

## Comparison of Physical Activity and Stress Levels of Individuals Playing Pickleball in Türkiye and Abroad

Mihraç KÖROĞLU<sup>1</sup>, Burcu YENTÜRK ŞİŞMAN<sup>1</sup>, Nuri Muhammet ÇELİK<sup>1</sup>, Oktay DAL<sup>1</sup>, Fikret SOYER<sup>2</sup>

DOI: <https://doi.org/10.38021/asbid/1853228>

ORIGINAL ARTICLE

<sup>1</sup>Batman University, Faculty of Spor Sciences, Department of the Coach Education, Batman/Türkiye

<sup>2</sup>Kyrgyzstan - Türkiye Manas University, Faculty of Spor Sciences, Bishkek/Kyrgyzstan

### Abstract

The aim of this study is to compare the physical activity and perceived stress levels of individuals who play pickleball in Türkiye and abroad in terms of various sociodemographic and sport-related variables. The study was conducted using a quantitative research approach and employed a comparative descriptive research design with independent samples. The data obtained in the study were collected through the Physical Activity Scale and the Perceived Stress Scale administered to the participants, and the analyses were performed using appropriate statistical procedures in the SPSS program. A total of 144 pickleball players, including 73 from Türkiye and 71 from abroad, participated in the study. The findings revealed that the mean physical activity scores did not show a statistically significant difference between Turkish and foreign players. However, the mean perceived stress scores differed significantly between the two groups. Physical activity levels did not differ significantly in terms of sociodemographic and sport-related variables (gender, frequency of playing pickleball, age, regular participation in sports, and the reason for playing pickleball). The perceived stress levels of the participants were similar with respect to gender, playing frequency, and age variables; however, they differed significantly in terms of regular participation in sports and the reason for playing pickleball. These results indicate that the stress and physical activity profiles of pickleball players may vary according to certain sociodemographic and sport-related variables.

**Keywords:** Pickleball, Physical Activity, Stress.

## Türkiye’de ve Yurtdışında Pickleball Oynayan Bireylerin Fiziksel Aktivite ve Stres Düzeylerinin Karşılaştırılması

**Corresponding Author:**  
Mihraç KÖROĞLU  
[mihackoroglu@gmail.com](mailto:mihackoroglu@gmail.com)

Received:  
31.12.2025

Accepted:  
12.03.2026

Online Publishing:  
28.03.2026

### Öz

Bu araştırmanın amacı, Türkiye’de ve yurtdışında pickleball oynayan bireylerin fiziksel aktivite ve algılanan stres düzeylerini çeşitli sosyodemografik ve sportif değişkenler açısından karşılaştırmaktır. Nicel araştırma yaklaşımıyla yürütülen çalışmada ilişkisiz örneklem karşılaştırmalı betimsel bir araştırma modeli kullanılmıştır. Çalışmada elde edilen veriler, katılımcılara uygulanan Fiziksel Aktivite Ölçeği ve Algılanan Stres Ölçeği aracılığıyla toplanmış ve SPSS programında ilgili istatistiksel analizler ile değerlendirilmiştir. Araştırmaya Türkiye’den 73 ve yurtdışından 71 olmak üzere toplam 144 pickleball oyuncusu katılmıştır. Bulgular, fiziksel aktivite düzeyi puan ortalamalarının Türk ve yabancı oyuncular arasında anlamlı bir farklılık göstermediğini ortaya koymuştur. Stres düzeyi puan ortalamaları ise iki grup arasında anlamlı düzeyde farklılaşmaktadır. Fiziksel aktivite düzeyleri sosyodemografik ve sportif değişkenler (cinsiyet, pickleball oynama sıklığı, yaş, düzenli spor yapma ve pickleball oynama nedeni) açısından anlamlı bir fark göstermemektedir. Katılımcıların stres düzeyleri ise cinsiyet, oynama sıklığı ve yaş değişkenlerine göre benzerlik göstermekte; ancak düzenli spor yapma durumu ve pickleball oynama nedeni açısından anlamlı düzeyde farklılaşmaktadır. Bu sonuçlar, pickleball oyuncularının stres ve fiziksel aktivite profillerinin bazı sosyodemografik ve sportif değişkenlere göre farklılaşabildiğini göstermektedir.

**Anahtar Kelimeler:** Pickleball, Fiziksel Aktivite, Stres.

## Introduction

Sports and sporting activities remain an integral part of people's lives and of society as a whole, regardless of age. In today's modern world, the variety of sports and sporting activities is increasing. Similar to many branches of sport that we might describe as 'classic', new and different sports are emerging that appeal to a wider range of people.

Recently, pickleball has become one of the sports that people view as a means of engaging in sport and recreational activities. Pickleball is considered an activity suitable for individuals of all ages due to its balance between low physical intensity, reduced risk of injury, and ease of play. Pickleball is also highly accessible due to its inexpensive and portable equipment. In addition, pickleball combines social and recreational aspects with the potential for significant health benefits (Wang et al., 2023). Pickleball is a game created in 1965 on Bainbridge Island by Joel Pritchard together with Bill Bell and Barney McCallum. This sport idea emerged from the need to design a game that would be fun and inclusive for all members of the family. When Joel Pritchard and a successful businessman, Bill Bell, returned to Pritchard's home after playing golf on a Saturday in the city of Bainbridge, they found their families sitting around with nothing to do. They noticed that there was an old badminton court at their home. However, they could not find sufficient badminton equipment or a complete set of rackets. Thus, they began to play the game improvisationally using table tennis paddles and a perforated plastic ball (Cerezuela et al., 2023). Pickleball is a sport played on a 6.10 × 13.41-meter court with a net in the middle. It is considered a combination of tennis, badminton, and table tennis. The growth of pickleball stems from its universal appeal. In addition to its simple rules, the game is easy to play for beginners but can quickly turn into a fast-paced and competitive match for experienced players. Both young people and adults can easily be directed toward the sport (Forrester, 2020). Pickleball provides significant benefits for individuals of all ages. In particular, it is among the activities that individuals engage in to make use of their leisure time. This is because activities performed during leisure time provide psychosocial benefits to individuals. These benefits help increase individuals' life satisfaction by enhancing their level of social interaction (Ryu et al., 2018; Wray et al., 2021).

The concept of physical activity is considered to have begun with the first movement of the first human being and is accepted as an indicator of vitality, encompassing all bodily movements (Ağgön et al., 2021). The World Health Organization defines physical activity as any movement performed in daily life using the musculoskeletal system that results in energy expenditure (WHO, 2022). Another definition of physical activity is that it consists of activities carried out in daily life through the use of muscles and joints, involving energy consumption, increasing heart and respiratory rate, and resulting in fatigue at varying intensities (Orhan, 2019). Based on these

definitions, actions such as walking, moving the head or torso, and exercising or doing sports are also considered daily physical activities (Yüksek, 2022). Regular physical activity habits are important not only for maintaining individual and social health and for reducing and eliminating future health threats, but also for overcoming harmful habits, promoting socialization, protecting against various chronic diseases or supporting their treatment, enabling older adults to experience an active senile period, and improving overall quality of life (Güldür et al., 2020; Menteş et al., 2011). Besides, it has been determined that regular physical activities have positive effects on many systemic functions, lead to improvements of 10–30% in cardiovascular functions in older adults as well as in younger individuals, contribute to the reduction of cardiovascular risk factors, result in favourable improvements in insulin sensitivity without causing changes in body composition, and help reduce blood pressure in hypertensive individuals (Chrysohoou et al., 2015; Lim & Taylor, 2005).

Stress is considered one of the most complex phenomena of our time and exhibits a multidimensional structure that is difficult both to define and to explain. There are notable differences among perspectives in the literature regarding the definition of stress. Dr. Hans Selye, who introduced this concept to the literature, defined stress as “the general and non-specific response of the organism to any demand for change” (Yılmaz, 2006). In the context of sports, stress stands out as a critical factor that negatively affects athletes’ physical energy, performance goals, levels of personal satisfaction, and the pleasure and motivation they derive from sports. Psychological stress is reported to weaken athletes’ ability to display the skills they have acquired over many years and may hinder the emergence of the flow experience. This situation may pave the way for an increased risk of injury, a stronger tendency to drop out of sports, and the emergence of early retirement decisions. Although the effects of stress are often invisible, they may follow a progressive and deepening course; especially in conditions such as overtraining syndrome, symptoms of mental, emotional, social, and physical exhaustion become evident. The negative consequences of stress are not limited to athletes but are also valid for coaches, technical staff, and other sports stakeholders. For this reason, knowing and effectively applying stress management strategies is of great importance in supporting both athletes’ performance levels and the overall well-being of all actors within the sports ecosystem (Altungül, 2006). It can also be stated that physical activities are generally beneficial and are particularly effective in stress management and coping with stress.

The aim of this study is to compare the levels of physical activity and perceived stress among individuals who play pickleball in Türkiye and abroad, and to examine how these levels differ in terms of sociodemographic and sport-related variables such as gender, age, frequency of playing pickleball, regular participation in sports, and reasons for playing pickleball. The study aims to

evaluate the effects of pickleball on individuals' physical and psychological well-being from an intercultural perspective.

Although pickleball has rapidly become widespread worldwide in recent years, studies that comparatively address the effects of this sport on participation in physical activity and stress levels are limited. Comparing individuals who play pickleball in Türkiye and abroad is important in terms of revealing how the sport is perceived in different cultural contexts and how it affects individuals' psychophysiological health. This study aims to contribute scientifically to the evaluation of pickleball as a potential tool for stress management and participation in physical activity.

## **Materials and Methods**

### ***Study Model***

In the study, the levels of physical activity and perceived stress of individuals playing pickleball in Türkiye and European countries were measured, and it was examined whether these levels showed significant differences between groups in terms of sociodemographic and sport-related variables such as country, gender, age, frequency of playing pickleball, regular participation in sports, and reasons for playing pickleball. In this respect, the study is a comparative descriptive research model with independent samples, aiming to describe the current situation as it is and to compare two different groups in terms of specific variables. The comparative survey model is a quantitative research design used to compare the current status of two or more groups in terms of specific variables. In this model, the researcher aims to reveal the differences between groups by describing the existing situation as it is, without making any intervention on the variables (Karasar, 2020).

### ***Population and Sample***

The population of this study consists of adult individuals who regularly engage in pickleball in Türkiye and abroad. The population was kept broad in order to understand how pickleball is experienced in different cultural and socioeconomic contexts. The sample of the study consisted of a total of one hundred forty-four athletes, including seventy-three players who play pickleball domestically and seventy-one athletes who play abroad.

### ***Data Collection Tools***

In the study, the Physical Activity Scale and the Perceived Stress Scale were used to collect data. The Physical Activity Scale is a measurement tool developed in 2007 by Ayda Karaca and H. Hüsrev Turnagöl. This scale aims to evaluate individuals' attitudes and tendencies toward physical activity. The scale is administered using Likert-type response options and measures participants' perceptions across different dimensions such as liking physical activity, getting bored, energy, and

enjoyment. The items include both positive and negative statements; thus, participants' overall tendencies toward physical activity can be determined more accurately. The scale is widely used in evaluating physical activity behaviours, in sports and health research, and in studies related to individuals' quality of life. Reliability and validity studies have shown that the scale is a reliable measurement tool (Table 1).

The Perceived Stress Scale is a psychological measurement instrument developed in 1983 by Cohen, Kamarck, and Mermelstein. The scale aims to determine the extent to which individuals perceive situations they have experienced over the past month as stressful. The scale is based on the assumption that stress is influenced not only by the events experienced but also by how individuals perceive these events. The scale consists of 10 items and is administered using a 5-point Likert-type rating. The items are scored as 0 = Never, 1 = Rarely, 2 = Sometimes, 3 = Quite often, and 4 = Very often. Some items in the scale consist of negative statements (measuring stressful feelings), while others consist of positive statements (measuring the sense of control). Items consisting of positive statements are reverse coded during the analysis process and included in the scoring. The total score obtained from the scale is calculated by summing the scores of all items. Accordingly, the total score that can be obtained from the scale ranges between 0 and 40, and an increase in the total score indicates a higher level of perceived stress. In the reliability study of the original form of the scale, the Cronbach's Alpha coefficient was found to be 0.86. The Turkish adaptation of the scale was conducted by Bilge et al. (2007), and in this study, the Cronbach's Alpha reliability coefficient was reported as 0.81.

### **Data Analysis**

SPSS 26.0 was used to analyse the data from the questionnaires completed by the participants, and descriptive statistics, frequency tables, reliability analysis, normality tests and t-tests were performed on the data. Skewness and kurtosis values of the items in the scales in normal distribution were examined. As an indication that the data follow a normal distribution, the values for kurtosis and skewness should fall between +2.0 and -2.0 (George and Mallery, 2010). Table 1 shows the results of the normality test.

Table 1

#### Normality Test

	<b>Mean</b>	<b>Std. Dev.</b>	<b>Skewness</b>	<b>Kurtosis</b>
Physical Activity Scale	2.80	0.03	-0.79	1.62
Stress Scale	0.39	0.00	0.38	1.70

When the results of the normality test were examined, it was determined that the skewness and kurtosis coefficients of the data related to the physical activity scale and the stress scale were within acceptable limits and that the distribution exhibited normal characteristics. Therefore, parametric methods were preferred in the analysis of the data obtained from these scales; the independent samples t-test and analysis of variance (ANOVA) were used.

It is observed that the scales included in the study are measurement tools that were previously developed and whose validity and reliability have been established. However, within the scope of this study, the reliability and validity properties of the relevant scales were also re-tested on the obtained sample. In reliability analyses, the Cronbach’s alpha coefficient, which is widely used in determining internal consistency, was utilized. Cronbach’s alpha is one of the most frequently used methods for evaluating internal consistency, especially in cases where the items in a scale take more than two values (Akbulut, 2010).

Table 2

Reliability Results of the Physical Activity and Stress Scale

Scale Name	Cronbach's Alpha	Number of Items
Physical Activity	.81	8
Stress	.71	14

As shown in Table 2, the Cronbach’s alpha coefficients obtained from the reliability analyses of the physical activity and stress scales were all greater than 0.70; consequently, it was concluded that both scales are considered reliable.

### Research Ethics

The necessary permissions for this study were obtained from the ethics committee with the decision of Batman University Scientific Research and Publication Ethics Committee dated 17 April 2025 and numbered 2025/04-36. Furthermore, informed consent forms were obtained from all participants.

### Findings

Table 3

Results of the t-test for Physical Activity and Stress Levels by Nationality

	Nationality	N	$\bar{X}$	S	df	t	p
Physical Activity	Turkish	73	2.76	0.51	142	-1.34	0.18
	Foreign	71	2.85	0.40			
Stress	Turkish	73	0.40	0.03	142	3.75	0.00*
	Foreign	71	0.38	0.03			

\*=p<0.05

According to Table 3, the mean scores of participants on the Physical Activity Level Scale do not show a significant difference in terms of being Turkish or foreign players,  $t(142) = -1.34, p > .05$ . The mean scores of participants on the Stress Level Scale show a significant difference in terms of being Turkish or foreign players,  $t(142) = 3.75, p < .05$ . The stress levels of Turkish participants ( $X = 0.40$ ) are higher than those of foreign participants ( $X = 0.38$ ).

Table 4

Results of the t-test for Physical Activity and Stress Levels by Gender

	Gender	N	$\bar{X}$	S	df	t	p
Physical Activity	Female	74	2.75	0.45	142	-1.46	0.15
	Male	70	2.85	0.34			
Stress	Female	74	0.39	0.03	142	-1.00	0.32
	Male	70	0.39	0.02			

\*= $p < 0.05$

According to Table 4, there is no significant difference in the mean scores on the physical activity level scale between participants of different genders:  $t(142) = -1.46, p > 0.05$ . The stress level scale means scores of the participants do not show a significant difference in terms of gender  $t(142) = -1.00, p > .05$ .

Table 5

Descriptive Statistics of Physical Activity and Stress Levels by Age

	Age	N	$\bar{X}$	SD
Physical Activity	15-25 years	61	2.74	0.44
	26-35 years	17	2.83	0.37
	36-45 years	46	2.90	0.32
	46-56 years	20	2.82	0.44
Stress	15-25 years	20	0.39	0.03
	26-35 years	46	0.39	0.02
	36-45 years	61	0.39	0.04
	46-56 years	17	0.40	0.03

Table 5 shows that, when analysed by age, the highest average physical activity score among participants was found in the 36–45 age group ( $X = 2.90$ ), whilst the lowest average was observed in the 15–25 age group ( $X = 2.74$ ). The mean stress level scores, in terms of the age variable, are highest in the 46–56 age group ( $X = 0.39$ ), while they are the same ( $X = 0.39$ ) across the other age groups.

The results of the one-way analysis of variance (ANOVA) conducted to determine whether participants’ physical activity and stress levels differ according to the age variable are presented in Table 6.

Table 6

Results of the ANOVA Test for Physical Activity and Stress Levels by Age

	Source of Variance	Sum Squares	df	Mean Squares	F	P
Physical Activity	Between-group	0.48	3	0.16	0.99	0.40
	Within-group	22.93	140	0.16		
	Total	23.41	143			
Stress	Between-group	0.00	3	0.00	0.43	0.73
	Within-group	0.12	140	0.00		
	Total	0.12	143			

\*= $p < 0.05$

Table 6 shows that there was no statistically significant difference in students' average physical activity scores when assessed in relation to the age variable ( $p > 0.05$ ). Similarly, when stress levels were examined in relation to age, no significant difference was found ( $p > 0.05$ ).

Table 7

Descriptive Statistics of Physical Activity and Stress Levels by Frequency of Playing Pickleball

	Frequency of Playing Pickleball	N	$\bar{X}$	SD
Physical Activity	Every Day	15	2.97	0.29
	Once a week	39	2.75	0.39
	3 times a week	83	2.80	0.43
	Once a month	7	2.73	0.40
Stress	Every Day	15	0.38	0.40
	Once a week	39	0.40	0.03
	3 times a week	83	0.39	0.03
	Once a month	7	0.42	0.03

Table 7 shows that, based on the frequency of pickleball play, the highest average physical activity score was recorded for the 'every day' category ( $X=2.97$ ), whilst the lowest average was recorded for the 'once a month' category ( $X=2.73$ ). The mean stress scores were highest for the variable 'once a month' ( $X=0.42$ ) and lowest for the variable 'every day' ( $X=0.38$ ), based on the participants' frequency of playing pickleball. Table 8 shows the results of the one-way analysis of variance (ANOVA) conducted to determine whether there were differences in participants' levels of physical activity and stress according to the variable of frequency of pickleball play.

Table 8

Results of the ANOVA Test for Physical Activity and Stress Levels According to the Frequency of Playing Pickleball

	Source of Variance	Sum Squares	df	Mean Squares	F	P
Physical Activity	Between-group	0.56	3	0.19	1.14	0.33
	Within-group	22.85	140	0.16		
	Total	23.41	143			

<b>Stress</b>	Between-group	0.01	3	0.00	3.40	0.12
	Within-group	0.11	140	0.00		
	Total	0.12	143			

\*= $p < 0.05$

Table 8 shows that, when the participants' average physical activity scores were examined in relation to the variable of pickleball playing frequency, no significant difference was observed ( $p > 0.05$ ). No significant difference was observed in stress levels when analysed in relation to the variable of pickleball playing frequency ( $p > 0.05$ ).

Table 9

t-test Results for Physical Activity and Stress Levels According to the Variable of Regular Exercise

		<b>Regular Exercise Status</b>		<b>N</b>	$\bar{X}$	<b>S</b>	<b>df</b>	<b>t</b>	<b>p</b>
<b>Physical Activity</b>	Yes			124	2.81	0.41	142	0.96	0.34
	No			20	2.72	0.39			
<b>Stress</b>	Yes			124	0.39	0.03	142	-2.93	<b>0.00</b>
	No			20	0.41	0.03			

\*= $p < 0.05$

Table 9 shows that there is no significant difference in the mean scores on the physical activity level scale between participants based on the variable of regular exercise:  $t(142) = 0.96, p > 0.05$ . The mean scores on the participants' stress levels scale show a significant difference in relation to the variable of regular exercise:  $t(142) = -2.93, p < .05$ . It was found that the stress levels of those who exercise regularly ( $X=0.39$ ) were lower than those of those who do not exercise regularly ( $X=0.41$ ).

Table 10

t-test Results for Physical Activity and Stress Levels by Previous Sports Participation

		<b>Previous Sports Experience</b>		<b>N</b>	$\bar{X}$	<b>S</b>	<b>df</b>	<b>t</b>	<b>p</b>
<b>Physical Activity</b>	Yes			138	2.79	0.41	142	0.72	0.47
	No			6	2.92	0.32			
<b>Stress</b>	Yes			138	0.39	0.03	142	-0.95	0.34
	No			6	0.40	0.02			

\*= $p < 0.05$

Table 10 shows that there is no significant difference in the mean scores on the physical activity level scale between participants based on whether they had previously engaged in sport:  $t(142) = 0.72, p > 0.05$ . The mean scores on the participants' stress levels scale did not show a significant difference based on the variable of previous exercise history:  $t(142) = -0.95, p > 0.05$

Table 11

Descriptive Statistics of Physical Activity and Stress Levels by The Reason for Playing Pickleball

	The Reason for Playing Pickleball	N	$\bar{X}$	SD
Physical Activity	Enjoyment / Fun	43	2.69	0.46
	Social Environment	39	2.87	0.41
	Fitness	3	2.96	0.29
	Competition	45	2.84	0.36
	Others	14	2.80	0.31
Stress	Enjoyment / Fun	43	0.40	0.03
	Social Environment	39	0.38	0.02
	Fitness	3	0.40	0.04
	Competition	45	0.40	0.03
	Others	14	0.39	0.03

Table 11 shows that, when analysed by the variable ‘reason for playing pickleball’, the highest mean physical activity score was found for the ‘fitness’ variable ( $X = 2.96$ ), whilst the lowest mean was observed for the ‘fun’ variable ( $X = 2.69$ ). The highest average stress scores were observed for the reasons for playing pickleball related to enjoyment, fitness and competition ( $X=0.40$ ), whilst the lowest were observed for the social environment ( $X=0.38$ ).

Table 12 shows the results of the one-way analysis of variance (ANOVA) conducted to determine whether there were differences in participants’ levels of physical activity and stress according to the variable of the reason for pickleball play.

Table 12

Results of the ANOVA Test on Physical Activity and Stress Levels According to the Reason for Playing Pickleball

	Source of Variance	Sum Squares	df	Mean Squares	F	P
Physical Activity	Between-group	0.87	4	0.22	1.34	0.26
	Within-group	22.54	139	0.16		
	Total	23.41	143			
Stress	Between-group	0.01	4	0.00	3.12	0.02*
	Within-group	0.11	139	0.00		
	Total	0.12	143			

\*= $p < 0.05$

Table 12 shows that, when the participants’ average physical activity scores were examined in relation to the variable of the reason for playing pickleball, no significant difference was observed ( $p > 0.05$ ). A significant difference was observed in stress levels when analysed in relation to the variable of the reason for playing pickleball ( $p < 0.05$ ). According to the post-hoc (Tukey HSD) results, which were conducted to identify which variables showed a significant difference, the stress

levels of those who play pickleball for leisure are higher than those of players who play for social reasons, fitness, competition or other reasons. The stress levels of those who play pickleball for social reasons are lower than those of people who play for fun, fitness, competition or other reasons. The stress levels of those who play pickleball for fitness purposes are lower than those who play for fun, but higher than those who play for social reasons, competition or other reasons. The stress levels of those who play pickleball competitively are lower than those who play for fun or to keep fit, but higher than those who play for social reasons or other reasons. The stress levels of those who play pickleball for other reasons are lower than those who play for fun, fitness or competition, but higher than those who play for the social aspect.

### **Discussion and Conclusions, Recommendations**

This study aims to compare the physical activity and stress levels of participants who play pickleball in Turkey and abroad, taking various variables into account. Physical activity levels did not show any significant differences across the variables of nationality, gender, frequency of pickleball play, regular participation in sport, previous participation in sport, and pickleball play. There were no significant differences in stress levels across the variables of gender, age, frequency of pickleball plays and previous participation in sport. It was found that the significant difference exists between stress levels and the variables of nationality, regular participation in sports, and the reason for playing pickleball.

When the nationality variable of the participants is examined, no significant difference was found between Turkish and foreign participants in terms of physical activity levels. However, when stress levels were analysed, a significant difference was observed between the two groups. It was determined that Turkish participants have higher stress levels compared to foreign participants. This situation suggests that different cultural, sporting, and environmental factors may have an effect on the perception of stress. The fact that pickleball is relatively newly developing in Türkiye may indicate that athletes' access to training opportunities, competitive environments, or social support resources may be limited. These conditions may contribute to increased stress levels by raising individuals' expectations and concerns related to the sport. In addition, the literature indicates that cultural differences may influence coping strategies with stress. It is stated that individuals in different cultural contexts may differ in their tendency to use problem-focused or social support-based coping strategies. This situation can be considered as one of the possible explanations for the differences in stress levels observed among participants from different countries. However, since coping strategies were not directly measured in this study, it is not possible to reach a definitive conclusion on this issue.

There is no significant difference between the gender variable of the participants and their physical activity and stress levels. This result shows that participation in physical activity in pickleball occurs at similar levels among male and female athletes. The structural characteristics of pickleball provide equal participation opportunities for both genders. Therefore, the absence of a gender-based difference in physical activity levels is an expected outcome. This finding is important in demonstrating that pickleball is an equally accessible sport regardless of gender. The social aspects of pickleball provide participants with opportunities to cope with stress through group interaction, enjoyment, and physical activity. In this context, the equalization of stress levels between male and female participants playing pickleball can be explained by the physical and social benefits provided by the sport.

When the age variable is examined in relation to physical activity and stress levels, no significant difference was observed. This indicates that the physical and psychological effects provided by the sport do not vary depending on age. Since pickleball is a low-intensity and safe sport suitable for different age groups, it allows both young and adult participants to engage in similar levels of physical activity and manage their stress levels. The fact that age differences are not determinant on physical activity and stress supports that pickleball is an accessible and inclusive sport.

There is no significant difference between participants' physical activity and stress levels in terms of the frequency of playing pickleball. This result indicates that the physical and psychological effects of the sport occur independently of how frequently participants engage in the game. In other words, no clear difference was observed in physical activity levels and stress perception between individuals who play more frequently and those who play less frequently.

In our study, participants' physical activity and stress levels were examined in relation to the frequency of playing pickleball, and no significant difference was found. When the mean physical activity levels are considered, the highest averages were observed among those who play pickleball every day, while the lowest were observed among those who play once a month. In terms of stress levels, individuals who play pickleball every day have lower average stress levels compared to those who play once a month.

When participants' physical activity and stress levels are compared according to regular participation in sports, no significant difference was observed in physical activity levels, whereas a significant difference was found in stress levels. The mean physical activity levels were higher among those who regularly engage in sports compared to those who do not. When stress levels are examined, individuals who regularly engage in sports have lower stress levels than those who do not.

In the study, physical activity and stress levels were also compared according to prior sports participation, and no significant difference was found. However, the mean physical activity levels of those who had previously engaged in sports were lower than those who do not regularly engage in sports. In terms of stress levels, individuals who had previously engaged in sports have lower average stress levels compared to those who do not regularly engage in sports.

When participants' physical activity and stress levels are compared according to the reason for playing pickleball, no significant difference was found in physical activity levels, whereas a significant difference was observed in stress levels. The purpose of playing pickleball leads to significant differences in stress levels. Those who play for recreational purposes have higher stress levels than all other groups. Those who play for social purposes have lower stress levels compared to all other purposes. Those who play for fitness and competition have lower stress levels than those who play for recreation, but higher than those who play for social purposes. Those who play for other reasons have lower stress levels than those who play for recreation, fitness, and competition, but higher than those who play for social purposes.

Pickleball is a sport that can be considered an effective means of exercise and physical activity. Its ability to provide a moderate level of physical activity and its potential to produce positive physiological responses on physical health make this sport particularly noteworthy (Denning et al., 2023). In the study by Smith et al. (2018), it was stated that pickleball may serve as a viable alternative to traditional moderate-intensity exercise methods in terms of metabolic responses for middle-aged and older adults; it was concluded that regular participation may improve cardiovascular fitness and lead to positive changes in key cardiovascular risk factors. In this context, pickleball can be considered not only a suitable activity for the development and maintenance of physical fitness but also an important alternative form of physical activity in terms of reducing mortality risk and improving quality of life (Denning et al., 2023).

It has long been emphasized that physical activity not only supports physical health but also has a significant positive impact on mental well-being (Mahindru et al., 2023). Current findings indicate that the relationship between physical activity and mental health is shaped through various mechanisms of influence (White et al., 2024). Indeed, Román et al. (2023) revealed that each one-point increase in mental well-being is significantly associated with regular participation in at least 150 minutes of physical activity per week. Expert opinions similarly state that movement creates a reciprocal interaction between the body and mind and that an active lifestyle enhances overall well-being (Turcu & Todor, 2010).

Evidence indicating that pickleball contributes positively to mood and mental health is also steadily increasing (Butz, 2016). With its structure suitable for all age groups, this emerging sport holds significant potential for investigating its supportive effects on mental health (Cerezuela et al., 2023). Studies have shown that participation in pickleball is associated with numerous psychological benefits such as reducing stress levels, improving coping skills, enhancing concentration, establishing social connections, and improving mood (Caldarella et al., 2024).

As a result of these findings, it has been concluded that pickleball supports physical activity levels regardless of participants' nationality/country and demographic variables, and that stress levels differ significantly depending on cultural and sporting habits. This study has certain limitations. First of all, the sample of the study is limited to 144 participants who play pickleball in Türkiye and abroad. Therefore, the generalization of the findings to all pickleball players should be considered with caution. In addition, the data used in the study are based on participants' self-reports. This may lead to bias in the measurements, as the responses given by participants reflect their subjective evaluations. Furthermore, since the study was conducted using a cross-sectional design, the relationships between variables cannot be interpreted causally. In future research, it is considered that studies conducted with larger samples, covering different countries, and using longitudinal or experimental research designs where possible will provide more comprehensive contributions to the topic.

### **Recommendations**

1. Pickleball clubs and organizations can strengthen participants' social bonds and reduce stress levels by organizing socially oriented activities.
2. Short stress management trainings or mindfulness exercise programs can be developed for participants who play for recreational purposes.
3. Structures that encourage regular participation in sports and support continuity of engagement can be established; this may have a positive impact on stress management and mental health.
4. In regions such as Türkiye, where pickleball is still developing, increasing infrastructure, training, and social support opportunities can improve participants' sport experience.
5. In future research, conducting long-term and intervention-based studies will allow for a more detailed examination of the effects of motivation and reasons for playing on stress and well-being.

### **Ethics Committee Permission Information**

Ethics review board: Batman University Ethics Committee

Date of ethical approval document: 17/04/2025

Issue number of the ethical approval document: 2025/04-36

### **Authors' Contributions**

The processes related to the design of the study, sample collection, and findings were carried out by the first and second authors; the introduction, statistical analyses, and methodology were handled by the second and third authors; and the discussion and conclusion sections were conducted by the fourth and fifth authors.

### **Conflicts of Interest**

No potential conflict of interest was reported by the authors.

### **Statement of Support and Acknowledgment**

No funding was received to prepare the submitted manuscript. The authors have no relevant financial or nonfinancial interests to disclose.

### **References**

- Ağgön, E., Çakmak Yıldızhan, Y., & Ağırbaş, Ö. (2021). *Spor ve sağlık araştırmaları [Sports and health research]* (1st ed.). Akademisyen Kitabevi.
- Akbulut, Y. (2010). *Sosyal bilimlerde SPSS uygulamaları [SPSS applications in social sciences]*. İdeal Kültür Yayıncılık.
- Altungül, O. (2006). *Stress level determination under the light of personal characteristics of the people at football activities* (Master's thesis, Fırat University Institute of Social Sciences).
- Bilge, A. F., Ögce Genç, R. E., & Oran, N. T. (2009). Psychometric adequacy of the Turkish version of Perceived Stress Scale (PSS). *Ege University School of Nursing Journal*, 25(2), 61–72.
- Butz, M. Y. (2016, October 14). Pickleball has many health benefits. Retrieved January 9, 2026, from <https://www.thenorthwestern.com/story/life/2016/10/14/pickleball-has-many-health-benefits/91869824/>
- Caldarella, P., Moya, M. S., Larsen, R. A. A., Horner, J. S., & Richards, E. J. (2024). Exploring the perceived mental health benefits of pickleball for junior players: A pilot study. *Leisure/Loisir*. <https://doi.org/10.1080/14927713.2024.2332659>
- Cerezuela, J. L., Lirola, M. J., & Cangas, A. J. (2023). Pickleball and mental health in adults: A systematic review. *Frontiers in Psychology*, 14, 1137047. <https://doi.org/10.3389/fpsyg.2023.1137047>
- Chrysohoou, C., Angelis, A., Tsitsinakis, G., Spetsioti, S., Nasis, I., Tsiachris, D., Rapakoulias, P., Pitsavos, C., Koulouris, N. G., Vogiatzis, I., & Dimitris, T. (2015). Cardiovascular effects of high-intensity interval aerobic training combined with strength exercise in patients with chronic heart failure. *International Journal of Cardiology*, 179, 269–274. <https://doi.org/10.1016/j.ijcard.2014.11.067>
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24(4), 385–396. <https://doi.org/10.2307/2136404>
- Denning, W. M., Zagrodnik, J., Smith, M., & Ruden, T. (2022). Physical activity differences between walking and playing pickleball doubles. *Science & Sports*, 37(5–6), 513.e1–513.e6. <https://doi.org/10.1016/j.scispo.2022.02.002>
- Forrester, M. B. (2020). Pickleball-related injuries treated in emergency departments. *The Journal of Emergency Medicine*, 58(2), 275–279. <https://doi.org/10.1016/j.jemermed.2019.11.020>
- Güldür, B. B., Göktepe, M. M., & Özkan, A. (2020). Investigation of physical activity levels and healthy lifestyle behaviors of vocational school of health services students. *International Journal of Contemporary Educational Research*, 6(1), 112–126.

- Karasar, N. (2020). *Scientific research method* (35th ed.). Nobel Academic Publishing.
- Lim, K., & Taylor, L. (2005). Factors associated with physical activity among older people: A population-based study. *Preventive Medicine*, 40(1), 33–40. <https://doi.org/10.1016/j.ypmed.2004.04.046>
- Mahindru, A., Patil, P., & Agrawal, V. (2023). Role of physical activity on mental health and well-being: A review. *Cureus*, 15(1), e33475. <https://doi.org/10.7759/cureus.33475>
- Orhan, R. (2019). The importance of physical activity and sports in child development. *Kırıkkale University Journal of Social Sciences*, 9(1), 157–176.
- Román, J. E. I., Ekholm, O., Algren, M. H., Koyanagi, A., Stewart-Brown, S., Hall, E. E., & Santini, Z. I. (2023). Mental wellbeing and physical activity levels: A prospective cohort study. *Mental Health and Physical Activity*, 24, 100498. <https://doi.org/10.1016/j.mhpa.2023.100498>
- Ryu, J., Yang, H., Kim, A. C. H., Kim, K. M., & Heo, J. (2018). Understanding pickleball as a new leisure pursuit among older adults. *Educational Gerontology*, 44(2–3), 128–138. <https://doi.org/10.1080/03601277.2017.1401700>
- Smith, L. E., Buchanan, C. A., & Dalleck, L. C. (2018). The acute and chronic physiological responses to pickleball in middle-aged and older adults. *International Journal of Research in Exercise Physiology*, 13(2), 21–32.
- Turcu, D. M., & Todor, R. (2010). Socialization through sport: Effects of physical education and sport. *The Annals of the "Stefan cel Mare" University*, 5, 128.
- Wang, S., Chen, C. C., Chu, Y. H., Lin, H. H., Ting, K. C., & Hsu, C. H. (2023). Predicting the sustainability of pickleball competitions as a new sport from the behavioral intention of pickleball players. *Sustainability*, 15(7), 6137. <https://doi.org/10.3390/su15076137>
- White, R. L., Vella, S., Biddle, S., Sutcliffe, J., Guagliano, J. M., Uddin, R., Burgin, A., Apostolopoulos, M., Nguyen, T., Young, C., Taylor, N., Lilley, S., & Teychenne, M. (2024). Physical activity and mental health: A systematic review and best-evidence synthesis of mediation and moderation studies. *International Journal of Behavioral Nutrition and Physical Activity*, 21(1), 134. <https://doi.org/10.1186/s12966-024-01676-6>
- World Health Organization. (2011). *Noncommunicable diseases country profiles*. Retrieved January 29, 2026, from <https://www.who.int/publications/i/item/9789241502283>
- Wray, P., Ward, C. K., Nelson, C., Sulzer, S. H., Dakin, C. J., Thompson, B. J., & Bolton, D. A. (2021). Pickleball for inactive mid-life and older adults in rural Utah: A feasibility study. *International Journal of Environmental Research and Public Health*, 18(16), 8374. <https://doi.org/10.3390/ijerph18168374>
- Yılmaz, O. (2006). *The effect of stress on performance: A study on the leader personnel of the 40th Infantry Training Regiment Command* (Master's thesis, Süleyman Demirel University Institute of Social Sciences).
- Yüksek, Y. (2022). *Investigation of the effect of gamification on students' physical activity behaviors* (Doctoral dissertation, Hacettepe University Graduate School of Health Sciences).



This paper by Mediterranean Journal of Sport Science is licensed under [CC BY-NC 4.0](https://creativecommons.org/licenses/by-nc/4.0/)