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## A comparative study of determining factors for performance and competition anxiety among Handball Players

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### Abstract

The paper covers an extensive study of the competition anxiety of handball players between offensive and defensive positions and compare them. A total of 40 subjects of inter college level handball players within the age of 18-25 years were selected randomly as subject for this study. Positional competition anxiety was studied by measuring the competition anxiety of players who played mainly in attacking and defending position and bear separate responsibility in handball match. Competition anxiety level was the criterion measure in this study. Competition anxiety was measured by Illinois Competition Anxiety Test Questionnaire (1977). Mean and standard deviation were used as descriptive statistics and t-test was computed to find out the significance between two means. All calculations were done by the standard statistical procedure. The present study considers 0.05% level of significance. The result revealed anxiety level for defensive position which was higher than that of offensive position of handball player. However, the significance of difference of competition anxiety for these two different position players in handball was not statistically significant. From above findings it can be said that there was no significant difference in the competition anxiety between defensive and attacking position of handball players.

**Keywords:** Handball players, competition anxiety, defensive and offence position player

### Introduction

Hand ball is a game where performance depends on a large number of factors. During the last decade, hand ball became a major sport. In India, it is most popular game. It is mainly played by hands. Hand ball is an indoor game and small area also. Hand ball players are generally need to be faster inside the court. One of the important psychological conditions which change the internal body state of a player is anxiety. It is a negative emotional state with feelings of worry, nervousness and apprehension that is associated with the activation of the body. It leads to stress on our body. The issue of anxiety is an important aspect of performance. Sports performance is not only a product of physiological factors and biomechanical techniques but psychological factors also play a crucial role in determining performance. Anxiety can affect performance in many ways. Whether it is during the tense moments of a championship game or amidst that dreaded history exam, anxiety affects our performance via changes in the body, which can be identified by certain indicators such as cutting nail by teeth, moving around aimlessly, headache, cold and clammy hand, constant need to urine etc. Sports-related anxiety is to be associated with psychological dysfunction and drop-outs for young athletes from sports. Han, Kim and Lee (2006) <sup>[2]</sup> speculated that anxious athletes with distorted perception would be more sensitive and irritable in competitive arenas. Competition anxiety is also a native emotional state with feeling of worry and nervousness during competition. Performance executed by different players in different position is also influence by the psychological factors. Every athlete has a certain anxiety level that is a key factor to affect his or her performance. This anxiety or stress level also depends on factors such as past experiences, coping responses and genetics. According to the Eysenck's study (1982) <sup>[1]</sup> the playing position in the team and the level of sports should be considered in research study to identify the factors influence on sports performance. The present paper studies the anxiety level of different positional players of handball in a competitive situation.

In recent research, the factor of competitive anxiety has been dissected into two segments -

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somatic and cognitive anxiety. Cognitive anxiety is characterized by negative expectations, lack of concentration, and images of failure. Somatic anxiety refers to physiological symptoms such as sweaty hands and tension and other physiologic changes. In order to chalk out optimal performance, the precursors of anxiety need to be sought out. The temporal patterning of anxiety, before, during and after competition has been receiving a lot of attention in research.

A certain level of stress is needed for optimal performance. Too little stress expresses itself in feelings of boredom and not being challenged. Several studies reported that a certain level of stress is needed for optimal performance. Competitive stress does not necessarily impair performance and can in certain circumstances enhance it. At an optimum level of stress, one gets the benefits of alertness and activation that improves performance. But even while making such statements; it is important to realize that there is currently no conclusive evidence except for the fact that stress and anxiety do have an influence in performance. The purpose of the present study was to study the competition anxiety of defensive and attacking positioned handball players and compare them.

**Materials and methods**

**Subject:** To achieve the purpose of the present study total of 40 subjects inter college level handball male players were the sample of this study. The age group of the sample was 18-25 years old boys only. The sample were selected through randomly sampling. Among them 20 were defensive position player and considered as G1 group in this study. Another 20 were attacking position player and considered as G2 group in present study.

**Criterion measure**

Competition anxiety level was the only criterion measure in this study.

**Test and Tools used**

Competition anxiety was measured by Illinois Competition Anxiety Test Questionnaire (1977).

**Statistical procedure**

Mean and standard deviation were used as descriptive statistics and t-test was computed to find out the significance of difference between two different groups. Only 0.05 level of significance was considered for the present study. All statistical calculations were done by the standard statistical software.

**Results and findings**

The mean value and standard deviation of competition anxiety of two positional players' namely defensive position (G1) and attacking position (G2) have presented in table-1. As the mean value for different groups was different the t-test was computed to find out the significance of the difference between means and result have presented in Table-2.

**Table 1:** Mean and SD of competition anxiety of G1 and G2 players in Handball

Statistical parameters	G1	G2
Mean	18.90	18.06
Standard Deviation	4.34	4.24
Number of Subjects	20	20
Statistical parameters	G1	G2

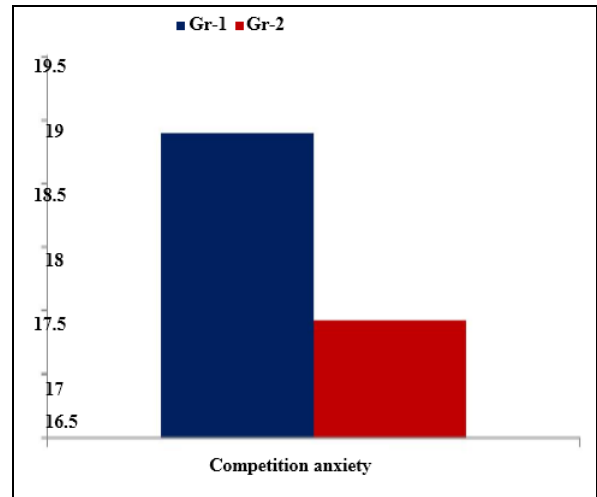
Source: Author's own computation

**Table 2:** Result of t-test for competition anxiety of G1 and G2 players in Handball

Statistical Parameters	Calculated value
Standard error of mean	4.29
Mean difference	0.84
t-value	0.619

\*Statistically insignificant

As per Table-1 the mean value of competition anxiety was found higher for G1 group and lower for G2. The result presented in graphical form in Figure-1. The result of t-test indicated that this difference in competition anxiety between two different positional players in handball was not statistically significant.



**Fig 1:** Comparison of competition anxiety of two different positional players in handball

Anxiety leads to psychological stress which affects sports performance differently. Present study found higher competition anxiety among defenders and lower for attacking players in handball. This might be due to the defending players were always anxious and worried about the opponent's attacks and they always tried to protect them to make score. The attackers were responsible to make score for their team but their responsibility was mostly related with scoring the goal not to defend it. That's why they might felt a little bit less anxiety than defenders during competition. Statistically insignificant t-value proved that all players of a team in competition felt anxiety at almost the same level. Han (2011) reported the better cognitive performances were negatively correlated with stress and anxiety. Landers, Wang and Courtet (1985) analyzed both experienced and inexperienced shooters to establish links between stress conditions and peripheral narrowing. They found that increased levels of arousal subsequently result in a narrowing of the athlete's field of attention. Han, Kim and Lee (2006) [2] found both trait and state anxieties of the 'winner' group were lower than those of the 'no winner' group. Anxiety negatively affects the sports performance which developed during the competition might be due to the fear of failure, concerns about social evaluation by others (particularly the coach and the team mates & the spectators), lack of readiness to perform, and loss of internal control over one's environment.

**Conclusion**

The competition anxiety level of the different positioned handball players was statistically insignificant, though the

defenders had comparatively higher anxiety levels than the attacking players. This high anxiety could be due to the fact that the defending players have to put a lot of mental effort to devise strategies for defending while this required mental effort is comparatively lower for the attacking players. This kind of finding calls for a special training/orientation programme formulated keeping in mind the anxiety faced by the players. Also, the idea that defending and attacking players are equally responsible for win/loss of the game should be imparted in a gentle way to all the players.

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