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Assessment of Optimal Emotional Ranges of Athletes Living in Disaster-Affected Areas

Gamze MURATHAN[1], Merve KERVAN[2]

ABSTRACT

Purpose: For this purpose, the research was designed in a quantitative research design, and descriptive and correlational survey models were used.

Method: The research population consists of athletes with sports licenses in different branches who experienced the earthquake disaster in Adıyaman province. The sample group consists of a total of 486 athletes who were actively licensed and lived in Adıyaman province during the February 6th earthquakes, including Football (158), Martial Arts (78), Volleyball (64), Basketball (41), Swimming (39), Archery (34), Fencing (28), Athletics (26), and Water Sports (18). The Depression, Anxiety, and Stress Scale (DASÖ-21), the Spielberger State-Trait Anxiety Inventory (STAI), and the Sports Anxiety Scale (SAS) were used as data collection tools in the study. In the analysis of the data, frequency and percentage distributions for the participants' personal characteristics, arithmetic means and standard deviations for the responses to the scales were calculated, and relationships between parameters were determined. The raw data obtained with the data collection tools were analyzed using SPSS version 26.

Results: The results showed that the total Spielberger State Anxiety Inventory score was 64.18, and the average scores for the 7 items in the depression subscale of the Depression, Anxiety, and Stress Scale were 19.34, 17.22, and 22.19, respectively. The average scores for athletes in the Sports Anxiety Scale were 14.18 in the somatic anxiety subscale, 17.34 in the worry subscale, and 5 items in the distractibility subscale. It was observed to be 16.61.

Conclusion: In conclusion, the findings indicate that athletes who have experienced a disaster demonstrate significant differences in their emotional characteristics conceptualized as optimal emotional rangesacross various variables. It is considered that these differences may be positively transformed through sport-based practices and structured interventions.

Keywords: Disaster, High School Student, Attitude, Physical Education and Sports Class

ÖZET

Afet Bölgesinde Yaşayan Sporcuların Optimal Duygu Aralıklarının Değerlendirilmesi

Amaç: Bu araştırma, afet bölgesinde yaşamına devam eden farklı spor branşlarına sahip sporcuların optimal duygu aralıklarının farklı değişkenlerce etkisinin incelenmesi amacıyla gerçekleştirilmiştir.

Yöntem: Bu amaçla araştırma nicel araştırma deseninde tasarlanmış olup, betimsel tarama modeli ve ilişkisel tarama modelinden faydalanılmıştır. Araştırma evrenini Adıyaman ilinde deprem afetini yaşayan farklı branşlarda sporcu lisansına sahip sporcular oluşturmaktadır. Örneklem grubunu ise 06 Şubat depremlerini Adıyaman ilinde yaşayan ve faal olarak lisanslı olan Futbol (158), Savunma Sporları (78), Voleybol (64), Basketbol (41), Yüzme (39), Okçuluk (34), Eskrim (28), Atletizm (26) ve Su Sporları (18) olmak üzere toplam 486 sporcu oluşturmaktadır. Araştırmada veri toplama aracı olarak "Depresyon, Anksiyete ve Stres Ölçeği (DASÖ-21) Spielberger Durumluk-Sürekli Kaygı Envanteri (STAI) ve Spor Kaygı ölçeği (SAS) kullanılmıştır. Verilerin analizinde, katılımcıların kişisel özelliklerine yönelik frekans ve yüzde dağılımları, ölçeklere verilen yanıtlara ilişkin aritmetik ortalama ve standart sapmalar hesaplanmış, ayrıca parametreler arası ilişkiler belirlenmiştir. Araştırmanın veri toplama araçları ile elde edilmiş olan ham veriler SPSS 26 versiyonu kullanılarak analiz edilmiştir.

Bulgular: Araştırma sonucunda Spielberger Durumluk Kaygı Envanteri toplam puanı 64,18, Depresyon anksiyete ve stres ölçeği depresyon alt boyutundaki 7 maddenin 19,34, Anksiyete alt boyutunda 7 madde 17,22 ve stres alt boyutunda 7 madde 22,19 puan ortalamasına sahip oldukları tespit edilmiştir. Sporcuların Spor Kaygı Ölçeği

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[1] Adiyaman University, Faculty of Sports Sciences, Department of Physical Education and Sports Adiyaman/TURKIYE. ORCID NO: 0000-0003-3325-0252, gmurathan@adiyaman.edu.tr

[2] Adiyaman University, Faculty of Sports Sciences Department of Physical Education and Sports, Adiyaman/TURKIYE. ORCID NO: 0009-0003-8316-0244, mervekervantr@gmail.com

somatik kaygı alt boyutunda 14,18, endişe alt boyutunda 17,34, konsantrasyon dağınıklığı alt boyutunda ise 5 madde üzerinden 16,61 olduğu gözlenmiştir.
Sonuç: Araştırma sonucunda afet yaşayan sporcuların optimal duygu aralıkları olarak duygusal özelliklerinde farklı değişkenler açısından belirgin farklılıklar oluştuğu, bu oluşumun spor yoluyla gerçekleştirilen uygulamalar ile olumlu duruma dönüştürebileceği düşünülmektedir.
Anahtar Kelimeler: Afet bölgesi, sporcu, duygusal gelişim, optimal duygu

INTRODUCTION

A disaster is an event natural, technological, or human-induced that disrupts or halts an individual's life and activities, causes economic, physical, and social losses, and exceeds the affected community's capacity to cope independently (AFAD, 2014). Disasters, which directly impact an individual's societal structure and daily life, also have traumatic effects on the individual's psychological state. This situation can lead to significant negative outcomes in physical, psychological, and sociological domains. Psychologically, even the mere possibility of experiencing a disaster can trigger anxiety, stress, and behavioral disturbances. Such effects negatively influence daily functioning and may result in a predominant need for personal safety (Karancı & İkizer, 2017).

Given that disasters can occur both naturally and artificially, human ability to intervene is generally limited. However, raising disaster awareness through education and increasing individuals' knowledge and preparedness is considered an effective measure to minimize the adverse psychological effects and traumatic experiences associated with disasters (Değirmenci et al., 2019). In this context, assessing and evaluating the emotional states of athletes who regularly engage in sports and reside in affected areas is of particular importance (Fırat et al., 2024).

In the field of sports and physical activity, understanding and managing athletes' psychological emotional states is recognized as a fundamental factor influencing performance. In this context, researchers have increasingly focused on emotional constructs and psychological factors as key determinants affecting performance. Moreover, findings from these studies indicate a strong relationship between an individual's emotional characteristics and emotional structure and their physical performance (Seleciler, 2019).

Achieving an individual's optimal emotional state is considered one of the psychological factors that enables the highest level of engagement in an activity and contributes to successful performance (Jackson & Eklund, 2002). In his 2004 study, Asakawa defined optimal emotion as the mental satisfaction arising from a sense of competence during activity, increased work focus, motivation, and the enjoyment experienced while completing the task

(Asakawa, 2004). The scholarly investigation of optimal emotion in the literature traces its origins to Csikszentmihalyi's pioneering study in 1975 (Csikszentmihalyi, 1975).

In this 1975 study, the dimensions of enjoyment and pleasure experienced during leisure time and sports activities were evaluated to determine their interrelationships (Ada et al., 2012; Carter et al., 2013). The literature indicates that research in this field gained significant momentum primarily after 1990 (Swann, 2016).

From an emotional development perspective, emotion is defined as an acute affective response of an individual to an event that influences mental processes and behaviors. It is challenging to provide a fixed definition of the components of emotion that arise within the organism (Koçak & Kayıklık, 2019). Consequently, the literature reveals that a clear conceptual definition of emotion is largely absent (Cabanac, 2002; Izard, 2009). Various explanations and definitions of emotion, which lack a single consensus, are summarized in dictionaries and scientific studies (Gendron, 2010). Structurally, the concept of emotion is described in terms of positive (pleasant) and negative (unpleasant) affective experiences, which are perceived differently by individuals (MacIntyre & Vincze, 2017).

In this context, emotion is considered a crucial determinant of performance, particularly among athletes. Key emotional components relevant to sporting performance include traits such as anxiety, stress, depression, and worry, which significantly influence an individual's effectiveness in physical activities.

In athletes, the influence of emotional characteristics is considered as important as focus and concentration during performance. Concentration, which is a significant predictor of an individual's attention processes, plays a crucial role in maximizing performance in sports activities. From a social development perspective, individuals need competencies such as understanding and interpreting their emotions, self-motivation, impulse control, and developing positive attitudes toward school and society (Murathan et al., 2022). Concentration has been defined as "focusing on and being aware of the nature of the stimulus affecting the organism" (Rodrigues et al., 2016). It has also been described as "ignoring distracting features and directing attention toward the task at hand" (Moran & Toner, 2018). In their 2006 study, Wilson, Peper, and Schmid explained the concept of concentration as the ability to remain unaffected by internal and external stimulus patterns and to avoid generating disruptive effects. In a 2011 study, Weinberg and Gould defined concentration during training and sports activities as "focusing on relevant cues in the environment, maintaining focus for the longest possible

duration, creating awareness, and adjusting attentional intensity under potential functional conditions."

Therefore, the optimal exhibition of concentration structures is regarded as a critical factor in achieving high performance among athletes.

In research conducted within the field of sports science, investigations on athletes' emotional development and psychological factors have focused not only on physical characteristics but also on their levels of motivation, drive, and emotional states. Additionally, studies on optimal emotional states have frequently examined the relationship between affective traits and optimal emotional states (Lane, Thelwell, & Devonport, 2009) as well as their connection to sports performance (Jackson et al., 2001; Pates et al., 2001; Nadler et al., 2010). However, in Turkey, research addressing the topic of optimal emotional states remains limited (Burucu, 2019).

In light of this information, the present study is considered significant for its potential to have a broad impact within the field of sports sciences and is regarded as original in terms of exploring the relationship between optimal emotional states and disaster contexts.

METHODS

Research Design

The present study aims to evaluate the optimal emotional ranges of athletes from different sports disciplines following a natural disaster, considering various variables. In line with this objective, the research was conducted as a quantitative study using a descriptive survey model. Additionally, relational survey models were employed for comparisons between the scales used.

From a methodological perspective, quantitative studies are defined as research designs that rely on numerical data to produce precise and generalizable results. In descriptive and relational survey models within quantitative research, data are collected numerically from study groups. Subsequently, statistical analyses are performed on the collected data to derive generalizable findings. The relational survey method employed within the quantitative model in this study is defined as a technique used to examine whether differences exist between two or more scales or variables and, if differences are present, to determine how they occur (Karasar, 2011).

Participants

The population of the study consists of athletes holding licenses in various sports disciplines who experienced the earthquake in Adıyaman province. The sample group includes a total of 486 athletes who were actively licensed and living in Adıyaman during the February 6 earthquakes, distributed across the following sports: Football (158), Defensive Sports (78), Volleyball (64), Basketball (41), Swimming (39), Archery (34), Fencing (28), Athletics (26), and Water Sports (18). The demographic characteristics of the research group are presented in Table 1.

Table 1. Demographic Characteristics of the Participants (N = 486)

		f	%
Gender	Male	301	61,93
	Female	185	38,06
Sport Discipline	Football	158	32,51
	Defensive Sports (Judo, Kickboxing)	78	16,04
	Volleyball	64	13,16
	Basketball	41	8,43
	Swimming	39	8,02
	Archery	34	6,99
	Fencing	28	5,76
	Athletics	26	5,34
	Water Sports (Canoeing, Sailing)	18	3,70
Education Level	High School	191	39,30
	Degree / Associate Degree	283	58,23
	Postgraduate	12	2,46
Years of Sports Experience	1 Year or less	54	11,11
	2-4 Years	174	35,80
	5-7 Years	207	42,59
	8 Years or more	51	10,49
National Team Status	Yes	38	7,81
	No	448	92,18
Loss of First-Degree Relative in February 6 Earthquake	Yes	163	33,53
	No	323	66,46

According to the data presented in Table 1, 61.93% of the participants were male athletes, while 38.06% were female athletes. Regarding the distribution of sport disciplines, the largest group consisted of football players, accounting for 32.51% (n = 158), whereas the smallest group consisted of athletes engaged in water sports (canoeing and sailing), representing 3.70% (n = 18). In terms of educational level, the majority of participants (58.23%, n = 283) had completed undergraduate or associate degree programs, while the smallest group (2.46%, n = 12) had attained graduate-level education.

Concerning national team status, 7.81% (n = 38) of the athletes reported being members of their national teams. Additionally, based on the assessment of loss of a first-degree relative

during the February 6 earthquake, 33.53% (n = 163) of the participants indicated that they had experienced such a loss.

Data Collection Methods and Tools

The first section of the data collection instrument consisted of a personal information form, which included six questions regarding the participants' gender, sport discipline, years of sports experience, educational level, sports background, national team status, and the loss of a first-degree relative during the February 6 earthquakes.

To obtain data for the study, a personal information form was used to determine the sociodemographic characteristics of the sample. In addition, the following standardized scales were employed to assess the optimal emotional ranges of athletes living in the disaster-affected area: the Depression, Anxiety, and Stress Scale (DASS-21), the Spielberger State-Trait Anxiety Inventory (STAI), and the Sport Anxiety Scale (SAS).

The DASS-21, developed by Lovibond and Lovibond (1995), is a short-form scale whose validity and reliability were established in Turkish by Yılmaz, Boz, and Arslan (2017). The scale consists of 21 items across three factors: 7 items for the Depression factor, 7 items for the Anxiety factor, and 7 items for the Stress factor. The internal consistency coefficients (Cronbach's Alpha) of the scale range from .755 to .822, while in the present study, the coefficients were obtained as 0.70, 0.78, and 0.73 for Depression, Anxiety, and Stress, respectively. The scale is scored on a 4-point Likert-type scale: "Never = 0," "Sometimes = 1," "Often = 2," and "Always = 3."

Table 2. Evaluation of Scores Obtained from the Scale

Level	Depression	Anxiety	Stress
Normal	0-4	0-3	0-7
Mild	5-6	4-5	8-9
Moderate	7-10	6-7	10-12
Severe	11-13	8-9	13-16
Extremely Severe	14+	10+	17+

Spielberger State-Trait Anxiety Inventory (STAI)

The STAI was developed by Spielberger, Gorsuch, and Lushene (1970), and its Turkish adaptation was conducted by Öner and Le Compte (1983). The scale, designed to assess individuals' state anxiety, consists of 20 items. It is a 4-point Likert-type scale with the response options: "Not at all = 1," "Somewhat = 2," "Moderately = 3," and "Completely = 4." Items 1, 6, 7, 10, 13, 16, and 19 are reverse-scored. Lower scores indicate lower levels of anxiety.

Sport Anxiety Scale (SAS)

The SAS is used to evaluate levels of worry and concentration disruption in athletes. It was developed by Smith, Smoll, and Schutz (1990), and its Turkish validity and reliability study

was conducted by Akyol, Altıntaş, Sezer, and Aşçı (2016). The scale consists of three subdimensions: somatic anxiety, worry, and concentration disruption. In the present study, only the worry and concentration disruption subdimensions were considered. The scale contains a total of 15 items.

Research Ethics

Ethical approval for the study was obtained from the Adıyaman University Social and Human Sciences Ethics Committee with decision number 42, dated April 24, 2024.

Data Analysis

The statistical analyses of the data obtained in the study were performed using SPSS 26.0. Initially, tests for data normality were conducted.To determine the personal characteristics of the athletes in the study group, frequency and percentage analyses were carried out. The reliability of the scales used in the study was assessed by calculating Cronbach's Alpha (α) coefficients. Skewness and kurtosis analyses were performed to examine the distribution of the data sets from different scales, and the results are presented in the Findings section. Since the data were normally distributed, parametric tests, including the t-test and ANOVA, were applied to assess the significance of differences between dependent and independent variables. To examine the relationships between athletes' responses to the scales, the Pearson Correlation Coefficient was employed. A significance level of 0.05 was used for all statistical analyses.

RESULTS

This section presents the statistical analyses conducted to determine the optimal emotional ranges of athletes living in disaster-affected areas.

Table 3. Scale Scores Related to the Optimal Emotional Ranges of the Participants

Scale	Sub Dimension	N	Number of Items	x̄	sd.	Level
Depression, Anxiety, and Stress Scale (DASS-21)	Depression	486	7	19,34	4,19	High
	Anxiety	486	7	17,22	3,82	High
	Stress	486	7	22,19	4,96	High
Sport Anxiety Scale (SAS)	Somatic Anxiety	486	5	14,18	3,61	High
	Worry	486	5	17,34	3,96	High
	Concentration Disruption	486	5	16,61	3,57	High
Spielberger State-Trait Anxiety Inventory (STAI)	Total Score	486	21	64,11	9,66	High

According to Table 3, the total scores of the Spielberger State-Trait Anxiety Inventory (STAI), the total and subdimension scores of the Depression, Anxiety, and Stress Scale (DASS-

21), and the subdimension scores of the Sport Anxiety Scale (SAS) for athletes residing in Adıyaman are presented. The results indicate that the total STAI score was 64.18. For the DASS-21, the mean scores were 19.34 for the Depression subdimension (7 items), 17.22 for the Anxiety subdimension (7 items), and 22.19 for the Stress subdimension (7 items). Regarding the SAS, the mean scores were 14.18 for the Somatic Anxiety subdimension, 17.34 for Worry, and 16.61 for the Concentration Disruption subdimension (5 items).

Table 4. Analysis of Optimal Emotional Ranges According to Gender of Athletes Living in the Disaster-Affected Area

Variable		Gender	N	x̄	Sd.	t	p
Depression, Anxiety, and Stress Scale (DASS-21)	Depression	Female	185	20,61	5,11	,961	**0,021**
		Male	301	18,10	4,02		
	Anxiety	Female	185	18,61	4,23	-1,667	0,214
		Male	301	17,14	3,80		
	Stress	Female	185	23,66	5,12	1,413	**0,001**
		Male	301	21,94	4,84		
Sport Anxiety Scale (SAS)	Somatic Anxiety	Female	185	15,11	3,01	-2,933	0,691
		Male	301	14,04	2,98		
	Worry	Female	185	19,13	4,81	-,644	0,311
		Male	301	16,96	3,68		
	Concentration Disruption	Female	185	17,02	3,76	1,796	**0,001**
		Male	301	16,28	3,20		
Spielberger State-Trait Anxiety Inventory (STAI)		Female	185	66,78	17,20	2,414	**0,014**
		Male	301	63,21	15,15		

p>0,05

According to Table 4, the analysis of optimal emotional ranges of athletes living in the disaster-affected area was conducted according to gender. The results indicate a significant difference in the total score of the Spielberger State-Trait Anxiety Inventory (STAI) between female and male athletes (t = 2.414, p = 0.014). However, no significant difference was observed in the Anxiety subdimension of the Depression, Anxiety, and Stress Scale (DASS-21) (t = -1.667, p = 0.214, p > 0.05). Additionally, a significant difference was found in the Concentration Disruption subdimension of the Sport Anxiety Scale (SAS) according to gender (t = 1.796, p = 0.001, p < 0.05), whereas no significant differences were detected in the other SAS subdimensions, namely Somatic Anxiety and Worry.

Furthermore, female athletes residing in the disaster-affected area exhibited higher mean scores than male athletes across several measures. Specifically, the mean score for the Depression subdimension was higher in female athletes ($\bar{x}$ = 20.61) compared to male athletes ($\bar{x}$ = 18.10). Similarly, female athletes scored higher on the Anxiety subdimension ($\bar{x}$ = 18.61) than male athletes ($\bar{x}$ = 17.14). The total STAI score was also higher in female athletes ($\bar{x}$ = 66.78) than in male athletes ($\bar{x}$ = 63.21).

Table 5. Analysis of Optimal Emotional Ranges According to Years of Sports Experience Among Athletes Living in the Disaster-Affected Area

Variable		Years of Sports Experience	N	x̄	Sd.	F	p	Significant Difference
Depression, Anxiety, and Stress Scale (DASS-21)	Depression	1 Year or less	54	18,11	3,95	,955	**0,000**	**4>1**
		2-4 Year	174	18,45	4,02			**4>2**
		5-7 Year	207	20,01	4,93			**4>3**
		8 Years or more	51	21,18	5,26			
	Anxiety	1 Year or less	54	16,79	3,66	1,116	**0,001**	**4>1**
		2-4 Year	174	16,45	3,14			**4>2**
		5-7 Year	207	18,11	3,84			**4>3**
		8 Years or more	51	19,04	4,28			
	Stress	1 Year or less	54	20,51	4,76	1,218	**0,001**	**4>1**
		2-4 Year	174	22,88	5,01			**4>2**
		5-7 Year	207	23,15	5,99			**4>3**
		8 Years or more	51	23,68	6,21			
Sport Anxiety Scale (SAS)	Somatic Anxiety	1 Year or less	54	13,92	2,09	-3,461	0,814	
		2-4 Year	174	13,99	2,28			
		5-7 Year	207	14,81	2,89			
		8 Years or more	51	15,26	3,21			
	Worry	1 Year or less	54	17,01	3,68	-2,744	0,612	
		2-4 Year	174	17,64	3,98			
		5-7 Year	207	17,83	4,07			
		8 Years or more	51	18,04	4,68			
	Concentration Disruption	1 Year or less	54	16,41	3,28	-2,022	0,554	
		2-4 Year	174	16,34	3,54			
		5-7 Year	207	16,86	3,86			
		8 Years or more	51	17,85	4,12			
Spielberger State-Trait Anxiety Inventory (STAI)		1 Year or less	54	63,90	15,55	-3,814	0,991	
		2-4 Year	174	64,35	15,98			
		5-7 Year	207	64,96	16,06			
		8 Years or more	51	65,17	16,60			

According to Table 5, there is a statistically significant difference between the sports age of athletes living in the disaster area and the sub-dimensions of the Depression, Anxiety, and Stress Scale, namely depression (t=,955, p=0,000), anxiety (t=1,116, p=0,001), and stress (t=1,218, p=0,001) (p>0.05).

As a result of the Tukey test conducted to determine the direction of the difference, it was found that the difference was in favor of athletes with 8 years or more of sports experience. Accordingly, athletes with 8 years or more of sports experience were found to have higher levels of depression, anxiety, and stress compared to those with 1 year or less, 2–4 years, and 5–7 years of sports experience.

Table 6. Analysis of Optimal Emotional Ranges of Athletes Living in the Disaster Area According to Loss of a First-Degree Relative in the February 6 Earthquake

Variable		Loss of a Relative	N	x̄	Sd.	t	p
Depression, Anxiety, and Stress Scale (DASS-21)	Depression	Yes	163	20,48	6,04	1,922	**0,001**
		No	323	19,15	5,81		
	Anxiety	Yes	163	17,81	5,66	,984	**0,000**
		No	323	17,20	5,11		
	Stress	Yes	163	22,68	7,02	-2,211	0,625
		No	323	22,14	6,82		

Sport Anxiety Scale (SAS)	Somatic Anxiety	Yes	163	15,08	4,16	-,934	0,211
		No	323	14,05	3,08		
	Worry	Yes	163	18,28	5,48	1,074	**0,026**
		No	323	17,03	5,02		
	Concentration Disruption	Yes	163	17,33	5,24	1,884	**0,001**
		No	323	16,28	4,96		
Spielberger State-Trait Anxiety Inventory (STAI)		Yes	163	65,04	16,98	-2,622	0,067
		No	323	64,06	16,22		

According to Table 6, a statistically significant difference was found between the loss of a first-degree relative in the February 6 earthquakes and the depression (t=1.922, p=0.001) and anxiety (t=0.984, p=0.000) sub-dimensions of the Depression, Anxiety, and Stress Scale (DASS-21). In addition, statistically significant differences were identified between the loss of a first-degree relative and the worry (t=1.074, p=0.026) and concentration disruption (t=1.884, p=0.001) sub-dimensions of the Sport Anxiety Scale (SAS).

However, no statistically significant differences were found in the total score of the Spielberger State-Trait Anxiety Inventory (STAI), the stress sub-dimension of DASS-21, and the somatic anxiety sub-dimension of the Sport Anxiety Scale according to the loss of a first-degree relative in the February 6 earthquakes (p>0.05).

Table 7. Correlation Analysis Between Depression, Anxiety, Stress, Sport Anxiety, and Spielberger State Anxiety Levels of Athletes Living in the Disaster-Affected Region

		Depression	Anxiety	Stress	Somatic Anxiety	Worry	Concentration Disruption	Spielberger State Anxiety
Depression	r	1	,421	,608	-,338	,244	,723	,536
	p		,020	,000	,071	,076	,001	,000
Anxiety	r	,421	1	,693	,262	,748	,804	,613
	p	,020		,000	,034	,000	,000	,001
Stress	r	,608	,693	1	,503	,493	,608	,560
	p	,000	,000		,000	,014	,000	,000
Somatic Anxiety	r	-,338	,262	,503	1	,268	,396	,381
	p	,071	,034	,000		,048	,003	,001
Worry	r	,244	,748	,493	,268	1	,528	,803
	p	,076	,000	,014	,048		0,00	,000
Concentration Disruption	r	,723	,804	,608	,396	,528	1	,716
	p	,001	,000	,000	,003	0,00		,000
Spielberger State Anxiety	r	,536	,613	,560	,381	,803	,716	1
	p	,000	,001	,000	,001	,000	,000	

p>0,05

Table 7 presents the correlation analysis examining the relationships between the Depression, Anxiety and Stress Scale (DASS-21), the sub-dimensions of the Sport Anxiety Scale (SAS), and the Spielberger State Anxiety levels of athletes living in the disaster-affected region.

Accordingly, a positive and above-moderate significant relationship was found between depression and stress, which are sub-dimensions of the DASS-21 (r=0.608; p< 0.05). Additionally, a positive but below-moderate relationship was observed between depression and

anxiety (r=0.421; p<0.05). Furthermore, a positive and above-moderate significant relationship was identified between stress and anxiety (r=0.693; p<0.05).

Based on the correlation test results presented in Table 7, a positive but below-moderate relationship was found between somatic anxiety, a sub-dimension of the Sport Anxiety Scale, and Spielberger State Anxiety (r=0.381; p<0.05). A strong, positive, and above-moderate significant relationship was observed between worry and Spielberger State Anxiety (r=0.803; p<0.05). Moreover, a strong positive relationship was identified between Spielberger State Anxiety and concentration disruption (r=0.716; p<0.05). Consequently, as the scores of the Sport Anxiety Scale sub-dimensions somatic anxiety, worry, and concentration disruption increase, Spielberger State Anxiety scores also increase.

A positive and above-moderate significant relationship was also found between the Depression, Anxiety and Stress Scale sub-dimensions and Spielberger State Anxiety scores (r=0.536, 0.613, 0.560; p<0.05). As athletes' depression, anxiety, and stress scores increase, their Spielberger State Anxiety levels also increase.

DISCUSSION and CONCLUSION

As a result of the study, it was determined that athletes in Adıyaman province had a mean total score of 64.18 on the Spielberger State Anxiety Inventory. The mean scores of the Depression, Anxiety and Stress Scale (DASS-21) were 19.34 for the depression sub-dimension (7 items), 17.22 for the anxiety sub-dimension (7 items), and 22.19 for the stress sub-dimension (7 items). Regarding the Sport Anxiety Scale (SAS), the athletes' mean scores were 14.18 for somatic anxiety, 17.34 for worry, and 16.61 for concentration disruption (based on 5 items).

Previous literature indicates that types of anxiety experienced by athletes may lead to feelings of inadequacy against opponents and fear of failure, which in turn may create pressure during competition (Gallahue, 1982). In relation to this, findings suggest that somatic anxiety structures may emerge in athletes during competition. These findings may manifest as physiological symptoms such as sweating, heart palpitations, muscle tension, and disturbances in stomach functions. In a study by Gould et al. (2002), it was reported that the increase in anxiety experienced by athletes during competition may stem from stress-related reactions. Similarly, Hanton et al. (2004) reported that pre-competition anxiety in athletes tends to increase during competition. Studies in the relevant field further indicate that types of anxiety occurring before competition significantly affect performance (Razon & Sachs, 2017).

As a result of the study, a statistically significant difference was observed in the total score of the Spielberger State Anxiety Inventory according to gender (t=2.414, p=0.014).

However, no significant difference was found in the anxiety sub-dimension of the Depression, Anxiety and Stress Scale (t=-1.667, p=0.214) (p>0.05).

In a study conducted by Stanton et al. (2020), which examined the effects of mood states during the pandemic on physical activity levels, tobacco and alcohol use, and sleep quality among adults, it was reported that female adults experienced higher levels of stress compared to males. Similarly, a study conducted in Brazil by Silva et al. found that women experienced higher levels of stress, anxiety, and depression compared to men. In another study, Lei et al. (2020) investigated emotional conditions such as depression and anxiety among individuals affected by the pandemic in southwest China and reported significant differences in favor of women in terms of gender.

When the findings of studies conducted according to gender are evaluated together with the results of the present study, it is observed that similar outcomes have been obtained. This situation may be attributed to women's physical, morphological, and psychological characteristics. As a result of the study, statistically significant differences were observed between athletes living in the disaster region in terms of losing a first-degree relative in the February 6 earthquakes and the depression (t=1.922, p=0.001) and anxiety (t=0.984, p=0.000) sub-dimensions of the Depression, Anxiety and Stress Scale.

Today, the emergence of emotional, sociological, and psychological adversities among individuals exposed to disasters is considered a global public health problem that negatively affects overall well-being (Gariepy et al., 2020). Emotional disturbances arising from traumatic events such as disasters not only delay the rehabilitation process but also lead to deterioration in individuals' psychological health (Karabulut et al., 2024). In a study conducted by Teng et al. (2018), it was reported that even three years after a natural disaster, a significant portion of the sample continued to experience sleep problems and behavioral disorders. Furthermore, the findings indicated that 48.9% of the young population exposed to the earthquake reported sleep disturbances.

The findings in the literature are consistent with the results of the present study. It can be inferred that children and adolescents, particularly those in developmental stages, may have difficulty coping with trauma-related consequences of disasters. Accordingly, it is concluded that these individuals may require structured social support interventions to effectively manage the psychological impacts of such traumatic experiences. Birsin-Yıldız et al. (2015), who examined the relationship between athletes' optimal emotional state and life satisfaction, conducted their study on 207 athletes and concluded that there was a positive relationship between life satisfaction and optimal emotion. Similarly, in a study conducted by Burucu

(2019), the motivation levels in physical education classes and optimal emotional states of 565 middle school students were compared. The findings indicated a significant positive relationship between students' motivation in physical education classes and their optimal emotion levels.

In another study conducted in Türkiye, Aydın (2019) investigated the relationship between optimal emotional state, mental toughness, and motivation structures based on a sample of 300 participants. The findings reported in the literature are consistent with the results of the present study. In light of these findings, it can be suggested that children and adolescents who lost first-degree relatives in the earthquake experience difficulties in their emotional development domains, and that this situation significantly affects their lives. Therefore, the necessity of providing structured social support mechanisms for these individuals becomes increasingly evident.

As a result of the study, it can be stated as an undeniable fact that individuals holding athletic licenses who experienced the February 6, 2023 earthquakes were affected cognitively, affectively, and behaviorally, and were exposed to traumatic consequences. The high magnitude and widespread impact of the earthquakes that occurred on February 6 in Türkiye led to the vast majority of individuals within the social structure being adversely affected. The earthquake was not limited to structural damage; it also had significant psychological, social, and economic repercussions. Particularly in the post-earthquake period, disruptions in coordination, infrastructure deficiencies, and inadequacies in sheltering and nutrition were observed in the affected provinces. Furthermore, the fact that the earthquake occurred during the winter season resulted in delays in transportation and aid delivery processes, thereby contributing to the emergence of numerous adverse outcomes. This situation once again underscores the critical importance of post-disaster recovery efforts and effective crisis management strategies.

In conclusion, the findings indicate that athletes who have experienced a disaster demonstrate significant differences in their emotional characteristics conceptualized as optimal emotional ranges across various variables. It is considered that these differences may be positively transformed through sport-based practices and structured interventions.

Considering that anxiety responses and related hormonal changes in athletes have a determining effect on performance, it would be beneficial to implement psychological training programs aimed at managing cognitive and somatic anxiety (e.g., breathing exercises, relaxation techniques, and mental training strategies).

Suggestions

Based on the findings of the study, the following recommendations are proposed:

- Future research should be conducted with larger samples and different groups exposed to traumatic experiences, while controlling for potential confounding environmental factors in order to clarify distinct functional relationships among symptom clusters.
- Athletes should be informed about coping strategies for stress, and they should be equipped with stress management skills to help them navigate disaster-related processes in a healthier manner.
- Coaches and sport educators should incorporate practices aimed at positively influencing athletes' emotional states in order to enhance high-level performance outcomes.

To ensure that athletes maintain optimal emotional states, opportunities should be provided for them to participate in psychological education programs within formal or non-formal educational institutions.

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