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An Examination of The Relationship Between Aggression and Anger Levels and Psychological Performance of Students at A Faculty of Sports Sciences

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Abstract

The aim of this study is to examine the relationship between aggression and anger levels and psychological performance among students of the Faculty of Sports Sciences. The study was conducted with students enrolled at the Kafkas University Sarıkamış Faculty of Sports Sciences during the 2023-2024 academic year. The sample of the study consisted of a total of 473 students, including both female and male students from the Faculty of Sports Sciences at Kafkas University Sarıkamış. The data collection tools used in the research consisted of two sections. The first section was the "Personal Information Form" to determine the demographic characteristics of the participants, and the second section included the "Aggression and Anger Scale in Sports (SSÖÖ)" and the "Psychological Performance Evaluation Scale in Sports (SPPDÖ)". Non-parametric techniques were used in the data analysis.

According to the findings of the study, the aim was to understand the potential relationship between aggression and anger levels and psychological performance by using the variables of gender, age, class, department, and sports branch. The analysis revealed that the anger levels of female students were significantly higher than those of male students in the anger sub-dimension. A significant difference was found in the aggression sub-dimension between the 21-23 age group and the 27 and older age group. Additionally, the 21-23 age group had a lower motivation level compared to the other age groups. No significant difference was found in other sub-dimensions. The findings highlight that demographic factors such as gender, age, and sports branch contribute to significant differences in psychological factors such as anger and aggression among university students.

Keywords: University, Aggression, Anger, Students, Psychological Performance

Spor Bilimleri Fakültesi Öğrencilerinin Saldırganlık ve Öfke Düzeyleri ile Psikolojik Performansları Arasındaki İlişkinin İncelenmesi

Özet

Bu araştırmanın amacı, Spor Bilimleri Fakültesi öğrencilerinin saldırganlık ve öfke düzeyleri ile psikolojik performansları arasındaki ilişkinin incelenmesi amaçlanmıştır. Araştırma 2023-2024 eğitim öğretim yılında Kafkas Üniversitesi Sarıkamış spor bilimleri fakültesindeki öğrenim gören öğrenciler oluşturmaktadır. Araştırmanın örneklemini Kafkas Üniversitesi Sarıkamış spor bilimleri fakültelerinde okuyan kadın ve erkek olmak üzere toplam öğrenci 473 oluşmaktadır. Araştırmada kullanılan veri toplama araçları iki bölümden oluşmaktadır. Birinci bölümde katılımcıların demografik özellikleri belirlemek için "Kişisel Bilgi Formu" ikinci bölümde 'Sporda Saldırganlık ve Öfke Ölçeği-SSÖÖ" ile Sporda Psikolojik Performans Değerlendirme Ölçeği (SPPDÖ)" kullanılmıştır. Veri analizin de Non-parametrik tekniklerden yararlanılmıştır.

Araştırmanın bulgularına göre; Spor Bilimleri Fakültesi öğrencilerinin cinsiyet, yaş, sınıf, bölüm ve spor branşı değişkenleri kullanılarak saldırganlık ve öfke düzeyleri ile psikolojik performansları arasındaki potansiyel ilişkinin anlaşılmasını amaçlamıştır. Yapılan analizlerde, Spor Bilimleri Fakültesi öğrencilerinin cinsiyet ve öfke alt boyutunda Kadın öğrencilerin öfke düzeylerinin, erkeklere göre; yaş grubu ve saldırganlık alt boyutunda 21-23 yaş grubu ile 27 yaş ve üzeri grubu arasında; saldırganlık düzeyinde, anlamlı bir fark bulunmuştur. Ayrıca 21-23 yaş grubu, diğer yaş gruplarına göre daha düşük bir güdülenme düzeyine sahip olduğu diğer alt boyutlarda anlamlı bir farka rastlanmamıştır. üniversite öğrencilerinin cinsiyet, yaş ve spor dalı gibi demografik faktörlerin, öfke ve saldırganlık gibi psikolojik faktörlerde anlamlı farklılıklar oluşturduğunu ortaya koymaktadır.

Anahtar Kelimeler: Üniversite, Saldırganlık, Öfke, Öğrenciler, Psikolojik Performans

INTRODUCTION

Time spent on university campuses offers students several important experiences, such as meeting a new environment, following lectures in lecture halls, and participating in sports and cultural events. This process includes vital events, including students developing skills such as managing their expenses for the first time, starting new relationships, understanding others' feelings, and expressing their thoughts. However, one of the problems that may arise if needs are not met and expectations are not realized in this process may be anger and aggression (11). The beginning years of university education also include the psychological difficulties experienced by young people in the process of adapting to a new city and academic life, coping with individual difficulties, and assuming their own responsibilities (4;28). Participation in sports, especially hindering motivations such as success, superiority, and prestige, is often considered an important factor that leads to a decrease in the sports performance of university students. It is known that this situation also contributes to the emergence of feelings of anger and aggression in students (15). Given the diverse cultural and social backgrounds of college students who come together, their future roles and psychological health are affected not only by their athletic performance but also by their habits of aggression and anger. The success of these students in sports will not only contribute to physical health but will also provide advantages in future leadership roles by encouraging the development of important skills such as discipline, teamwork, and leadership (19).

The university years are very important periods for students to set goals for their future investments and create a career plan. However, a large portion of university students have problems with career decisions, and it is observed that a significant portion of them have higher levels of psychological negativity (such as anxiety, uneasiness, and depression) and lower levels of psychological well-being (24). This situation, which occurs due to low psychological well-being, rapidly increases the tendency towards anger, aggression, and violence among university students, which constitute a global public health problem affecting families and communities (16). Spielberger defined anger as "an emotion ranging from mild discomfort to severe

resentment and anger" (49). Considering experiences in the university environment, situations such as domestic incidents, mistreatment leading to violence, limited access to food and sleep, workplace obstacles, the effects of failures, and emotional and sexual dissatisfaction reflect real challenges faced by both individuals and society (41). Aggressive behavior is defined as "any behavior intended to harm others" (25). Psychological resilience, defined as an individual's ability to overcome difficulties, refers to individuals controlling the difficulties that may arise due to acting with a sense of commitment (33). Numerous studies show that college athletes experience positive effects on their physical, mental, and personality development by participating in sports activities. These positive effects include strengthening the will, creating mutual solidarity, increasing self-confidence, self-control, anger control, gaining the ability to avoid aggressive behavior, and learning respect for others (50; 10). Social competence, which is an important dimension of self-efficacy that is associated with many psychological structures and affects various behaviors, is thought to be related to anger and anger expression styles as well as aggression (5; 6; 7). Cicchetti expressed psychological development as a process in which an individual can develop into someone who can adapt positively to the environment. This process occurs in situations of great difficulty, serious threat, or trauma (13). Leary et al. argue that anger acts as a bodily signal and can be affected by numerous biological, psychological, interpersonal, and cultural factors. Therefore, aggression and anger can also be considered emotional behaviors (36).

In sports activities, situations such as competitive drive, excessive effort, and the high stress of winning can lead the individual to exhibit aggressive and uncontrolled behavior (20). Encouraging university athletes to identify and evaluate the qualities necessary for success in their field (32), Loehr's (37) development of a psychological performance scale to measure athletes' psychological abilities during competitions provided coaches and athletes with the opportunity to recognize their own abilities. Understanding one's own mental strengths and weaknesses, oneself, and one's limits enables the individual to define these limits and set effective goals. In this context, seven basic psychological skills have been defined: Negative energy, self-confidence, attention control, motivation level, visualization and imagination, positive energy, and attitude control (9). This process not only provides an effective platform for athlete-focused goal setting and the development of future training programs, but also brings about positive changes in athletes' increased awareness of the strengths and weaknesses of their performance (9).

Research Purpose

The purpose of this study is to examine the relationship between aggression and anger levels and the psychological performances in the students of the Faculty of Sports Sciences and reveal the differences in terms of the demographic variables in light of scientific data.

Problem Statement

It has been suggested in different studies that the aggression and anger levels and the psychological performance of Faculty of Sports Sciences students affect their success. In this study, it is considered important to investigate the anger and aggression levels and psychological performance of the students of the Faculty of Sports Sciences.

Moreover, investigating the impact level of these factors and the relationship levels between them is important in terms of their impact on the success and performance of the students in the Faculty of Sports Sciences. Within this context, answers were sought to answer the following research questions:

1. What are the students' aggression and anger levels?
2. Is there a significant relationship between students' aggression levels and anger levels?
3. Do students' aggression and anger levels show any statistically significant differences by

a. Gender,

b. Age,

c. Year in the school,

d. Program of study, and

e. Sports branches?

METHOD

Data Collection Instrument

Study data were collected using the "Competitive Aggressiveness and Anger Scale-CAAS" and the "Psychological Performance Evaluation Scale in Sports (PPESS)". CAAS was adapted into Turkish by Gürbüz, Kural, and Özbek in 2019. PPESS has a two-dimensional structure (1-6: Anger Dimension and 7-12: Aggression Dimension). The "Psychological Performance Evaluation Scale in Sports (PPESS)" developed by Aydoğan ve Honaş (3) consists of 32-item and has 3-factor structure. The three sub-dimensions of the Psychological Performance Evaluation Scale in Sports were adapted as the physical and formal anxiety, motivation, and self-confidence sub-dimensions.

Population and Sample of the Research

In our study, the survey research model, which is preferred among quantitative survey methods, was used. It is the process that enables the development of the learning model and the emergence of desired behavioral patterns in people by describing past and present research with the relational screening model (29). In this research, the general survey model, which aims to objectively describe a past or present situation, was used. On the other hand, the relational screening model aims to determine the relationship between two or more variables. In this model, the focus is on the existence of co-change between variables and the nature of this change (30).

The data were collected from students studying at Kafkas University Sarıkamış Faculty of Sports Sciences. The data collection process was conducted face-to-face and remotely (online scale forms). In other words, the researcher reached the sample determined by the random sampling method both face-to-face and remotely through online scale forms. The main purpose here was to increase the generalizability (external validity) of the research results by reaching as many participants as possible.

The population of the study consists of students studying in the departments of Physical Education and Sports Teaching, Coaching Education, Sports Management (Regular Education), and Sports Management (Evening Education) at Kafkas University Sarıkamış Faculty of Sports Sciences in the 2023-2024 academic year. An ethics committee approval was obtained from the Kafkas University Social and Human Sciences Scientific Research and Publication Ethics Board of Ethics with the date 24.01.2024 and number 53. The sample of the study consists of a sufficient number of students at Kafkas University Sarıkamış Faculty of Sports Sciences during the 2023-2024 academic year selected using the random method and calculated according to statistical techniques. The reason for using the random sampling method is to give everyone in the population an equal chance of being selected. The sample group of the study consists of a total of 473 students, female (n = 194) and male (n = 279), studying at Kafkas University Sarıkamış Faculty of Sports Sciences.

Statistical Analysis of Data

The data obtained with the data collection instruments used in the study were analyzed in a computer environment using the IBM SPSS Statistic 25 statistical analysis program. Descriptive analysis results were presented in graphs and tables, including arithmetic mean (X), standard deviation (SD), frequency (n), percentage (%), minimum (min.), and maximum (max) values. Cronbach's alpha value was calculated to determine the sub-dimensions and total internal consistency coefficients of the Competitive Aggressiveness

and Anger Scale (CAAS) and the Psychological Performance Evaluation Scale in Sports (PPESS), which were used as data collection tools. To examine the normality assumptions of the distribution of scale data, the Kolmogorov-Smirnov (K-S) test, skewness, and kurtosis values, as well as the Q-Q plot, box plot, histogram graphs, and mode-median-arithmetic mean-standard deviation data were analyzed. The normality analysis revealed that the Kolmogorov-Smirnov test results were lower than 0.5 in all variables. When the skewness-kurtosis values, graphs, and mode-median-arithmetic mean-standard deviation values were evaluated as a whole, it was found that the distribution did not meet the normality assumptions, and therefore, nonparametric statistical techniques were used. In data analysis, the Mann-Whitney-U test was used to determine the difference between the means of two independent variables, and Kruskal-Wallis-H was used to determine the mean difference between three or more independent variables. At this stage, Mann-Whitney-U tests were performed between the pairs to determine which groups showed a difference found using the Kruskall-Wallis-H test.

RESULTS

Table 1. Demographic Characteristics of Participants

Variables	Group	n	%
Gender	Female	194	41.0
	Male	279	59.0
Age	18-20	109	23.0
	21-23	268	56.7
	24-26	83	17.5
	27 and older	13	2.7
Year in the Program	1st Year	79	16.7
	2nd Year	92	19.5
	3rd Year	110	23.3
	4th Year	192	40.6
Program of Study	Physical Education and Sports Teaching	72	15.2
	Coaching Training	126	26.6
	Sports Management (Regular Education)	219	46.3
	Sports Management (Evening Education)	56	11.8
Sports Branch	Team Sports	236	49.9
	Individual Sports	237	50.1
Total		473	100

Table 1 shows the student distributions according to the variables of gender, age, year in the program, and sports branch. When examined according to the gender variable, it was found that the rate of female participants was 41.0% and the rate of male participants was 59.0%. When examining the age variable, the largest age group consists of participants between the ages of 21-23 (56.7%), while the smallest group consists of participants aged 27 and over (2.7%). Regarding the year in the program variable, most participants are in their 4th year in the program (40.6%). According to the department variable, the number of students in sports management (evening education) is higher (11.8%). The highest participation was in sports management (regular education) (46.3%). Regarding the sport branch variable, participants are involved in a wide range of sports, including individual sports (50.1%) and team sports (49.9%).

Table 2. Cronbach's Alpha Internal Consistency Coefficients of the Competitive Aggressiveness and Anger Scale (CAAS) and the Psychological Performance Evaluation Scale in Sports (PPESS) sub-dimensions

Factors	Cronbach's Alpha Coefficient
CAAS Anger sub-dimension	0.94
CAAS Aggression sub-dimension	0.96
PPESS Physical and formal anxiety sub-dimension	0.85
PPESS Motivation sub-dimension	0.85
PPESS Self-confidence sub-dimension	0.87

Table 2 shows the Cronbach's alpha internal consistency coefficients obtained from the Competitive Aggressiveness and Anger Scale (CAAS) and its sub-dimensions. For the overall scale, the Cronbach's alpha internal consistency coefficients were 0.94 for the CAAS anger sub-dimension and 0.96 for the CAAS aggression sub-dimension. In the study conducted by Gürbüz (27), the Cronbach's alpha internal consistency coefficient was reported as 0.79 for the overall scale. In general, the correlation values in this study are similar to the values obtained for the original Turkish form. Table 2 also includes the Cronbach's alpha internal consistency coefficients obtained from the Psychological Performance Evaluation Scale in Sports and its sub-dimensions. The Cronbach's alpha internal consistency coefficients for the overall scale were 0.85 for the physical and formal anxiety sub-dimension, 0.85 for the motivation sub-dimension, and 0.87 for the self-confidence sub-dimension. In the study conducted by Aydoğan ve Honaş (3), the Cronbach's alpha internal consistency coefficients were determined as 0.91 for the overall scale, 0.91 for the physical and formal anxiety sub-dimension, 0.82 for the motivation sub-dimension, and 0.78 for the self-confidence sub-dimension. In general, the correlation values in this study are similar to the values obtained for the original Turkish form.

Table 3. Total Means of Scales/Sub-Dimensions

Variables	n	$\bar{X}$	SD	Value
CAAS	473	2.65	1.01	Moderate level
CAAS Anger sub-dimension	473	2.43	1.07	Moderate level
CAAS Aggression sub-dimension	473	2.97	1.08	Moderate level
PPESS	473	3.09	0.77	Moderate level
PPESS Physical and formal anxiety	473	2.95	0.88	Moderate level
PPESS Motivation sub-dimension	473	3.19	0.97	High
PPESS Self-Confidence sub-dimension	473	3.31	1.03	High

According to Table 3, the results of the analysis of the Competitive Aggressiveness and Anger Scale (CAAS) are generally at a moderate level. The overall mean of CAAS was 2.65, and its standard deviation was 1.01. These values show that the participants have a moderate attitude towards aggression and anger. The anger sub-dimension ($\bar{X}$ = 2.43) and aggression sub-dimension ($\bar{X}$ = 2.97) have slightly lower and higher values, respectively, than the general scale mean, indicating that there are significant differences in the anger and aggression sub-dimensions. Again, when we examine Table 3, the analysis results of the Psychological Performance Evaluation Scale in Sports (PPESS) are generally at a moderate level. The overall PPESS mean was 3.09, and the standard deviation was 0.77. These values show that the psychological performance evaluation skills of the participants are generally at a medium level. While the physical and formal anxiety sub-dimension ($\bar{X}$ = 2.95) has a moderate score, the motivation ($\bar{X}$ = 3.19) and self-confidence ($\bar{X}$ = 3.31) sub-dimensions have higher values than the general scale averages, indicating that the participants have a more positive attitude in terms of motivation and self-confidence.

Overall, the table reveals the athletes' level of coping with aggression and anger and their psychological performance evaluation skills. These evaluations show that the athletes have a more positive attitude in terms of motivation and self-confidence, while there are differences in the sub-dimensions of aggression and anger.

Table 4. Mann-Whitney U Test Results for Comparing Students' Scores on Survey Sub-Dimensions by Gender

						Significance	
Sub-Dimensions	**Gender**	**n**	**Mean Rank**	**Sum of Ranks**	u	**z**	**p**
CAAS Anger sub-dimension	Female	194	224.97	43644.5	24729.5	-1.59	.011*
	Male	279	245.36	68456.5			
CAAS Aggression sub-dimension	Female	194	238.1	46191.5	26849.5	-0.14	.884
	Male	279	236.23	65909.5			
PPESS Physical and formal anxiety sub-dim.	Female	194	244.23	47380	25661	-0.95	.337
	Male	279	231.97	64721			
PPESS Motivation sub-dimension	Female	194	236.33	45847.5	26932.5	-0.08	.929
	Male	279	237.47	66253.5			
PPESS Self-confidence sub-dimension	Female	194	227.68	44169	25254	-1.23	.216
	Male	279	243.48	67932			

***p<0.05**

This study used the Mann-Whitney U test to examine the emotional differences in the sub-dimensions of anger, aggression, physical and formal anxiety, motivation, and self-confidence between gender groups. According to the results presented in Table 4, there was a significant difference between gender groups only in the anger subscale ($p = 0.011$). No significant difference was found between gender groups in the sub-dimensions of aggression ($p = 0.884$), physical and mental anxiety ($p = 0.337$), motivation ($p = 0.929$), and self-confidence ($p = 0.216$). These findings point to gender-related emotional differences, especially in the anger sub-dimension. The study is expected to contribute to the literature on gender-based differences in these sub-dimensions.

Table 5. Kruskal-Wallis Test Results for Comparing the Students' Scores on Survey Sub-Dimensions by Age Groups

Sub-Dimensions	Age Groups	n	Mean Rank	s.d	X2	p	Difference
CAAS Anger Sub-Dimension	1.18-20	109	245.22	3	5.005	0.171	
	2.21-23	268	225.56				
	3.24-26	83	257.9				
	4.27 & older	13	270.42				
CAAS Aggression Sub-Dimension	1.18-20	109	256.5	3	7.544	0.056*	2>4
	2.21-23	268	225.42				
	3.24-26	83	237.88				
	4.27 & older	13	306.65				
PPESS Physical and Formal Anxiety Sub-Dimension	1.18-20	109	243.28	3	1.686	0.64	
	2.21-23	268	233.87				
	3.24-26	83	232.31				
	4.27 & older	13	278.81				
PPESS Motivation Sub-Dimension	1.18-20	109	250.42	3	11.057	0.011*	4>2
	2.21-23	268	228.8				
	3.24-26	83	228.35				
	4.27 & older	13	348.77				
PPESS Self-Confidence Sub-Dimension	1.18-20	109	253.48	3	7.036	0.071	
	2.21-23	268	223.58				
	3.24-26	83	250.1				
	4.27 & older	13	291.85				

***p<0.05**

In Table 5, possible differences between the age groups of the students and the survey sub-dimensions in the Competitive Aggressiveness and Anger Scale (CAAS) are evaluated. According to the results of the Kruskal Wallis test performed, in relation to the anger sub-dimension, no significant difference was found between the 21-23 age group and other age groups in anger level (p = 0.171). In the aggression sub-dimension, there was a significant difference in the aggression levels between the 21-23 age group and the 27 and older group (p = 0.056). The 21-23 age group had a lower level of aggression compared to the 27 and older group. When the psychological performance evaluation scale in sports (PPESS) was examined, no significant difference was found in the physical and formal anxiety levels between age groups (p = 0.64). In the motivation subscale, there was a significant difference in the motivation levels between the 21-23 age group and other age groups (p = 0.011). The 21-23 age group has a lower motivation level compared to other age groups. Regarding the self-confidence sub-dimension, no significant difference was found in the self-confidence levels between the 21-23 age group and other age groups (p = 0.071).

Table 6. Kruskal-Wallis Test Results for Comparing Students' Scores on the Survey Sub-Dimensions by the Year in the Program Variable

Sub-Dimensions	Year in the Program	n	Mean Rank	s.d	X2	p	Difference
CAAS Anger Sub-Dimension	1st Year	79	219.34	3	5.052	0.168	
	2nd Year	92	247.17				
	3rd Year	110	257.02				
	4th Year	192	227.92				
CAAS Aggression Sub-Dimension	1st Year	79	252.8	3	2.307	0.511	
	2nd Year	92	231.59				
	3rd Year	110	244.91				
	4th Year	192	228.56				
PPESS Physical and Formal Anxiety Sub-Dimension	1st Year	79	236.27	3	0.28	0.964	
	2nd Year	92	241.55				
	3rd Year	110	239.87				
	4th Year	192	233.48				
PPESS Motivation Sub-Dimension	1st Year	79	238.96	3	0.775	0.855	
	2nd Year	92	240.95				
	3rd Year	110	243.55				
	4th Year	192	230.55				
PPESS Self-Confidence Sub-Dimension	1st Year	79	234.98	3	4.999	0.172*	
	2nd Year	92	253.24				
	3rd Year	110	251.67				
	4th Year	192	221.67				

***p<0.05**

The possible differences between the year in the program variable and the survey sub-dimensions in the Competitive Aggressiveness and Anger Scale (CAAS) were evaluated and presented in Table 6. Thus, a Kruskal-Wallis test was completed, and the results showed that there was no statistically significant difference between the 2nd and 3rd years in the CAAS anger sub-dimension (p=0.168). In the aggression sub-dimension, there was no significant difference in the aggression level between years (p=0.511). When the psychological performance evaluation scale in sports (PPESS) was examined, there was no significant difference in the physical and formal anxiety levels between years (p= 0.964). In the motivation sub-dimension, no significant difference (p = 0.855) was found in the motivation levels between years. Regarding the self-confidence sub-dimension, there was no significant difference in self-confidence levels between the 2nd and 4th years (p = 0.172). No statistically significant differences were found between the other years.

Table 7. Kruskal-Wallis Test Results for Comparing Students' Scores on Survey Sub-Dimensions by the Department Variable

Sub-Dimension	Department	n	Mean Rank	s.d	X2	
CAAS Anger Sub-Dimension	Physical Education and Sports Teaching	72	264.28	3	4.857	**0.183**
	Coaching Education	126	244.27			
	Sports Management (Regular Ed.)	219	226.3			
	Sports Management (Evening Ed.)	56	227.44			
CAAS Aggression Sub-Dimension	Physical Education and Sports Teaching	72	249.97	3	4.648	**0.199**
	Coaching Education	126	254.21			
	Sports Management (Regular Ed.)	219	227.15			
	Sports Management (Evening Ed.)	56	220.13			
PPESS Physical and Formal Anxiety	Physical Education and Sports Teaching	72	227.05	3	1.399	**0.706**
	Coaching Education	126	246.95			
	Sports Management (Regular Ed.)	219	232.79			
	Sports Management (Evening Ed.)	56	243.87			
PPESS Motivation Sub-Dimension	Physical Education and Sports Teaching	72	237.53	3	2.479	**0.479**
	Coaching Education	126	239.57			
	Sports Management (Regular Ed.)	219	242.15			
	Sports Management (Evening Ed.)	56	210.41			
PPESS Self-Confidence Sub-Dim.	Physical Education and Sports Teaching	72	234.28	3	1.497	**0.683**
	Coaching Education	126	240.72			
	Sports Management (Regular Ed.)	219	240.87			
	Sports Management (Evening Ed.)	56	217.01			

***p<0.05**

In Table 7, the possible differences between the students' department variable and the survey sub-dimensions in the Competitive Aggressiveness and Anger Scale (SSAS) were evaluated. According to the results of the Kruskal-Wallis test completed, students in the coaching education department have higher anger levels than those in the physical education and sports teaching and sports management departments. However, there was no statistically significant difference (p=0.183). Although the aggression sub-dimension scores of students in the coaching education department were higher than those in other departments, there was no statistically significant difference (p = 0.199). When the psychological performance evaluation scale in sports (PPESS) was examined, it was found that the students in the coaching education department had higher levels of physical and formal anxiety than other departments. However, this difference was not statistically significant (p=0.706). In the motivation sub-dimension, it was found that the students in the sports management (Evening Education) department had lower motivation levels than other departments, and this difference was statistically significant (p=0.479). The self-confidence sub-dimension showed that students in the coaching education department had higher self-confidence levels than other departments. However, this difference was not statistically significant (p=0.683).

Table 8. Mann-Whitney U Test Results for Comparing the Students' Scores on Scale Sub-Dimensions by Sports Branches

				Sum of		Significance	
Sub-Dimensions	**Sports Branch**	**n**	**Mean Rank**	**Ranks**	**u**	**z**	**p**
CAAS Anger Sub-Dimension	Team Sports	236	244.19	57629.5	26268.5	-1.14	0.253
	Individual Sports	237	229.84	54471.5			
CAAS Aggression Sub-Dimension	Team Sports	236	247.68	58452.5	25445.5	-1.69	0.089
	Individual Sports	237	226.36	53648.5			
PPESS Physical and Formal Sub-Dimension	Team Sports	236	231.59	54655	26689	-0.85	0.39
	Individual Sports	237	242.39	57446			
PPESS Motivation Sub-Dimension	Team Sports	236	245.41	57917	25981	-1.33	0.181
	Individual Sports	237	228.62	54184			
PPESS Self-Confidence Sub-Dimension	Team Sports	236	241.82	57069.5	26828.5	-0.44	0.44
	Individual Sports	237	232.2	55031.5			
***Significance level p<0.05**							

A Mann-Whitney U test was completed to determine the differences in emotional experiences between the team sports and individual sports. According to the results presented in Table 8, there were no differences in the anger, aggression, physical and formal anxiety, motivation, and self-confidence sub-dimensions between the team and individual sports ($p>0.05$). These findings suggest that there is no clear distinction between emotional experiences based on sports branches. This research contributes to the sport psychology literature and the lack of knowledge on the similarity of emotional experiences across different sports disciplines. The results highlight the need for more comprehensive studies on athletes' emotional experiences.

Table 9. Correlational Analysis of Competitive Aggressiveness and Anger Scale (CAAS) and Psychological Performance Assessment Scale in Sports (SPPRS) Scores

Sub-Dimensions	CAAS	CAAS.1	CAAS.2	PPESS	PPESS.1	PPESS.2	PPESS.3
CAAS	1						
CAAS.1	.934**	1					
CAAS.2	.895**	.691**	1				
PPESS	.459**	.375**	.484**	1			
PPESS.1	.498**	.420**	.505**	.893**	1		
PPESS.2	.225**	.158**	.273**	.775**	.491**	1	
PPESS.3	.302**	.247**	.321**	.750**	.466**	.566**	1
****p<0.01**							

The Pearson correlation analysis results of the participants' mean CAAS and PPESS scores in the study are presented in Table 9. When the correlation between the CAAS and PPESS scales was examined, a moderately positive correlation was determined between CAAS and PPESS (0.459**). This indicates that there is a positive relationship between the Competitive Aggressiveness and anger scale and the psychological performance

evaluation in sports scale, but this correlation is lower. When the CAAS and its sub-dimensions are examined, a very high and positive correlation was observed between the CAAS and CAAS.1 (0.934**). This indicates that there is a strong positive relationship between the Competitive Aggressiveness and anger scale and a sub-dimension of this scale. A very high and positive correlation was also found between CAAS and CAAS2 (0.895**). This indicates a strong positive relationship between the Competitive Aggressiveness and anger scale and another subdimension of this scale. When we look at the correlation analysis between PPESS sub-dimensions, there is a moderately positive correlation between the PPESS.1 and PPESS.2 (0.491**). This indicates a moderately positive relationship between the different subdimensions of the psychological performance evaluation in sports scale. A moderately positive correlation was found between

DISCUSSION AND CONCLUSION

This study aimed to understand the potential relationship between aggression and anger levels and psychological performance among students of the Faculty of Sports Sciences. According to the results, various differences in students' emotional experiences were evaluated based on gender, age groups, academic years, departments, and sports disciplines. Analyses of the subdimensions of anger, aggression, physical and body-related anxiety, motivation, and self-confidence revealed a significant difference in the anger subdimension among women, while no significant differences were found for the other variables ($p = 0.011$).

In a study conducted by Bostancı et al. (8) with university students and another by Fiyakalı (23) involving high school students with divorced and non-divorced parents, no significant differences were found in anger levels between female and male participants. However, Yöndem and Bıçak (57) observed that men had significantly higher anger levels compared to women. The variability in findings across the literature may stem from societal norms, which are considered significant factors shaping how individuals experience and express emotional responses. Traditional gender norms tend to tolerate open displays of anger and aggression in men while encouraging women to suppress such emotions. This indicates that gender differences in anger levels may be influenced by these societal norms.

In our study, no significant differences were found between gender and the subdimensions of anger, aggression, physical and body-related anxiety, motivation, and self-confidence. Similarly, Öztürk (44), in his master's thesis examining the perspectives of active and inactive sports science students regarding tendencies toward violence and aggressive behavior in sports, reported no statistically significant differences in aggression levels between male and female students, regardless of whether they were active or inactive athletes. Uzun et al. (54), in their study on the aggression and anger tendencies of defensive and offensive athletes, found no significant gender differences in the anger dimension among offensive athletes ($p > 0.05$). However, significant differences were identified in the aggression subdimension between male and female offensive athletes ($p < 0.05$). Among defensive athletes, significant gender differences were observed in both anger and aggression subdimensions ($p < 0.05$). Cin et al. (14) identified statistically significant gender differences in the aggression subdimension, with findings unfavorable to males. Similarly, Türkçapar and Şahinler (51) reported significant differences in the aggression subdimension and the overall scale based on gender, with mean scores favoring males in both aggression and anger subdimensions. Şahinler et al. (46) also found significant differences in the aggression subdimensions. In Öztürk's (44) study, significant differences were found in the tendency toward violence among inactive athletes based on gender, with male participants exhibiting higher tendencies. Özgider and Akgün (42), in their study on the levels of violence and aggression among sports science students, observed that male participants were more prone to violence and aggressive behaviors than their female counterparts. Interestingly, the average scores for female participants in certain dimensions were higher than those of males.

The relationship between gender and aggression is critically influenced by societal norms and cultural context. Societal expectations often encourage men to display more overt and outwardly directed aggressive behaviors, while women may be inclined to express such emotions more subtly. These findings suggest that gender differences in aggression and related behaviors are shaped significantly by societal and cultural factors.

In our study, no significant differences were found between gender and the subdimensions of physical and body-related anxiety. While no similar studies exist in the literature, physical and body-related anxieties may be a significant concern for both men and women. However, the expression and intensity of these

anxieties can vary depending on individual characteristics, levels of physical activity, and body perception. Given that sports science students are generally physically active individuals, such anxieties may become independent of gender-based differences.

The lack of significant differences in the subdimensions of motivation and self-confidence by gender may be attributed to multiple factors, including modern societal dynamics, the equalizing influence of sports culture, and the prominence of individual factors. This finding suggests that the effects of gender differences on motivation and self-confidence may vary depending on the context.

Analysis by age groups revealed significant differences in the aggression subdimension between the 21–23 age group and those aged 27 and above ($p = 0.056$). In the motivation subdimension, the 21–23 age group exhibited lower motivation levels compared to other age groups. Şahinler et al. (46), in their study on the aggression levels of sports science students who engaged in physical activity during the COVID-19 pandemic, found significant differences in aggression levels between the 26–30 age group and the 22–25 age group, favoring the latter. Similar findings by Özgider and Akgün (42), Yaşartürk et al. (2022), and Demirhan (17) indicate that aggression levels may remain stable as individuals age, and that academic year may not affect aggressive behaviors. These results align with our findings, suggesting that life experiences, social environments, and stress factors encountered by individuals may contribute to variations in aggression levels.

No significant differences were observed in anger, aggression, physical and body-related anxiety, motivation, or self-confidence across academic years. However, a decrease in aggression levels was noted as students progressed through their academic years. Çeşit (12), Doğan (18), and Ağlamaz (1) similarly found no significant differences in aggression levels based on academic year. Conversely, Kaynak and Tunç (31), in their study on the relationship between emotional intelligence and aggression levels among education faculty students, reported significant differences. Kurtoğlu (35) found that students' aggression scale scores increased as their academic year advanced. Erşan et al. (21) identified significant differences between second- and fourth-year students in physical education teaching programs. Variations in findings across the literature may reflect the impact of academic responsibilities, stress levels, and individual development on changes in aggression and anger levels.

In the analysis of the subdimensions of anger, aggression, physical and body-related anxiety, motivation, and self-confidence based on department variables, it was observed that students in the coaching education department exhibited higher levels of anger compared to students in the physical education and sports teaching and sports management departments. However, this difference was not statistically significant. Similarly, Erşan et al. (21), in their study evaluating the aggression levels of physical education and sports school students from a sociodemographic perspective, found no statistically significant differences in the mean scores of aggression subdimensions between students in the physical education teaching and coaching education departments. Likewise, Bahadır and Erdoğan (20) and Arslanoğlu (2) reported no significant differences in aggression levels based on department variables. However, Göktaş et al. (26) identified significant differences in the trait anger subdimension among physical education and sports school students based on their department.

In our study, no statistically significant differences were observed in the subdimensions of anger, aggression, physical and body-related anxiety, motivation, and self-confidence between team and individual sports participants. However, Sadi (45), in a master's thesis examining the impact of aggression and anger levels on fair play behaviors among athletes in different sports disciplines, found that athletes involved in individual sports exhibited higher levels of anger and aggression compared to those engaged in team sports. Similarly, Tutkun (53) reported statistically significant differences in aggression levels between individual and team athletes, with individual athletes scoring higher on average. Koruç and Bayar (34) observed that male athletes participating in individual sports exhibited more aggressive behaviors than those involved in team sports.

The literature suggests that individual athletes tend to have higher levels of aggression and anger compared to team athletes. This may be attributed to the emphasis on personal success in individual sports, which could increase the pressure on athletes to prove themselves, thereby intensifying emotions such as

anger and aggression. In contrast, team sports may provide an environment where emotions can be shared and regulated through group dynamics, potentially reducing the intensity of these emotions.

Information regarding the presence of mental health issues among university student-athletes highlights an incomplete understanding in the existing literature about the extent to which these athletes benefit from mental health services (40). Lopez and Levy, along with Lubker and colleagues, noted that university athletes tend to prefer counselors and coaches with a sports background, and when such preferences are met, they provide valuable support in controlling aggression and anger, thereby positively enhancing psychological performance.

In his study, Özmen (43) identified key sources of anger, including experiences of injustice, obstacles to achieving goals, physical injuries, and frustration. These factors were highlighted as critical triggers for anger responses and were framed as the psychological foundations of anger. This perspective provides an important theoretical framework for understanding the roots of anger and aggression and for developing anger management strategies. Slaby and Guerra (48) found that aggressive behaviors during adolescence are closely associated with cognitive factors. Thus, emphasizing early psycho-educational programs focused on adolescence, particularly among university students, is of great importance. These programs can equip students with rational thinking skills, helping reduce aggressive behaviors and fostering healthier interpersonal relationships.

Most studies on emotion regulation in sports primarily focus on pre- and post-performance periods. These contexts often provide ample time for athletes to divert attention from emotional components or to direct their focus to reduce or enhance emotional experiences (22; 55). The sports environment and education for student-athletes not only enhance athletic performance but also contribute to their overall psychological well-being. Consequently, sports go beyond developing physical and motor skills, playing a significant role in supporting holistic personal development (52). In their research, Shih and Lin (47) emphasized that although anger has garnered significant attention in sports performance literature, it remains one of the most critical yet under-researched topics in sports psychology. Evidence from their study suggests that recognizing opponents' emotions can aid in accurately predicting their actions, further underscoring the importance of emotional awareness in competitive settings.

In conclusion, this study aimed to explore the potential relationship between aggression and anger levels and psychological performance among students of the Faculty of Sports Sciences. The findings reveal emotional and psychological differences based on gender groups, age groups, academic levels, and departmental variables. Notably, the emergence of gender-based emotional differences in the anger subdimension and the identification of varying levels of emotional characteristics such as aggression, motivation, and self-confidence—across age groups are particularly significant.

Recommendations:

1. Psycho-Educational Programs: Psycho-educational programs should be developed for students of the Faculty of Sports Sciences, especially focusing on anger management and emotional awareness. These programs can help students control their levels of aggression and anger by teaching them rational thinking skills.

2. Gender-Based Approaches: Identifying gender-based differences, especially in the anger sub-dimension, may require the development of emotional management strategies in a gender-sensitive manner. Gender-specific support and guidance programs can be created.

3. Interventions Appropriate for the Levels of Age and Year in the Program: This study highlights emotional differences across age groups and years in the program. In this context, psychological support, and intervention programs appropriate to the age and years in the program can be planned.

4. Support According to the Department Variable: It was observed that the department variable has potential effects on students' emotional and psychological characteristics. In this context, programs that support emotional health and performance can be developed specifically for each department.

5. Comprehensive Studies by Sports Types: Although no significant differences were found between team sports and individual sports, it is important to examine emotional experiences in more detail according to sport types in larger studies.

These recommendations can shape intervention and support programs to be developed to improve the emotional health of Faculty of Sports Sciences students, increase their performance, and help them cope with sports-related stress.

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