



RESEARCH ARTICLE

The Effect of Volleyball Training on Trait Anxiety Levels of 9-12 Ages Female Students

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Abstract

The aim of this study is to determine the impact of volleyball education on the levels of trait anxiety of 9-12-year-old female students. The sample of the study is a group of 9-12-year-old girls from the Düzce Volleyball Youth and Sports Club in 2021-2022, who have just begun the sport. In total, 37 female students volunteered to participate in the study. This study is the single group pretest-posttest model, which is one of the pre-experimental models. As a data collection tool, trait anxiety Scale (CKDSE) is used developed by Spielberger (1973) to measure individual differences in children's anxiety and is the lower scale of children's State-constant anxiety inventory. As an analysis method, the Wilcoxon Signed Ranks Test was used to compare two associated samples. When the findings are analyzed, it is understood that there is a significant difference between the pre-test scores for trait anxiety and the final test scores for trait anxiety for girls attending volleyball training ($p < .05$). The results of the study are important to guide families and coaches.

Keywords

Trait Anxiety, Volleyball, Anxiety

INTRODUCTION

Anxiety can be defined as “a state of expectation about the future that upsets and bores people, a state of excitement mixed with a sense of insecurity” (Oktay & Yıldız, 2018). In addition to this definition, it can also be defined as “an emotion experienced in the face of the possibility of danger arising from the outside world or any situation that is perceived and interpreted as dangerous by the person” (Alisinanoğlu & Ulutaş, 2000).

Anxiety is a situation in which stimuli that do not normally cause fear cause various fear reactions. In other words, they are the feelings felt for a situation that has not already happened or will not happen (Köknel, 1990; as cited in İkizler, 1993). As the reaction to situations that cause anxiety or are perceived as a threat becomes

chronic, the emotion we call constant anxiety emerges. (Öner, 1994; as cited in Öztürk, 2019).

Trait anxiety is an aspect and predisposition of personality. A person with trait anxiety will react more intensely to momentary stressful situations than someone who is not (Ercan, 2013). Individuals with high trait anxiety experience higher state anxiety in challenging competitions or similar activities that require performance (Weinberg & Gould, 2019). In a study in which elite team athletes participated, it was concluded that there was a negative significant relationship between trait anxiety and self-actualization behavior (Mirzeoğlu ve Çetinkanat, 2005).

Anxiety is one of the psychological factors in athletes. The level of anxiety can negatively affect the outcome of the competition or performance (Başer, 1998; Türksoy et al., 2012).

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Excessive anxiety can cause athletes to forget some movements that they know very well and that they perform many times in training, as well as cause confusion in their emotions and make some negative movements (Gümüş, 2002). Anxiety is a serious condition that can occur in sports matches, and it is possible to prevent anxiety and increase performance with the psychological support to be given to the athlete (Sopa, 2021). According to a study in which active volleyball players between the ages of 11-13 participated; It has been revealed that the ability of athletes to cope with anxiety has a positive effect on their physical performance. In this context, it is thought that the exercise programs of the athletes as well as the training for coping with anxiety will positively affect their performance of the athletes. (Akel & Aki, 2020).

In this study, trait anxiety levels of female students in the group of students who are new to volleyball and the changes in these anxiety levels through volleyball training were examined. In the literature, there are many studies investigating the effects of volleyball training on physical properties such as physical fitness (Ersöz, Mitat, Koz, Sunay, & Gündüz, 1996), hematological and biochemical parameters (Günay, Çelik, Aksu, & Çoksevim, 2011) or motor skills (Çitak, 2019). However, it has been observed that studies addressing the psychological effects of volleyball are quite rare. This research aims to examine the effects of volleyball training given to 9-12-year-old girls on their trait anxiety levels and discuss the results in light of the literature and offer useful suggestions. The findings obtained as a result of the study are important in terms of guiding families and coaches

MATERIALS AND METHODS

This study, it is aimed to reveal the effect of volleyball training on trait anxiety levels of 9-12-year-old female students. This study is in the single-group pretest-posttest model, which is one of the pre-experimental models. In this model, measurements are made both before and after the experiment. The argument is applied to the selected group. The effect of the application on the dependent variable is examined (Karasar, 2020).

In this context, volleyball training was given to 37 female students aged 9-12, who are new to volleyball, at Düzce Volleyball Youth and Sports Club, for 12 weeks. These training were carried

out under the leadership of the 3rd level volleyball coach. The training was planned and implemented as 60 minutes, 2 days a week. Training practices were carried out in 3 stages. In the first stage, warm-up practices (stretching, jogging, ball pulling, and educational games) were made.

The second stage consists of the movements used in the basic techniques of volleyball. At this stage, the cuff pass basic position movements were explained conceptually and simply applied. In addition, gliding steps, ball picks, cuff pass on the bench, standing cuff pass, cuff pass on bosuball, cuff pass by running back and forth, cross cuff pass, control cuff pass practices, finger pass ball catch, opposing ball with finger pass in a controlled manner, finger pass studies on the wall, games including basic finger pass in the educational game were carried out.

In the third stage, educational games were played, which did not include competition and elimination, and where the participation of children was at the forefront. At the end of the educational games, the stretching movements and the evaluation of the training process were completed.

The training programs are designed in accordance with the principles from easy to difficult, from simple to complex, and from concrete to abstract. In addition, parents were not allowed to watch the training so that the children would feel more comfortable and free during the training sessions and their performance would not be affected.

This study was approved by Düzce University Scientific Research And Publication Ethics Committee (decision dated 31/03/2022 and numbered E- -78187535-640-155622). Necessary permissions were obtained from the scale owner for the use of the scale. Since the students were underage, parent consent forms were prepared and necessary permissions were obtained from the parents of the students who could participate in the research. It has been observed that the same scale has been used safely in many studies (Turan Cebeci, 2009; Deniz, Yorgancı, & Özgüven, 2009; Karakaya, Coşkun & Ağaoglu, 2006).

Participants

The universe of the research consists of 40 students who are in the 9-12 age group of Düzce Volleyball Youth and Sports Club in the year 2021-2022 and who have just started volleyball. The sample of the research consists of 9-12 age

group female students who are new to volleyball and who are in Düzce Volleyball Youth and Sports Club in 2021-2022. A total of 37 female students voluntarily participated in the research. Demographic information and percentiles of the participants are given in the table below.

Table 1. Descriptive statistics of participants

Variables	F	%	
School	Private School	18	48,6
	Public School	19	51,4
	Total	37	100,0
Number of Siblings	One Sibling	14	37,8
	Two Siblings	17	45,9
	Three Siblings	6	16,2
	Total	37	100,0

When the Table 1 is examined, it is seen that 48.6% of the participants were educated in a private school and 51.4% in a public school. It is understood that 37.8% had one sibling, 45.9% had two siblings, and 16.2% had three siblings.

Instruments and Data Collectionable

The Trait Anxiety Inventory (TCSE), a subscale of the State-Trait Anxiety Inventory in Children, developed by Spielberger (1973) to measure the individual differences in children's anxiety susceptibility, was used as a data collection tool in the study (Özusta, 1995). The Turkish validity and reliability of The Trait Anxiety Inventory (TCSE) were done by Özusta (1995). The lowest score that can be obtained from the scale is 20, and the highest score is 60. A high score on the scale indicates a high level of trait anxiety.

Analysis of Data

After data entry, trait anxiety pretest and posttest total scores were calculated. A normality test was performed to check the normality of the distributions of the data. As a result of the normality test, it was understood that the skewness and kurtosis values in the pretest scores were within +/-1 limits, but outside the +/-1 values in the posttest scores. (Skewness: 2,167; Kurtosis: 5,566). It was deemed appropriate to perform nonparametric tests when the skewness and kurtosis values were not within the limits of +/-1 (Büyüköztürk, 2017). Wilcoxon signed-rank test was used to compare two related samples from nonparametric tests. SPSS 22.0 package program was used for the analysis of the obtained data.

Table 2. Skewness and kurtosis values of the scale results

Scales	N	Sd	Skewness	Kurtosis
Pretest Total Score	37	5.93	.747	.526
Posttest Total Score	37	4.81	2.167	5.566

RESULTS

Table 3. Wilcoxon Signed Ranks Test Results of Trait Anxiety Pretest and Posttest Mean Scores

PRETEST- POSTTEST	N	Mean Rank	Sum of Ranks	Z	p
Negative Ranks	23	17.37	399.50	-3.438	.001*
Positive Ranks	7	9.36	65.50		
Ties	7				

*p<.01

When the results in Table 3 are examined, it is understood that there is a significant difference between the trait anxiety pretest scores and trait anxiety posttest scores of the girls participating in volleyball training. Based on this finding, it can be said that volleyball training reduces the trait anxiety levels of girls. (p<.05).

DISCUSSION

As a result of our research, it is understood that the trait anxiety levels of children decreased through volleyball training. This result may be due to the fact that volleyball is a sport that especially girls are interested in (Rokita, 2005; Ściślak, Rokita & Popowczak, 2013). It is thought that children's education in an area they are interested in and having a good time affects their trait anxiety levels positively. It has been concluded that the fact that the volleyball training is carried out in the company of a 3rd-level senior head coach who knows the development level of the children and prepares the program as an expert on this subject also affects this result. In addition, it is thought that the program has a positive effect on the level of anxiety due to factors such as the lack of an alternative that triggers competition, the absence of loss anxiety in children, the creation of a comfortable process in which children are not worried about making mistakes in the training environment, the absence of parents during training and not watching the children.

When the literature was examined, studies supporting our findings were found. As a result of a study, it was found that the trait anxiety levels of secondary school students who participated in badminton training for 12 weeks decreased significantly (Efek & Eryiğit, 2022). In another study, the depression and anxiety levels of individuals who participated in regular volleyball activities were positively affected compared to those who participated in irregular recreational activities (Vaccaro et al., 2021).

When the studies conducted in different branches are examined, it is understood that the findings obtained are in different directions. In a study, the state and trait anxiety levels of children aged 9-13 who are actively engaged in swimming and children who are not actively involved in sports were compared. According to the results of the study, trait anxiety levels of children who are actively engaged in swimming sports were found to be significantly higher (Karakaya, Coşkun & Ağaoğlu, 2006). According to the results of a study examining the state and trait anxiety levels of taekwondo players before the competition, it was found that the state anxiety levels of the athletes were high and their trait anxiety levels were low (Öntürk, İmamoğlu & Karacabey, 2019).

Conclusion

As a result, it was revealed that volleyball training had a positive effect on the trait anxiety levels of girls aged 9-12. In addition to girls, the effect of volleyball training on the trait anxiety levels of boys and the effect of volleyball training on trait anxiety levels of individuals in different age groups can be examined. In addition, research can be conducted on the effects of training given in different sports branches on the anxiety levels of individuals.

Conflict of interest

There is no conflict of interest between authors related to the publication of this article.

Ethical approval

This study was approved by Duzce University Scientific Research And Publication Ethics Committee (decision dated 31/03/2022 and numbered E- -78187535-640-155622).

Author Contributions

Study Design, LG, RA; Data Collection LG; Statistical Analysis, RA; Data Interpretation, RA, LG, BY; Manuscript Preparation, LG, RA, BY; Literature Search, RA, BY. All authors have read

and agreed to the published version of the manuscript.

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