3,158		
SAAS	Male	180	28,789	9,340	2,829	<b>0,005*</b>
	Female	317	26,473	7,662		

According to Table 2, the anger scores of Males are higher compared to Females. However, this difference is not statistically significant ( $p = 0.407$ ). When examining aggression scores, it is again observed that Males have higher average scores than Females, and this difference is statistically significant ( $p < 0.001$ ). When comparing the average total scores on the sport aggression and anger scale, it is also seen that Males have higher averages, and this difference is statistically significant ( $p = 0.005$ ).

### The Impact of Aggression and Anger Levels on Fair Play Behaviors According to the Economic Status of Taekwondo Athletes

Under this heading, the effects of aggression and anger levels on fair play behaviors among Taekwondo athletes were analyzed based on the economic status of the participants.

**Table 3**

*Total Scores and Subdimensions of the Aggression and Anger Scale in Sports According to the Economic Status Variable*

	Economic situation	N	Mean	Std. Deviation	F	p	Post-Hoc
Anger	Very Good	79	14,494	6,520	3,734	<b>0,026*</b>	a
	Good	208	15,250	5,264			ab
	Average	210	16,429	5,780			b
Aggression	Very Good	79	11,519	4,449	0,229	0,796	a
	Good	208	11,827	4,175			a

	Average	210	11,605	3,471			a
SAAS	Very Good	79	26,013	9,321			a
	Good	208	27,077	8,295	1,818	0,163	a
	Average	210	28,033	8,039			a

\*p<0,05; Post-Hoc: There is no significant difference between groups that share the same letters in multiple comparisons.

According to Table 3, when examining anger scores and anger subdimension scores based on the economic status variable, it is noticeable that as economic conditions worsen, the mean scores increase. The results of the Welch analysis indicate that the differences between economic status groups are statistically significant (p=0.026). According to the results of the Games-Howell post hoc test, a significant difference was observed between the "very good" and "moderate" groups, whereas no significant difference was found between the "very good" and "good" groups. Similarly, no significant difference was observed between the "good" and "moderate" groups. When analyzing the aggression subdimension scores, similarities were observed in the mean values of the groups, and the results of the Welch analysis showed no statistically significant difference between the groups (p=0.796). Furthermore, when comparing the group mean values for the total scores of the Aggression and Anger Scale in sports, participants with a moderate economic status were found to have the highest mean score. However, despite this finding, the results of the one-way ANOVA test indicated that there was no significant difference between the age groups (p=0.163).

**The Impact of Aggression and Anger Levels on Fair Play Behaviors According to the Educational Status of Taekwondo Athletes**

Under this title, the effects of aggression and anger levels on fair play behaviors among Taekwondo athletes were analyzed based on the educational status of the participants.

**Tablo 4**

*Total Scores and Subdimensions of the Aggression and Anger Scale in Sports According to the Variable Educational Status*

	Education level	N	Mean	Std. Deviation	F	p	Post-Hoc
Anger	Primary	123	13,894	5,968	11,851	0,000*	a
	Secondary	232	15,552	5,622			b
	High School	142	17,254	5,264			c
Aggression	Primary	123	11,455	3,803	0,311	0,733	a
	Secondary	232	11,802	4,137			a
	High School	142	11,690	3,719			a
SAAS	Primary	123	25,350	8,396	6,203	0,002*	a
	Secondary	232	27,353	8,517			ab
	High School	142	28,944	7,799			b

\*p<0,05; Post-Hoc: There is no significant difference between groups that share the same letters in multiple comparisons.

When examining the one-way ANOVA results for the anger subdimension based on the educational status variable in Table 4, a significant difference was identified between the groups (p<0.001). The results of the Tukey post-hoc test revealed that all groups differed significantly from one another. For the aggression subdimension, the one-way ANOVA results

indicated no significant difference between the groups ( $p=0.733$ ). When analyzing the one-way ANOVA results for the total scores of the Aggression and Anger Scale in sports, a significant difference was observed between the groups ( $p=0.002$ ). According to the Tukey test, there was a significant difference between the primary school and high school groups, while no significant difference was found between the middle school group and either the primary school or high school groups.

### **The Effect of Taekwondo Athletes' Aggression and Anger Levels on Fair Play Behavior According to Their Duration of Sport Participation**

In this section, the impact of Taekwondo athletes' aggression and anger levels on fair play behavior was analyzed according to the duration of their sport participation.

**Table 5**

*Total and Sub-dimensions of Aggression and Anger Scale According to the Duration of Sport Participation Variable*

	<b>Exercise Time</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>F</b>	<b>p</b>	<b>Post-Hoc</b>
<b>Anger</b>	1-3 Year	290	14,907	5,793	7,720	<b>0,000*</b>	a
	4-7 Year	154	16,169	5,285			ab
	8 Year/More	53	18,000	5,939			b
<b>Aggression</b>	1-3 Year	290	11,717	3,896	0,180	0,835	a
	4-7 Year	154	11,727	4,009			a
	8 Year /More	53	11,377	3,987			a
<b>SAAS</b>	1-3 Year	290	26,624	8,308	2,989	0,051	a
	4-7 Year	154	27,896	8,242			a
	8 Year /More	53	29,377	8,797			a

\* $p<0,05$ ; Post-Hoc: There is no significant difference between groups that share the same letters in multiple comparisons.

In Table 5, when examining the one-way ANOVA test results for the anger sub-dimension scores according to the sport age variable, a significant difference is observed between the groups ( $p<0.001$ ). According to the Tukey post-hoc results, this difference is found between the participants in the 8+ years sport age group and those in the 1-3 years sport age group. There is no difference between participants with 4-7 years of sport experience and the other groups. Looking at the ANOVA results for the aggression sub-dimension, no significant differences are observed between the groups ( $p=0.835$ ). Similarly, the ANOVA results for the total scores of the aggression and anger scale also show no difference between the groups ( $p=0.051$ ).

### **The Effect of Taekwondo Athletes' Aggression and Anger Levels on Fair Play Behavior According to Their Weekly Training Frequency**

In this section, the impact of Taekwondo athletes' aggression and anger levels on fair play behavior was analyzed according to the participants' weekly training frequency.

**Tablo 6**

Total and Sub-dimensions of the Aggression and Anger Scale According to the Weekly Training Variable

	Weekly Training	N	Mean	Std. Deviation	F	p	Post-Hoc
<b>Anger</b>	1	12	13,000	3,247	6,905	0,000*	a
	2	41	13,268	6,538			a
	3	198	14,495	5,953			a
	4	84	17,702	5,446			b
	5	58	15,621	3,183			ab
	6	26	17,077	6,468			ab
	7	78	17,436	5,31			b
<b>Aggression</b>	1	12	11,167	3,38	1,845	0,099	a
	2	41	11,659	4,789			a
	3	198	11,798	4,068			a
	4	84	12,071	4,42			a
	5	58	10,517	3,004			a
	6	26	12,346	2,545			a
	7	78	11,718	3,545			a
<b>SAAS</b>	1	12	24,167	5,024	4,212	0,000*	a
	2	41	24,927	9,443			ab
	3	198	26,293	8,989			a
	4	84	29,774	8,585			b
	5	58	26,138	5,735			a
	6	26	29,423	7,737			ab
	7	78	29,154	7,213			

\*p<0,05; Post-Hoc: There is no significant difference between groups that share the same letters in multiple comparisons.

In Table 6, when evaluating the Welch test results for the anger sub-dimension according to the weekly training frequency variable, a significant difference between the groups was identified ( $p<0.001$ ). According to the Games-Howell post-hoc test results, a significant difference was found between participants who train 4 to 7 times per week and those who train 1, 2, or 3 times per week. However, no significant differences were found in the pairwise comparisons of the other groups. As for the aggression sub-dimension, the Welch test results showed no significant difference between the groups ( $p=0.099$ ). When examining the ANOVA results for the total aggression and anger scale score, a significant difference was found between the groups ( $p<0.001$ ). According to the Tukey test results, a difference was observed between participants who train 4 times per week and those who train 1, 3, or 5 times per week, while no significant differences were found in the other pairwise comparisons.

### **The Effect of Taekwondo Athletes' Aggression and Anger Levels on Fair Play Behavior According to Their Personality Definition**

In this section, the impact of Taekwondo athletes' aggression and anger levels on fair play behavior was analyzed according to the participants' personality definition.

**Table 7**

*Total and Sub-dimensions of the Aggression and Anger Scale According to the Personality Definition Variable*

	Personality	N	Mean	Std. Deviation	F	p	Post-Hoc
<b>Anger</b>	Calm	159	14,35	4,842	9,003	<b>0,000*</b>	b
	Hyperactive	124	15,05	5,780			bc
	Irritable-Aggressive	57	19,93	6,718			a
	Sociable	136	16,06	5,120			c
	Introverted	21	14,29	7,065			bc
<b>Aggression</b>	Calm	159	11,69	4,140	3,903	<b>0,005*</b>	b
	Hyperactive	124	11,01	3,569			b
	Irritable-Aggressive	57	13,75	4,737			a
	Sociable	136	11,39	3,343			b
	Introverted	21	11,95	4,018			ab
<b>SAAS</b>	Calm	159	26,031	7,653	7,58	<b>0,000*</b>	b
	Hyperactive	124	26,056	8,283			b
	Irritable-Aggressive	57	33,684	9,876			a
	Sociable	136	27,449	7,128			b
	Introverted	21	26,238	9,924			b

According to Table 7, the Welch test results for the anger sub-dimension indicate a significant difference between the groups ( $p < 0.001$ ). Based on the Games-Howell test results, a difference was found between the group that defined itself as irritable and all other groups. Additionally, a difference was observed between the group that defined itself as calm and the sociable group. No differences were found in the other group comparisons. For the aggression sub-dimension, a significant difference between the groups was also found ( $p = 0.005$ ). According to the Games-Howell test results, the group that defined itself as irritable showed a significant difference with all other groups except for the introverted group. Apart from this result, no significant differences were found in pairwise comparisons between the groups. Finally, when examining the total score of the Aggression and Anger Scale, a significant difference between the groups was observed ( $p < 0.001$ ). The Games-Howell test results revealed a difference between the group that defined itself as irritable and the other groups, while no differences were found among the other groups.

### Results and Discussion

In the age variable sub-dimension, a significant difference between age groups was observed. Although there was no significant difference found in the aggression sub-dimension across age groups, no significant difference was detected in the total score averages. According to the relevant literature, similar findings were obtained in previous studies. For instance, Kaya (2019) found that anger and aggression did not differ significantly among age groups in their study. Öztürk (2019) concluded that aggression scores did not significantly vary according to age. In his 2016 study, Doğan also found no significant differences in aggression scores based on age groups. Similarly, Demir et al. (2017) confirmed that there were no

differences in athletes' anger expression styles based on age, supporting our study. In contrast, Altın (2017), in his study on amateur football players, found a significant difference based on age. On the other hand, Takar (2022), in his research with ice hockey players, found a significant difference between aggression levels and age variables. Afyon and Metin (2015) found a significant difference in aggression sub-dimensions based on age in their study with football players. Kalkavan et al. (2022) reported a positive relationship between anger management and age in football players, concluding that older athletes are better able to manage their anger due to adapting more quickly to environmental conditions. Mamak and Dalkılıç (2017) found that aggression did not vary by age in physical education and sports students.

Regarding the gender variable sub-dimension, although males had higher anger scores, the difference was not statistically significant. In the aggression sub-dimension, males also had higher mean scores. When comparing the total scores, males had significantly higher averages. As observed, "Looking at the inherent characteristics of people, gender differences are one of them. One of the differences between males and females is that the testosterone hormone released by males plays a larger role in triggering physical aggression compared to the estrogen hormone released by females" (Birinci, 2019). Kharkan et al. (2013) found in their study on volleyball, basketball, taekwondo, and karate athletes that male athletes were more aggressive than female athletes. Kafalı et al. (2017) concluded that male athletes had higher aggression scores and behaved more aggressively compared to female athletes. Gedik and Güvendi (2023) found that males had significantly higher average scores in aggression and anger sub-dimensions in their study with 88 combat athletes. Zor (2021) found a significant difference between aggression and gender. However, in Gedik's (2024) study, no significant difference was found in aggression and anger scores between male and female athletes. Keskin (2015), in a study on students participating in inter-high school competitions, found that male athletes had higher general aggression scores than female athletes, contrary to our findings.

In the values and anger sub-dimension scores, it was observed that as economic conditions worsened, the average scores increased. However, no significant differences were observed in aggression sub-dimension scores, and no meaningful difference was found among the groups. Nevertheless, according to the one-way ANOVA test results, there was no significant difference among age groups. Some supporting findings in the literature include Kaya et al. (2012), who found no significant difference between anger and income level. Esentürk et al (2005) also demonstrated that there was no significant difference in anger and anger traits based on economic and social characteristics and gender of high school students. Other studies that also found no difference in aggression levels based on socioeconomic status include Öz (2007), Demirhan (2002), and Şahan (2007). Some studies that found significant differences in aggression and income level are by Taşkıran (2021) and Toksöz (2022), who identified a significant relationship between income level and aggression. Hatunoğlu (1994) found that there was a significant difference between family income level and aggression, stating that youths who perceive their family's income as low or medium had higher aggression levels. In Algur's (2019) study, a significant difference between anger and income level was found.

In our study, a significant difference was found between the educational level variable and aggression and anger scores. Upon examining the second-level test results, it was observed that differences existed among the groups. However, no significant difference was found in the aggression sub-dimension. Nevertheless, the one-way ANOVA analysis of the total aggression and anger scale scores revealed a significant difference between the groups. Parallel to our study, Yavuz (2015) found in his research that anger, and aggression scores showed significant differences based on educational level. Shokoufeh (2018), Yavuz (2015), and Cengiz (2017) also found significant differences in aggression and anger scores according to educational level. Demir (2020) found no significant difference in aggression and anger scores based on educational level. Kaya (2019) found no significant differences in anger and aggression scores according to educational level. In Baykan's (2018) research, anger scores did not show significant differences according to educational level.

When examining the results of the test for the anger sub-dimension according to the age of starting sports, a significant difference is observed between the groups. However, when looking at the aggression sub-dimension, no differences are found between the groups. Similarly, the analysis of the total score for the aggression and anger scales reveals no significant differences between the groups. In his study, Birinci (2019) found that aggression and anger scores did not significantly differ according to the age of starting sports and the number of training days. Teke (2018) studied the impact of athletes' personality traits on fair play and concluded that athletes' sports behaviors decreased as age increased. In a study by Baykan (2018), no significant differences were found in anger scores according to the age of starting sports. Demir (2020) revealed that motivation scores in sports did not significantly differ based on the age of starting sports. Yavuz (2015) found significant differences in aggression and anger scores according to education level, age groups, and the age of starting sports. In a study by Esentürk (2014), it was found that sports showed significant differences according to age.

When the weekly training frequency variable was evaluated, a significant difference was found in the anger sub-dimension scores. However, no significant difference was found in the aggression sub-dimension. A significant difference was found in the total aggression and anger scale scores. Öztürk (2019), Birinci (2019), and Shokoufeh (2018) found that athletes who actively participate in sports have significantly higher aggression and anger scores compared to those who do not engage in sports. Özen (2019) found no significant differences based on the day and time of weekly exercise, such as awareness, emotional experience, repression, and identification.

Regarding the personality definition sub-dimension, the analysis results for the anger sub-dimension showed a significant difference between groups. A significant difference was also found in the aggression sub-dimension. Finally, a significant difference was observed in the total aggression and anger scale scores. Some relevant findings from the literature are as follows: Mazılı (2018) observed narcissistic personality traits in karate and taekwondo athletes, while Sağlam (2018) found that competitive taekwondo athletes tend to show "passive aggression." In line with these findings, our study shows that athletes who define themselves as angry and aggressive had higher aggression and anger scores compared to other personality types.

### Suggestions

- The effect of aggression and anger levels of taekwondo athletes on fair play behavior can be studied in athletes at the national team level, considering different variables.
- The effect of aggression and anger levels of taekwondo athletes on fair play behavior can be studied in taekwondo athletes from different regions, considering different variables.
- The effect of aggression and anger levels of taekwondo athletes on fair play behavior can be studied across different sports, considering different variables.
- The effect of aggression and anger levels of taekwondo athletes on fair play behavior can be studied comparatively across different sports, considering different variables.

### References

- Afyon, Y., & Metin, S. (2015). Muğla süper amatör ligindeki futbolcuların saldırganlık düzeylerinin incelenmesi. *Spor ve Performans Araştırmaları Dergisi*, 6(1), 5-11. <https://doi.org/10.17155/spd.05537>
- Algur, V. (2019). *Üniversite öğrencilerinin anksiyete ve depresyon düzeyleri ile fiziksel saldırganlık, öfke, düşmanlık ve sözel saldırganlık arasındaki ilişkinin incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). İstanbul Gelişim Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.
- Altın, M. O. (2017). *Amatör düzeyde futbol oynayan sporcuların bilişsel duygu düzenleme ve saldırganlık düzeyleri arasındaki ilişkinin incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). Maltepe Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.
- Arkonaç, S. A. (1998). *Psikoloji zihin süreçleri bilimi* (2. Basım). İstanbul: Alfa Basım Yayım.
- Ateşoğlu, M. (1974). *Sporla erdemlilik "fair-play"* (1. Basım). Ankara: Başbakanlık Yayınları.
- Aydoğan, A. ve Özkan, B. (2018). Öfke kavramı ve sağlık çalışanı olmak. *Türkiye Sağlık Araştırma Dergisi*, 18, 15-22.
- Baykan, E. (2018). *Y ve Z nesil taekwondocuların sürekli öfke düzeylerinin saptanması ve ilişkili faktörlerin incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). Bozok Üniversitesi Sağlık Bilimleri Enstitüsü, Yozgat.
- Belli, E. vd., (2018). Spor bilimleri fakültesi öğrencilerinin öfke düzeylerinin araştırılması. *Atatürk Üniversitesi Beden Eğitimi ve Spor Bilimleri Dergisi*, 20(3), 163-171.
- Birinci, R. (2019). *Spor yapan ve yapmayan bireylerin benlik saygısı ve saldırganlık düzeylerinin incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). Erzincan Binali Yıldırım Üniversitesi Sağlık Bilimleri Enstitüsü, Erzincan.
- Brecher, P. (1998). *The way of the spiritual warrior* (1<sup>st</sup> ed.). New York: Godsfield Press.
- Cengiz, M. S. (2017). *Aikido antrenörleri ile diğer savaş sanatı antrenörlerinin; duygusal zekâ, sürekli öfke ve sporda güdülenme açılarından incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). İstanbul Üniversitesi Sağlık Bilimleri Enstitüsü, İstanbul.

- Choi, Hong Hi (1991). *Taekwon-do: The Korean art of self-defence* (1<sup>st</sup> ed.). London: International Taekwon-Do Federation.
- Chung, J. (2018). The Impact of Taekwondo Training on Self-Control Development. *Journal of Martial Arts Studies*, 4(2), 56-72.
- Demir, H., Sezan, T., Demirel, H., Yalçın, Y. G. ve Altın, M. (2017). Sporcuların öfke ifade tarzları. *Mehmet Akif Ersoy Üniversitesi, Sosyal Bilimler Enstitüsü Dergisi*, 9(19), 408-414.
- Demir, Ş. (2020). *Elit düzey boksörlerin sporda güdülenme, saldırganlık ve öfke düzeyleri arasındaki ilişkinin incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). Bartın Üniversitesi Lisansüstü Eğitim Enstitüsü, Bartın.
- Demirhan, M. (2002). *Kendini açma düzeyleri farklı genel lise öğrencilerinin bazı değişkenler açısından saldırganlık düzeylerinin incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). Anadolu Üniversitesi Eğitim Bilimleri Enstitüsü, Eskişehir.
- Dervent, F. (2007). *Lise öğrencilerinin saldırganlık düzeyleri ve sportif aktivitelere katılım ilişkisi* (Yayımlanmamış Yüksek Lisans Tezi). Gazi Üniversitesi, Eğitim Bilimleri Enstitüsü, Ankara.
- Doğan, B. O. (2005). *Spor psikolojisi* (2. basım). Adana: Nobel Kitabevi.
- Duda, J. L., & Nicholls, J. G. (1992). Dimensions of achievement motivation in schoolwork and sport. *Journal of Educational Psychology*, 84(3), 290-299. <https://doi.org/10.1037/0022-0663.84.3.290>
- Duda, J. L., Olson, L. K. & Templin, T. J. (1991). The relationship of task and ego orientation to sportsmanship attitudes and the perceived legitimacy of injurious acts. *Research Quarterly for Exercise and Sport*, 62, 79-87.
- Esentürk, O. K. (2014). *Lise düzeyinde öğrenim gören ve okullararası spor müsabakalarına katılan sporcu öğrencilerin güdülenme ve saldırganlık düzeylerinin incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). Gazi Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.
- Esentürk, O. K., İlhan, E. L. & Çelik, O. B. (2015). Examination of high school students' sportsmanlike conducts in physical education lessons according to some variability. *Science, Movement and Health*, 15(2), 627-634.
- Fırat, S. B. (2022). *Taekwondo sporcularında imgeleme türlerinin incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). Yozgat Bozok Üniversitesi Lisansüstü Eğitim Enstitüsü, Yozgat.
- Filiz, K. (2002). Sporun tanımlanması ve kapsamının belirlenmesi üzerine bir çalışma. *Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi*, 22(2), 203-211.
- Fong, S. S., & Ng, G. Y. (2011). Taekwondo training improves the neuromuscular control and balance of children with developmental coordination disorder: A randomized controlled trial. *Research in Developmental Disabilities*, 32(5), 1785-1790. <https://doi.org/10.1016/j.ridd.2011.03.011>

- Gedik, M. R. (2024). *Sporcuların akıldışı performans inançlarının saldırganlık ve öfke davranışları ile ilişkisi* (Yayımlanmamış Yüksek Lisans Tezi). Yalova Üniversitesi Lisansüstü Eğitim Enstitüsü, Yalova.
- Gedik, M. R. ve Güvendi, B. (2023). Dövüş sporcularının saldırganlık ve öfke düzeylerinin belirlenmesi: Yalova ili örneği. *Yalova Üniversitesi Spor Bilimleri Dergisi*, 2(2), 29- 35.
- Gökçe, B., & Yılmaz, M. (2022). Taekwondo and Motor Skills Development in Adolescents. *Sports Science and Education*, 3(1), 45-52.
- Gültekin, O., Doğan, M., Doğan, A. ve Eylen, B. (2000, 27 Ekim). *Futbol sahalarında şiddet ve emniyet güçlerinin tutumu üzerine bir araştırma*. [https://www.researchgate.net/publication/327239205\\_Futbol\\_sahalarinda\\_siddet\\_ve\\_emniyet\\_guclerinin\\_tutumu\\_uzerine\\_bir\\_arastirma](https://www.researchgate.net/publication/327239205_Futbol_sahalarinda_siddet_ve_emniyet_guclerinin_tutumu_uzerine_bir_arastirma).
- Gürbüz, B., Kural, S., & Özbek, O. (2019). Sporda saldırganlık ve öfke ölçeği: Geçerlik ve güvenilirlik çalışması. *Sportif Bakış: Spor ve Eğitim Bilimleri Dergisi*, 6(2), 206-217.
- Hatunoğlu, A. (1994). *Ana-baba tutumları ile saldırganlık arası ilişkiler* (Yayımlanmamış Yüksek Lisans Tezi). Atatürk Üniversitesi Sosyal Bilimler Enstitüsü, Erzurum.
- Hodge, K., & Lonsdale, C. (2011). Prosocial and antisocial behavior in sport: The role of coaching style, autonomous vs. controlled motivation, and moral disengagement. *Journal of Sport and Exercise Psychology*, 33(4), 527-547. <https://doi.org/10.1123/jsep.33.4.527>
- İkizler, H. C. (1993). *Sporda başarının psikolojisi* (1. Basım). İstanbul: Alfa Basım Dağıtım.
- Jondeau, E.; Rockinger, M. (2003). Conditional volatility, skewness, and kurtosis: existence, persistence, and comovements. *Journal of Economic Dynamics and Control*, 27 (10), 1699-1737. [https://doi.org/10.1016/S0165-1889\(02\)00079-9](https://doi.org/10.1016/S0165-1889(02)00079-9)
- Kafalı, S., Hünkâr, İ., Keçeci, O. ve Demiray, E. (2017). Bireysel spor ve takım sporu yapan sporcuların saldırganlık düzeylerinin araştırılması. *Uluslararası Sosyal Araştırmalar Dergisi*, 10(50), 36-390.
- Kalkavan, A., Karaca, B. ve Işık, U. (2022). Amatör ve profesyonel futbolcuların öfke düzeylerinin incelenmesi. *Sportive*, 5(2), 55-68.
- Karademir, T.; Pakyardım, C.; Açak, M. (2022). *Her Yönüyle Taekwondo*, Efe Akademi Yayınları
- Karasar, N. (2017). *Bilimsel araştırma yöntemi* (1. Basım). Ankara: Nobel Akademi.
- Kavussanu, M. (2006). Motivational predictors of prosocial and antisocial behaviour in football. *Journal of Sport Sciences*, 24(6), 575-588. <https://doi.org/10.1080/02640410500190825>
- Kavussanu, M., & Boardley, I. D. (2009). The prosocial and antisocial behavior in sport scale. *Journal of Sport and Exercise Psychology*, 31(1), 97-117. <https://doi.org/10.1123/jsep.31.1.97>

- Kaya, M. İ. (2019). *Kadın futbolcularda antrenmanın algılanan stres, sporda güdülenme, sürekli öfke ve öfke tarzı düzeylerine etkisi* (Yayımlanmamış Yüksek Lisans Tezi). Hitit Üniversitesi Sağlık Bilimleri Enstitüsü, Çorum.
- Kaya, N., Kaya, H., Atar, N., Turan, N., Eskimez, Z., Palloş, A. ve Aktaş, A. (2012). Hemşirelik ve ebelik öğrencilerinin öfke ve yalnızlık özellikleri. *Hemşirelikte Eğitim ve Araştırma Dergisi*, 9(2), 18-26.
- Keskin, C. (2015). *Liseler arası müsabakalara katılan sporcu öğrencilerin saldırganlık durumlarının araştırılması (Zonguldak-Kozlu örneği)* (Yayımlanmamış Yüksek Lisans Tezi). Dumlupınar Üniversitesi Sağlık Bilimleri Enstitüsü, Kütahya.
- Kharkan, M., Andam, R., & Mehdizadeh, R. (2013). The comparison of athletic aggression girl and boy athlete students. *International Journal of Sport Studies*, 3(6), 594-598.
- Kim, Y. (2014). Taekwondo and Moral Education: Beyond the Physical Training. *Asian Journal of Physical Education and Sport Science*, 6(3), 112-119.
- Kim, Y. S., & Zhang, P. (2020). Physical and Psychological Benefits of Taekwondo for Youth. *International Journal of Martial Arts Studies*, 5(1), 23-35.
- Ko, B. (2010). The Philosophy of Do: Ethical Teachings in Taekwondo. *Journal of Eastern Philosophy*, 2(4), 39-54.
- Köknel, Ö. (1986). *İnsanı anlamak* (1. Basım). İstanbul: Altın Kitaplar Matbaası.
- Lakes, K. D., & Hoyt, W. T. (2004). Promoting self-regulation through school-based martial arts training. *Applied Developmental Psychology*, 25(3), 283-302. <https://doi.org/10.1016/j.appdev.2004.04.002>
- Lee, J. (2016). The Role of Martial Arts in Modern Education Systems. *Education Quarterly Review*, 10(1), 78-89.
- Lewis, P. (1996). *The martial arts: Origins, philosophy and practice* (1<sup>st</sup> ed.). London: Prion Books Ltd.
- Mamak, H. ve Dalkılıç, M. (2017). Ömer Halisdemir Üniversitesi Beden Eğitimi ve Spor Yüksekokulu öğrencilerinin saldırganlık düzeylerinin belirlenmesi. *International Journal of Academic Value Studies*, 3(15), 419-423.
- Manap, A. ve Kış, A. (2019). Cinsiyete göre öfke düzeyinin incelenmesi: Türkiye’de yapılan tezler üzerine bir meta-analiz çalışması. *Turkish Journal of Educational Studies*, 6(3),15-28.
- Maxwell, J. P., & Moores, E. (2007). The development of a short scale measuring aggressiveness and anger in competitive athletes. *Psychology of Sport and Exercise*, 8(2), 179-193. <https://doi.org/10.1016/j.psychsport.2006.03.002>
- Maxwell, J. P., Moores, E., & Chow, C. C. (2009). Anger rumination and self-control in athletes. *Journal of Sport and Exercise Psychology*, 31(2), 109-132. <https://doi.org/10.1123/jsep.31.2.109>

- Mazlı, N. (2018). *Türkiye'deki taekwondo ve karate sporcularının narsist kişilik özellikleri, mizaç tipleri ve saldırganlık düzeylerinin araştırılması* (Yayımlanmamış Yüksek Lisans Tezi). Ege Üniversitesi Sağlık Bilimleri Enstitüsü, İzmir.
- Mehmet, A. (2001). Kütahya Futbol Hakemlerinin sosyo Kültürel Yapıları Hakemliğe Yönelme Sebepleri ve Hakemlik Anlayışları Üzerine Bir Araştırma. *Dumlupınar Üniversitesi Sosyal Bilimler Dergisi*, (5), 563- 580.
- Moenig, U. (2015). *Taekwondo: From a Traditional Martial Art to a Modern Olympic Sport*. Routledge.
- Nay, R. W. (1995). Cognitive Behavioral and Short-term Interventions for Anger and Aggression. In L.Vandecreek & S. Knapp (Eds.), *Innovations in clinical practice: A source book* (pp. 11 1-136). Sarasota, FL: Professional Resource Press.
- Öz, E. S. (2007). *İlköğretim 1. kademe 4. ve 5. sınıf öğrencilerinin saldırganlık düzeylerinin bazı değişkenler açısından incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). Ege Üniversitesi Sosyal Bilimler Enstitüsü, İzmir.
- Özen, A. (2019). *Y ve Z kuşaklarındaki taekwondo sporcularının çok boyutlu mükemmeliyetçilik düzeylerinin sporda güdülenme ve başarı motivasyonu ile ilişkisinin incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). Selçuk Üniversitesi Sağlık Bilimleri Enstitüsü, Konya.
- Öztürk, Y. M. (2019). *Aktif spor yapan ve yapmayan spor bilimleri fakültesi öğrencilerinin sporda şiddet eğilimi ve saldırganlık davranışlarına ilişkin görüşlerinin incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). Bartın Üniversitesi Eğitim Bilimleri Enstitüsü, Bartın.
- Park, H. S., et al. (2017). The Effects of Martial Arts Training on Stress Management in Adolescents. *Journal of Adolescent Health*, 60(3), 315-321. <https://doi.org/10.1016/j.jadohealth.2016.10.017>
- Pehlivan, Z. (2004). Fair-play kavramının geliştirilmesinde okul sporunun yeri ve önemi. *Spor metre Beden Eğitimi ve Spor Bilimleri Dergisi*, 2(2), 49-53.
- Precision Martial Arts Academy. (2021, 4 May). *World taekwondo*. Retrieved from: <https://www.worldtaekwondo.org/index.html>.
- Sağlam, M. (2018). *Müsabık taekwondocularında saldırganlık ve dürtüsel davranış tepkilerinin incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). Kahramanmaraş Sütçü İmam Üniversitesi Sağlık Bilimleri Enstitüsü, Kahramanmaraş.
- Shields, D. L., & Bredemeier, B. L. (2007). Advances in sport morality research. In G. Tenenbaum & R. C. Eklund (Eds.), *Handbook of sport psychology* (pp. 662-684). Wiley.
- Shokoufeh, S. (2018). *Türkiye'de elit erkek ve bayan güreşçiler ile spor yapmayan bireylerin zihinsel yetenek, liderlik ve saldırganlık düzeylerinin incelenmesi* (Yayımlanmamış Doktora Tezi). Ondokuz Mayıs Üniversitesi Sağlık Bilimleri Enstitüsü, Samsun.

- Şahan, M. (2007). *Lise öğrencilerinde saldırganlığı yordayan bazı değişkenlerin incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). Gazi Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.
- Şahin, M. (1998). *Spor ahlakı ve sorunları* (1. Basım). İstanbul: Evrensel Yayınları.
- Takar, M. S. (2022). *Türkiye'deki buz hokeyi sporcularının saldırganlık ve özgüven düzeylerinin farklı değişkenler açısından incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). Atatürk Üniversitesi Spor Bilimleri Enstitüsü, Erzurum.
- Taşkıran Avcı, T. (2021). *Üniversite öğrencilerinde serbest zamanda sıkılma algısı, psikolojik sağlamlık ve saldırganlık eğilimi arasındaki ilişkinin incelenmesi* (Yayımlanmamış Doktora Tezi). Ankara Üniversitesi Sağlık Bilimleri Enstitüsü, Ankara.
- Tatlıhoğlu, K. ve Karaca, M. (2013). Öfke olgusu hakkında sosyal psikolojik bir değerlendirme. *International Journal of Social Science*, 6(6), 1101-1123.
- Teke, E. (2018). *Sporcuların kişilik özelliklerinin fair-play davranışına etkisinin incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). Muğla Sıtkı Koçman Üniversitesi Sağlık Bilimleri Enstitüsü, Muğla.
- Tel, M. (2008). Bir spor dalı olarak taekwondo. *e-Journal of New World Sciences Academy*, 3(4), 194-202.
- Todorovich, J. R. (2016). Anger and aggression in sports: Considering moral and motivational climate. *International Journal of Physical Education*, 53(3), 19-27.
- Toksöz, B. (2022). *Yetişkin bireylerde saldırganlık düzeylerinin yordayıcıları olarak çocukluk çağı travmaları, bilişsel duygu düzenleme stratejileri ve sosyal destek düzeylerinin incelenmesi* (Yayımlanmamış Yüksek Lisans Tezi). Marmara Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.
- Yavuz, S. (2015). *Farklı spor dallarındaki sporcu, seyirci ve yöneticilerin küresel vatandaşlık ve saldırganlık ilişkisi (Adana-Mersin ili örneği)* (Yayımlanmamış Yüksek Lisans Tezi). Dumlupınar Üniversitesi Sağlık Bilimleri Enstitüsü, Kütahya.
- Yeter, A. (2006). *Sosyoloji ve spor* (2. Basım). İstanbul: Marpa Kültür Yayınları.
- Yıldıran, İ. (1992, 8 Ekim). *Spor da "fair-play" kavramının tarihsel boyutları*. <https://dergipark.org.tr/tr/download/issue-full-file/27982>
- Yıldıran, İ. (2002, 17 Ekim). *Fair-play: Kapsamı, Türkiye'deki görünümü ve geliştirme perspektifleri*. [https://www.sporbilim.com/dosyalar/Panel\\_Seminer\\_Giris.pdf](https://www.sporbilim.com/dosyalar/Panel_Seminer_Giris.pdf)
- Yıldıran, İ. (2004). Fair-play: Kapsamı, Türkiye'deki görünümü ve geliştirme perspektifleri. *Gazi Beden Eğitimi ve Spor Bilimleri Dergisi*, 9(4), 3-16.
- Yılmaz, E. ve Tuzgöl Dost, M. (2015). *Polislerin kişiler arası problem çözme becerileri, öfke ve öfke ifade tarzları* (Yayımlanmamış Yüksek Lisans Tezi). Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü, Ankara.
- Zor, S. (2021). *Lisanslı olarak okul sporlarına katılan orta öğretim öğrencilerinin sportmenlik yönelimi ve sporda saldırganlık-öfke düzeyleri* (Yayımlanmamış Yüksek Lisans Tezi). Abant İzzet Baysal Üniversitesi Sosyal Bilimler Enstitüsü, Bolu.

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### **Conflict of Interest**

It has been reported by the authors that there is no conflict of interest.

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### **Ethical Committee Approval**

This study has an ethics committee document dated 28.11.2023 and numbered 2023/11, issued by the T.C. Dumlupınar University, The Committee on Scientific Research and Publication Ethics in Social and Human Sciences. The study was prepared by paying attention to ethical rules.