Examination of the Stress and Social Phobia Levels of 13–18 Age Group Students Participating In Tennis Training

Mihraç Koroglu[1], Korkmaz Yigiter[2]

[1]Batman University, Coaching Department, Faculty of Sports Sciences, Turkey; [2]Yalova University, Department of Recreation, Faculty of Sports Sciences, Turkey.

Abstract. The aim of this study is to examine the stress and social phobia levels of 13–18 age group students receiving tennis training in terms of some variables. In this study, the relational survey model, which is one of the quantitative research designs, was used. The stress level scale and social phobia scale were used as data collection tools in the research. These questionnaires were applied to students aged 13–18 attending tennis clubs in Sakarya. The data obtained from the students were transferred to the SPSS program and descriptive statistics were applied to indicate their demographic characteristics. Mann Whitney U test and Kruskal Wallis test were used to see if there is a significant difference between stress and social phobia points of students according to age, gender, and education level. A correlation test was applied to look at the relationship between stress and social phobia levels. As a result of the study, there was no significant difference in the stress and social phobia levels of tennis players attending tennis clubs in Sakarya in terms of age, gender, and class levels (p>0,05). In addition, there was no significant relationship between the stress and social phobia levels of tennis players (p>0,05).

Key words: tennis, social phobia, stress

Introduction

Although the sport was introduced to the world with the help of English, it is not of English origin. It is derived from the Latin words dispotore and deportore, meaning "to disperse". Sports are intense efforts to improve the physical and mental health of the individual, to compete within the limits of competition according to certain rules, to feel excited, to compete and to prevail, and to increase the power of success in the real sense and to reach the highest level personally (1). Sport has a history dating back to the beginning of human history and is an indispensable phenomenon of our social life. Since the existence of humanity, human beings have been involved in sports. The primitive man of the cave age was far from the concept of sport; he ran, jumped, and had to agile his body to catch his prey. However, these movements are not defined as sports because they are not conscious, regular, and continuous (2). Sport is a tool that enables individuals to develop physically, mentally, emotionally, and socially, and develops their knowledge, skills, and leadership abilities. Sport helps people to discipline themselves and to overcome psychological and physiological problems. Sports also have positive contributions to the national economy with international friendship and peace. In addition, today's media organs' approach to sports, people's efforts to get rid of stress and keep their bodies in shape, international successes in sports have become very important in the daily life of the society and have added an important dimension to sports (3).

In recent years, significant developments have occurred in sports performance and it continues to

develop. Extraordinary degrees are achieved in every field of sports with new world records that could not be imagined in the past but are broken today. Sports scientists have studied mechanical ergonomics, physiology, statistics, and psychology. In addition, the development of new measurement tools also plays an important role. If these measurement techniques and data are used, the main purpose in performance sports will be to reach the fastest, highest and strongest (4). Tennis is a sport that requires high physical strength. A special and complete conditioning program should be prepared, especially for young and professional age groups, according to the requirements of the branch and the musculoskeletal structure of the individual athlete. Recreational tennis players can use conditioning programs to increase their level of performance, but the important thing for this group is to improve general physical fitness and prevent injuries. Tennis players in the younger age group should start with a training program that will provide physical development. This program should include physical fitness, flexibility, cardio-circulatory endurance, general strength and muscular endurance. After a solid foundation of physical fitness has been developed, young age group athletes should move on to the basic and special movements of the tennis branch and to prevent injury. Professional-level tennis players should already have a solid foundation of general physical fitness. Athletes at this level can then devote the majority of their training time to athletic physical fitness and tennis specific technical work. As it is known, anaerobic capacity is at the forefront in tennis, and coordination, agility, balance, speed and power are the most important body components (5).

The word stress comes from the Latin "estrictia". Stress was used in the 17th century in the meanings of disaster, trouble, affliction, affliction, grief, sorrow. In the 18th and 19th centuries, the meaning of the concept has changed and it has been used for objects, people, organs and spiritual structure in the meanings of power, pressure and force. Accordingly, stress has begun to be used as a resistance against the deformation and distortion of the object and person by the effect of such forces (6). As for today, stress, which has become a concept frequently used by people of all generations and is defined as the disease of contemporary

societies, is defined as "the body's reaction against any non-specific demand imposed on the body" (7). Stress is a concept that affects individuals and affects their behavior and relationships with other people. Every individual is affected by the changes in the environment, but some individuals are affected more or more slowly by these changes. Stress is related to the effect of a change in the environment in which a person lives or a change in the environment of a person. In order for stress to occur, the individual's body system must be activated by the formation of special biochemical changes in the body of the individual affected by the environment (8). According to Selye (1974), stress should not always be seen as a harmful, bad and avoidable situation. Positive stress can be considered as the events experienced in the events related to the goal that people want to achieve, such as getting promoted, gaining fame, getting married. Events related to obstacles and losses such as death, unemployment, lack of progress in the profession can also be grouped into the negative stress category. Positive stress can enable an individual to achieve their dreams. Negative stress, on the other hand, can lead the individual to experiences that he does not even want to encounter (9). The symptoms of stress are not seen in the same way in all individuals. Stress can show individual differences. If the symptoms are very frequent, the person is under stress. To control stress, the priority is to be aware of stress. What needs to be done afterward is to analyze himself physically, emotionally, mentally and socially and cope with the stressful situation in the most appropriate way by being aware of these symptoms in abnormal conditions (6).

Social Phobia is an anxiety disorder in which individuals constantly fear being disgraced in social environments where they are worried about being judged by others. People shy away from subjects or situations that require interaction with others and try to avoid these situations. They think that others will have bad words about them. They may also have great anxiety when talking to someone else. That is why they are afraid of speaking in public or creating perception due to their concerns. They cannot talk appropriately with other people. They are concerned about other people being aware of the tremors in their hands or voices. They are afraid of eating, drinking, or writing in the presence of

other people because they are afraid that the hands of people in society will be seen shaking (10). Individuals with social phobia feel bad when they are exposed to anxiety. In order not to feel worse in social situations, they start to avoid some roles they take in daily life. Thus, the troublesome situation is postponed. A student who has to make a presentation in the lesson can postpone the presentation to a later date or make an excuse even though he is prepared for the presentation. Because he is uncomfortable talking to people he does not know, he may not be able to go out without a trusted friend. In this way, the individual produces avoidance-oriented solutions to the troubled situations he is in. As the avoidance behavior gets stronger, the social anxiety situation increases, as the social anxiety continues, the avoidance behavior increases (11). The people with social fobia are usually introverted and shy. They avoid making eye contact with others and speak in low and low voices. They don't talk much unless they are asked about something. They are shy and have short answers (12).

Materials and Methods

Participants and Procedure

This research was conducted on tennis individuals (N:61) attending tennis sports clubs in Sakarya in 2020-2021. The relational screening model was used in the study. The research's purpose is to examine the stress and social phobia levels of 13-18 age group students receiving tennis training in terms of some variables. A relational screening model is a screening approach that aims to determine the existence of co-variation between two or more variables. In the relational screening model, whether the variables change together; If there is a change, it is tried to determine how it happened (13. (Karasar, 2011). It could be said that 61 participants are enough for this research because much similar research has already been completed. For example, Yigiter, (2014) investigated the effects of participation in regular exercise for 12 weeks on self-esteem and hopelessness of female students at a Turkish university (14). The current research sample group consisted of tennis players aged between 13 and 18 who attend tennis clubs in Sakarya. Our study has passed the ethics

committee with the decision dated 28/01/2021 and numbered 2021/01-37 of the Scientific Research and Publication Ethics Committee of Batman University in Turkey. The research was performed acccording to principles of the Helsinki Declaration.

Data Collection Tools and Features

Stress Level Scale

To determine the stress level of tennis players, the Stress Level Scale, which structured by Leighton, (1989) in the United States and arranged for the school-age universe, was used. The Cronbach's alpha coefficient of 20 questions related to the stress level scale assessment was found to be 0.732, and the questionnaire was found to be valid and reliable. The Cronbach's alpha coefficient of the multidimensional perceived social support scale total score was found to be 0.879; When the Cronbach's alpha coefficients of the subgroups were examined, the Cronbach's alpha coefficient of the family score was found to be 0.847, the Cronbach's alpha coefficient of the friends score was 0.928, and the Cronbach's alpha coefficient of a special person score was 0.838, and this scale was found to be valid and reliable (15). In order to determine risk groups in preventive mental health services, studies on large groups are made with situation assessment scales. Stress Level Scale is a screening technique developed to assist such situation assessments. In this questionnaire, 20 questions allow an assessment of how stressful conditions affect the person, especially physically. Negative reactions at the physical, emotional and intellectual levels in the face of stressful situations are evaluated with a triple scoring. Those who score 20-29 on the scale are considered normal in terms of stress level, while 30-35 points should be considered as the limit value in terms of stress level, and 36 and above should be considered as indicating difficulty in adjustment (16).

Social phobia scale for children and adolescents

In order to determine the social phobia level of tennis players, the Capa social phobia scale for children and adolescents was used. The scale has a high internal

consistency coefficient (Cronbach a=0.83), and the test-retest correlation in the total score is very good (r=0.82). Retest correlations of individual items range from 0.35 to 0.66 (17). The scale was prepared as a 35-question form at the first stage, and it was applied to 30 children with and without social phobia in the clinic, and it was checked whether the expression styles of the items were appropriate for the target age group. Thus, some articles have been rewritten or otherwise edited. Some of the items were removed and the number of items in the scale was reduced to 22. Five-point Likert type was preferred as scale form. The statements in which the symptoms will be investigated were created by paying attention to the basic criteria that should be considered in writing attitude statements for likert type scales (18).

Data Collection Method

A questionnaire was distributed in order to collect data in the research. scales were applied to the participants in the tennis sports club. Stress scale and social phobia scale questionnaires were used as data collection tools in the study. Participation in the research was done on a voluntary basis.

Analysis of Data

The data obtained from the collected questionnaires were transferred to the SPSS 24 program and descriptive statistics were applied to indicate the priority demographic characteristics. Mann Whitney U test and Kruskal Wallis test were used to understand whether there was a significant difference between the points of stress and social phobia according to gender, age and class. Kruskal Wallis test was applied by comparing two independent groups. In order to understand whether there is a significant relationship between stress and social phobia levels, the Correlation test was applied and the Spearman correlation coefficient was examined.

Results

The distribution of socio-demographic characteristics of the students participating in the research is given in Table 1. When the table was examined, it was seen

Table 1. Socio-Demographical Characteristics of the Students (n=61).

Category		N	%
Gender	Female	34	55.7
	Male	27	44.3
Age	13	16	26.2
	14	9	14.7
	15	10	16.4
	16	7	11.5
	17	12	19.7
	18	7	11.5
Class	8	16	26.2
	9	8	13.1
	10	14	23
	11	14	23
	12	9	14.7
Years of playing tennis	New Started	14	23
	1	9	14.7
	2	12	19.7
	3	8	13.1
	4	10	16.4
	5	8	13.1
Player in family	No	25	41
	Yes	36	59

that 55.7% (34 people) of the gender distribution of the students were girls and 44.3% (27 people) were boys.

26.2% (16 people) of the age group of the students participating in the research were 13 years old, 14.7% (9 people) were 14 years old, 16.4% (10 people) were 15 years old, 11.5% (7 people) were 16 years old, 19.7% (12 people) were 17 years old, 11.5% (7 people) were 18 years old. When the grade levels of the students participating in the research were examined, 26.2% (16 people) were 8th grade, 13.1% (8 people) were 9th grade, 23% (14 people) were 10th grade, 23% (14 people) were 11th Grade and 14.7% (9 people) in 12th Grade. Considering the years of playing tennis of the students participating in the research, 23% (14 people) just started, 14.7% (9 people) were for 1 year, 19.7% (12 people) were for 2 years, 13.1% (8 people) were for 3 years, 16.4% (10 people) were for 4 years and 13.1% (8 people) for 5 years. It was seen

that 41% (25 people) of these participants did not have a tennis player in their family, while 59% (36 people) of them got tenis player in their family.

The Mann Whitney U test was used to understand whether the stress levels of the students participating in the study showed a significant difference according to gender. Accordingly, it was seen that there was no significant difference between the stress levels of the students and their gender U=336.50, (p>0,05).

The Mann Whitney U test was used to understand whether the social phobia levels of the students participating in the study showed a significant difference according to gender. According to the test results, there was no significant difference between the social phobia levels of the students participating in the study and gender U=451.50, (p>0,05).

According to the results of the kruskal wallis test performed to understand whether there is a significant difference in the stress levels of the students according to the age groups, it was seen that the stress levels

did not show a significant difference between the age groups X^2(sd=5, N=61)=8,52, (p>0,05).

According to the results of the kruskal wallis test performed to understand whether there is a significant difference in the social phobia levels of the students according to the age groups, it was seen that the social phobia levels did not show a significant difference between the age groups X^2(sd=5, N=61)=2,30, (p>0,05).

According to the results of the kruskal wallis test, which was conducted to understand whether the stress levels of the students participating in the study differed significantly according to the classes they were, it was seen that the stress levels did not show a significant difference according to the classes X^2(sd=4, N=61)=5,92, (p>0,05).

According to the results of the Kruskal Wallis test, which was conducted to understand whether the social phobia levels of the students participating in the study differed significantly according to the classes they were, it was seen that the social phobia levels did not show a significant difference according to the classes X^2(sd=4, N=61)=2,31, (p>0,05).

Table 2. Mann Whitney U-test results of the data about stress and gender

Group	N	Median	Total Rank	U	p
Female	34	27,40	931,50		
Male	27	35,54	959,50	336,50	,072

Tablo 3. Mann Whitney U-test results of the data about social phobia and gender

Group	N	Median	Total Rank	U	p
Female	34	30,78	1046,50		
Male	27	31,28	844,50	451,50	,913

Table 4. Results of Kruskal Wallis test for comparing students' stress levels by age.

Group	N	Median	SD	X^2	p
13 Age	16	25,56			
14 Age	9	36,33			
15 Age	10	42,75	5	8,52	0,130
16 Age	7	31,71			
17 Age	12	24,46			
18 Age	7	30,29			

Table 5. Results of the Kruskal Wallis test conducted to compare students' social phobia levels by age.

Group	N	Median	SD	X^2	p
13 Age	16	36,75			
14 Age	9	29,00			
15 Age	10	30,45	5	2,30	0,806
16 Age	7	26,50			
17 Age	12	32,08			
18 Age	7	26,14			

Table 6. Results of Kruskal Wallis test for comparing students' stress levels by grade level

Group	N	Median	SD	X^2	p
8th grade	16	25,56			
9th grade	8	31,63			
10th grade	14	40,29	4	5,927	0,205
11th grade	14	27,79			
12th grade	9	30,67			

Table 7. Results of Kruskal Wallis test for comparing students' social phobia levels by grade level.

Group	N	Median	SD	X^2	p
8th grade	16	35,75			
9th grade	8	28,38			
10th grade	14	28,64	4	2,31	0,678
11th grade	14	32,46			
12th grade	9	26,28			

Table 8. Correlation between students' stress levels and social phobia levels.

			Social phobia	Stress level
Spearman's rho	Social phobia	Correlation Coefficient	1,000	,039
		Sig. (2-tailed)	.	,765
		N	61	61
	Stress level	Correlation Coefficient	,039	1,000
		Sig. (2-tailed)	,765	.
		N	61	61

There was no significant relationship between students' stress levels and social phobia levels r=0,39, (p>0,05).

Discussion

This study, designed as relational survey model which is one of the quantitative research designs, was to examine the stress and social phobia levels of 13–18 age group students receiving tennis training in terms of some variables. 34 girls and 27 boys were participated in the study voluntarily. Accordingly, results of the study showed that there was no significant difference between the stress points of the students according to gender. Also, there was no significant difference between the social phobia points of the students participating in the study according to gender. According to the results of the kruskal wallis test, the stress levels did not show a significant difference between the age groups. The social phobia levels did not show a significant difference between the age groups. Moreover, according to the results of the kruskal wallis test, it was seen that the stress levels did not show a significant difference according to the classes. The social phobia

levels did not show a significant difference according to the classes. Results of the data related to correlation showed that there was no significant relationship between students' stress levels and social phobia levels.

Many studies on the stress, social phobia and psychological variables could be found in the literature on the subject. Koroglu and Yigiter (2016), conducted a research to determine the effects of the swimming training program on stress levels of the students ages 11–13. In their research, 60 students ages 11–13 were divided into two groups as experimental and control. Results of their study showed that swimming training program was effective to reduce stress level of the students ages 11–13. They suggested that people could be encouraged to participating in swimming sports or any program including physical activity (19). Gomes at all. (2013), investigated the effect of a periodised pre-season training plan on internal training load and subsequent stress tolerance, immune-endocrine responses and physical performance in tennis players. Results of their study showed that cortisol concentration and the symptoms of stress also increased in weeks 3 and/or 4, before returning to baseline in week 5. Conversely, the testosterone to cortisol ratio decreased in weeks 3 and 4, before returning to baseline in week 5. In conclusion, the training plan evoked adaptive changes in stress tolerance and hormonal responses, which may have mediated the improvements in physical performance (20). Gowden et all., (2016), investigated the relationships between mental toughness, resilience, and stress among competitive South African tennis players. A total of 351 tennis players participate in their study. The results of their study indicated that total mental toughness was positively associated with total resilience, but negatively associated with total stress. The resilience subscales of perception of self, perception of future, social competence, and social resources, but not family cohesion, significantly predicted total mental toughness. Both total resilience and total mental toughnesssignificantly predicted total stres (21). Marks (2006), conducted a study to explore the health benefits of tennis participation in veteran players and to identify future research needs. In his study, He undertook an electronic literature search using the Ovid (Cinhal, Medline, Sport Discus) library databases from 1966–2005.

He stated that there have been research studies targeting veteran tennis players but most were cross sectional. No tennis related study successfully eliminated all confounding cross training effects. The health of veteran tennis players improved enhanced aerobic capacity, greater bone densities in specific regions, lower body fat, greater strength. Also, participants maintained reaction time performance compared to age-matched but less active controls. However, it is not certain whether tennis alone can be a sole contributor to these physiological variables (22). Fernandez et al., (2009), aimed to examine whether differences in playing level influence the activity profile and physiological demands of advanced and recreational veteran men's tennis players during an hour of tennis match play. Fernandez et al., (2009), stated physiological (i.e., cardiorespiratory responses and energy cost) and movement pattern responses during tennis match play and compared these responses in 2 groups of veteran tennis practitioners with different playing levels (i.e., recreational vs. advanced players). No significant differences between the groups were found in any of the parameters investigated. The results of their study also suggest that regular tennis play (i.e., 2-3 times per week) can satisfy the ACSM recommendations for quantity and quality of exercise for the development and maintenance of cardiovascular fitness in healthy adults, regardless of the playing ability of the participants (i.e., recreational vs. advanced players) (23). It has been stated that regular physical activity and endurance exercise in sufficient doses offrequency, duration, intensity factors improves psychological health, decreases health risks associated with various chronic disease conditions, and reduces premature death (24). (Kesaniemi et all., 2001).

Consequently, This study investigated the stress and social phobia levels of 13-18 age group students receiving tennis training in terms of some variables. Results of the study pointed out that there was no significant difference in the stress and social phobia levels of tennis players attending tennis clubs in terms of age, gender and class levels. In addition, there was no significant relationship between the stress and social phobia levels of tennis players. It could be suggested that researchers should investigate more athletes on their stress and social phobia.

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Correspondence:
Korkmaz Yigiter
Yalova University,
Department of Recreation,
Faculty of Sports Sciences, Turkey
E-mail: korkmazyigiter@gmail.com