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A study on state and trait anxiety level between Inter College and Inter University female Kho-kho players

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Abstract

In the present study, an attempt has been made to compare the state and trait anxiety level between inter college and inter university female Kho-kho players. Out of forty eight (48) female subjects; twenty four (24) female Kho-kho players were selected from Vidyasagar University Inter College Kho-kho tournament held on 2017 and twenty four (24) female Kho-kho players were selected from East Zone Inter University Tournament held on 2017 held at Vidyasagar University Sahid Kshudiram Bose Krirangan. Players' age range was from 19 to 25 years. In this study State and Trait Anxiety Inventory (STAI) questionnaire (Spielberger, *et al.*, 1970) ^[9] were used to measure the state and trait anxiety for both the teams. The trait and state anxiety questionnaire were distributed among the Kho-kho players two hour and one hour before the competition respectively. Sufficient explanation has been given to the players before the data collection. Descriptive statistics (mean and standard deviation) and 't' test were used to analysis the data. From the findings of the study it revealed that there was no significant difference found in trait anxiety between inter college and inter university female Kho-kho players. The findings also revealed that significant difference was found in state anxiety between inter college and inter university female Kho-kho players.

Keywords: state anxiety, trait anxiety, questionnaire

Introduction

For top class performance in any activity; body composition, physical and physiological characteristics as well as psychological attributes of sports participants are four important factors besides technical & tactical efficiency and intellectual soundness. Kho-kho is the most popular Indian traditional game, which is said to have had its origin in Akharas (the wrestling schools) and Vyayamshalas (the health and fitness clubs) in Maharashtra. The Kho-kho game is at present, becoming most popular among the indigenous activities in physical education programme in India as well as neighboring countries in South Asia. In our country the competition on Kho-kho are being held in sub-junior, junior, senior level, as well as school, college, inter varsity, inter university, and all India inter university level, occasionally attempts are being made to include this Kho-kho game in the area of competitive sports at the international level in both the sex. Top class performance of Kho-kho game demands specific physical fitness with different balance psychological aptitudes like anxiety, confidence, etc. Anxiety plays a paramount role in sports. Anxiety determines how successful he would be. Anxiety may be positive motivating force or it may interfere with successful performance in sport events. Anxiety is likely to be greater in higher competitive sports than in relatively non-competitive sports, because in the competitive sports, participants are made upon them to succeed. Anxiety is an unpleasant and aversive state, and it might have a biological significance. Spielberger (1966) ^[8] identified two kinds of anxiety, and differentiated state anxiety and trait anxiety. State anxiety reflects a transient emotional state or a condition that is characterized by subjective conscious perceived feelings of tension and apprehension, and gives rise to autonomic nervous system activity simultaneously. It may fluctuate and can vary in intensity. In contrast, trait anxiety refers to a general tendency to respond with anxiety to perceived threats in the environment. It is a relatively stable characteristic of individuals. Individuals with higher trait anxiety feel more threats in many situations than someone with lower trait anxiety.

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As regards the relationships among trait anxiety, state anxiety and performance, Eysenck (1992) [1] expressed that state anxiety is produced interactively by trait anxiety and situational stress, and then the level of performance is determined by state anxiety. The level of anxiety is reflecting the sympathetic and parasympathetic balance. Relationship of anxiety to motor performance has been well established. Research on the sport anxiety-performance relationship has posited a curvilinear relationship between physiological arousal and performance (Gould & Krane, 1992; Jones, 1995) [2, 3]. Moderate levels of arousal were generally associated with better performance, whereas arousal levels that were too high or too low led to poorer performance (Gould & Krane, 1992) [2]. The present study was an attempt to compare the state and trait anxiety level between inter college and inter university female Kho-kho players.

Purpose of the study

The purpose of the present study was to compare the state and trait anxiety level between inter college and inter university female Kho-kho players.

Significance of the study

The results of the study would help the coaches, sports psychologists and physical education teachers to understand the state and trait anxiety level of between inter college and inter university female Kho-kho players. It might be helpful to the trainees to solve and improve the optimal levels of trait and state anxiety. It would also help to monitor one's own anxiety to discriminate among them and to use this information.

Methodology

Total forty eight (48) female subjects of which twenty four (24) each group of female Kho-kho players were selected from Vidyasagar University Inter College Kho-kho tournament, 2017 and East Zone Inter University Tournament, 2017 respectively were selected for the study.

Collection of data

In this study trait and state anxiety were measured by State and Trait Anxiety Inventory (STAI, Spielberger *et al.*, 1970) [9] questionnaire. Data were collected during championship of their respective tournaments.

Table 1: Significance of differences of mean, SD, SEM, mean difference and 't' value of trait anxiety between inter college and inter university female Kho-kho players

Team	N	Mean	SD	SEM	Mean difference	t-value	S/NS
Inter College	24	45.131	2.629	0.687	1.249	1.342	NS
Inter University	24	43.882	2.162	0.583			

* Significant at 0.05 level, $t_{0.05}(46) = 2.021$

The analysis of data in Table 1 pertaining to the comparison of trait anxiety between inter college and inter university female Kho-kho players reveals that the mean (SD) of trait anxiety score 45.131 ± 2.629 of Vidyasagar University Inter College female Kho-kho players is higher than that of mean (SD) of trait anxiety score 43.882 ± 2.162 of East Zone Inter

Administration of the Test

For measuring the trait and state anxiety the State and Trait Anxiety Inventory (STAI) questionnaire were adopted. This inventory was design and developed by Spielberger, Gorsuch and Lushane (1970) [9].

Scoring of STAI

Either scale can be administered by it-self. However when both forms administered together, it is recommended that the state anxiety form to be administered first (Spielberger *et al.*, 1970) [9]. This is a self-administering inventory. There is no time limit to complete the form. In both forms some items are worded in such a way that a response of '1' indicates little anxiety or absence of anxiety and a response of '4' indicate high anxiety. The rest are worded in such a way that the level of anxiety increases gradually. For the scoring of either scale one has to add the rating given the direct items and reverse items separately and then to sub-track the sum of the direct items and to add a constant value. In trait anxiety the direct items (D.I.) are the questions of 2, 3, 4, 5, 8, 9, 11, 12, 14, 15, 17, 18, 20 and reverse items (R.I.) are 1, 6, 7, 10, 13, 16, 19 number questions. To calculate the trait anxiety count score of D.I. and R.I. Then subtract the sum of R.I. from D.I. (D.I. – R.I.) and add it a constant value that is 35. In state anxiety the direct items (D.I.) are the questions of 3, 4, 6, 7, 9, 12, 13, 14, 17, 18 and reverse items (R.I.) are 1, 2, 5, 8, 10, 11, 15, 16, 19, 20 number questions. Then subtract the sum of R.I. from D.I. (D.I. – R.I.) and add it a constant value that is 50. The score for either form (T- anxiety and S- anxiety) range from 20 to 80, the higher the score, greater is the level of anxiety.

Statistical Procedure

For the purpose of analysis of data descriptive statistics (mean, standard deviation, mean difference and SE of mean difference) and independent Sample 't' test were applied to compare the trait and state anxiety between inter college and inter university female Kho-kho players. The level of significance was set at 0.05.

Results

The scores were obtained by using the key as suggested by Spielberger *et al.*, (1970) [9]. All the individuals' trait and state anxiety test scores were used to judge the level of anxiety in table 1 and 2.

University female Kho-kho players. The mean difference of trait anxiety between two teams is 1.249. The 't'- value for testing the significance of mean differences between inter college and inter university female Kho-kho players came out to be insignificant as the calculated 't'=1.342 value is less than tabulated 't' value, $t_{.05}(46)=2.021$.

Table 2: Significance of differences of Mean, SD, SEM, mean difference and 't' Value of state anxiety between inter college and inter university female Kho-kho players

Team	N	Mean	SD	SEM	Mean difference	t-value	S/NS
Inter College	24	49.153	2.328	0.711	3.314	3.489*	S
Inter University	24	45.839	2.269	0.682			

* Significant at 0.05 level, $t_{0.05}(46) = 2.021$

The result shown in Table 2 indicates that significant difference exist in state anxiety between inter college and inter university female Kho-kho players. The mean (SD) scores of state anxiety of Inter College female Kho-kho players were 49.153 ± 2.328 , whereas East Zone Inter University female Kho-kho players were 45.839 ± 2.269 . The

mean difference of state anxiety between two teams is 3.314. The 't' value 3.489 as shown in the table 2 was found significantly higher than the table value of $t_{0.05}(46) = 2.021$ which was required to be significant at 0.05 level of significance.

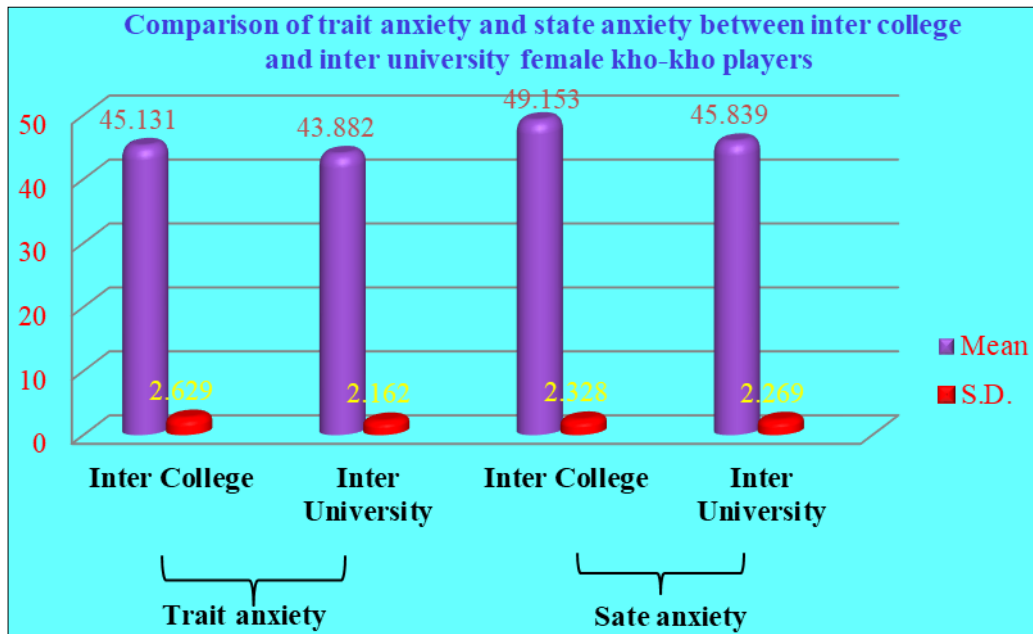


Fig 1: Graphical representation of trait anxiety and state anxiety between inter college and inter university female Kho-kho players.

Discussion of Findings

Mathur (1983) [4] reported that, anxiety is considered as a block to an activity. A person who suffers from anxiety may not be able to devote his full energy in the performance of a task. Anxiety can be classified in two ways; trait and state anxiety. State anxiety is situational stress induced by situations in the games. A sports person's autonomic nervous system is aroused in this state which is the natural reaction of any individual. On the other hand, trait anxiety can be thought of as a world view that an individual uses when coping with stress. In sports, individuals who are state anxious and low on the trait anxiety in tough situations, often deliver good performances consistently. Whereas, athletes who have higher levels of trait anxiety, added with the state anxiety, tend to perform below expectations. It is evident from the obtained mean scores of the Vidyasagar University Inter College female Kho-kho players and East Zone Inter University female Kho-kho players demonstrated moderate level trait anxiety scores. Table 1 clearly indicates that no significant difference was found in trait anxiety between inter college and inter university female Kho-kho players. Although East Zone Inter University female Kho-kho players showed slightly lower in trait anxiety than that of Vidyasagar University Inter College female Kho-kho players. Slevin (1970) [7] used Spielberger's test and showed that individuals with low levels of trait anxiety performed better in the novel skill than those who had been classified as having high levels of trait anxiety.

Table 2 clearly indicates that significant difference was found in state anxiety between inter college and inter university female Kho-kho players. The reason probably could be that East Zone Inter University female Kho-kho players has more confidence about contesting in upcoming Kho-kho contest, moderate level trait anxiety, lower level of state anxiety and also good exposure in sports than that of Vidyasagar

University Inter College female Kho-kho players. In these reasons may be the female East Zone Inter University female Kho-kho players possess in better in their fitness level as well as game related skills because they are the best selected players of a specific University team than that of Vidyasagar University Inter College female Kho-kho players. Morgan and Johnson (1978) [5] revealed that successful athletes possess higher perceived ability, greater satisfaction and a lower state of anxiety than less successful athletes.

Conclusion

It can be concluded from the above findings that Vidyasagar University Inter College female Kho-kho players showed higher value in trait anxiety than East Zone Inter University female Kho-kho players but the mean differences of both the teams statistically showed insignificant. It is further concluded that significant difference was found in state anxiety between inter college and inter university female Kho-kho players. Interuniversity female Kho-kho players showed higher value in state anxiety than Vidyasagar University Inter College female Kho-kho players. From these findings the coaches, sports psychologists and physical education teachers should be considering the psychological factors mainly while coaching their players coming from Kho-kho game in different levels as well as different games.

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