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## A comparative study of mental toughness Amongst volleyball and basketball players

**Dr. Anand Bhatt and Rahul Trivedi**

### Abstract

The purpose of the study was to compare the mental toughness of inter university Basketball and Volleyball players. Only male players were selected randomly from the Basketball and Volleyball, who had participated in inter university championship held at C.S.J.M.U and Lucknow University. The age of players were between 19-25 years. Mental toughness was selected as a variable. To measure the mental toughness level of Inter University Basketball and Volleyball championship, mental toughness questionnaire developed by Alan Goldberg was used. Subjects responses in respect to each question were considered as their score and tabulated for statistical analysis. Independent T-test was used to verify difference. Findings of the study revealed that Basketball players were significantly mentally tough in comparison to Volleyball players.

**Keywords:** Mental toughness, volley ball, basketball

### 1. Introduction

Competitive sports demand a high level physical ability, and at the same time, they require a sharp mental focus. In today's competitive world it is very difficult to stay mentally tough and perform under tremendous pressure. More physical and mental energy is needed and for this it is essential to be mentally tough hence mental toughness is on high demand. Player are subject to performance evaluation by coaches, manager, fellow team-mates, spectators, press and media which occur before, during and post-performance. Player are expected to make a split second judgment and accurate movement or reaction to the opponent's move, often under immense pressure and tough situation, which can have far reaching effects with games at all levels. The demands in team sports are different from that of individual sports. The nature of sports makes an individual to behave in a certain manner. In group sports like football, basketball, handball and others the nature of these sports causes the athletes to commit many fouls during competition, as a result they experience negative emotion and show problematic behavior. In contrast in individual sports, athletes depend on to their individual abilities. In individual sports, performance criteria is one dimensional while in group sports performance depends on the teammates performance. In team sports, athletes are involved with teammates and spend a lot of time practicing with teammates and have more interaction with one another, in contrast in individual sports athletes spend a lot of time alone in practicing.

Mental toughness is a critical element in Volleyball championship. However, little is known beyond the obvious basics of what constitutes mental toughness for Basketball players. Mental toughness has been described as one of the most used but least under-stood terms in applied sport psychology (Jones *et al.*, 2002) [6]. Numerous articles investigating successful sport performers have cited mental toughness as a vital component. Definitions and characteristics of mental toughness have been proposed by many authors, leading to a diverse range of positive psychological characteristics being associated with mental toughness. Unfortunately, most of the explanations have emanated from anecdotal evidence and personal accounts. This was high-lighted by Jones *et al.*, who concluded that the knowledge base regarding mental toughness lacked scientific rigor and was replete with contradiction, ambiguity, and conceptual confusion. Jones *et al.* (2002) [6]. addressed some of the conceptual weaknesses by investigating mental toughness in elite performers. These authors sought to define mental toughness and identify the attributes required to be a mentally tough performer using personal-

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construct theory as a guiding framework (cf. Kelly, 1955) [7]. The resulting definition emphasized a natural or developed construct that enabled mentally tough performers to cope with the demands of training and competing better than their opponents.

### 1.1 Mental toughness

Mental toughness is one of the psychological dimensions that is considered important in performance, achievement and excellence across many domains of life. Mental toughness is a term used throughout the sporting world it resides in common vocabulary of coaches, athletes, fan, and commentators across sporting context. With regards to sport, mental toughness is a term that coaches, athletes and sport psychology consultants use when discussing psychological factors that differentiate between successful and less successful athletes. Mental toughness is perhaps the single most valuable psychological characteristic in sports (Bull, Shambrook, James, and Brooks, 2005; Jones, Hanton, & Connaughton, 2002) [6]. For instance a mentally tough person is described as the one who is a self-oriented person and who accepts criticism and failure without getting discouraged. Reported that mentally tough people have “a high sense of self-belief and an unshakable faith that they control their own destiny, these individuals can remain relatively unaffected by competition and adversity”. Many experts propose numerous attributes to clarify the nature of mental toughness, like not letting adverse situations affect performance, rebounding from failures, possessing superior mental skills, having the ability to cope with pressure and being resilient believes that mental toughness is the one factor that mediates the mind-body connection. He also describes some of the characteristics of a mentally tough athlete, including self-motivated, positive and realistic, emotional control, calmness, being highly energetic, determined, focused, self-confident, and responsible. Mental Toughness can be described as having the psychological edge that allows athletes to reach optimal performance states regardless of obstacles or adversity. Bull *et al.*, 2005; Thelwell *et al.*, 2005) [5, 7] identified specific key psychological components that affect performance across many sports codes.

These include: self-confidence, self-motivation, attention control, hardiness and enjoyment, ability to handle pressure, resilience and quality preparation. However, some dimensions are sport-specific, such as reaction time, team cohesion and team dynamics. In other words, the context of mental toughness may be determined by the nature of a specific sport. Research suggests that mentally tough athletes may be better able to maintain an optimal mindset throughout competition handle criticism, losses, and poor performances overcome or rebound from setbacks (Jones *et al.*, 2002) [6], take personal responsibility for performance and remain calm and relaxed in high pressure situations. Additionally, the mental toughness components of confidence, anxiety management, and concentration have all been found to positively relate to athletic performance. The literature clearly shows that mental toughness is imperative for peak sport performance. All state that mental toughness is an important psychological characteristic of sport performance.

## 2. Materials and Methods

### 2.1 Method

For the present study descriptive comparative method was used. It was used to assess the mental toughness of Individual Game and Team Game players and to compare between the two groups.

### 2.2 Sampling Technique

For the present study the researcher used Quota sampling technique to select the sample from the population because the entire population for the study was not known. The Quota sampling was used so as to ensure that both contact game and non-contact game players are included in the study.

### 2.3 Population

All the players that have represented Inter University and who fall in the age group of 19 to 25 years.

### 2.4 Sample

Fifty male subjects were selected randomly from the Basketball (25) and Volleyball (25) players who had participated in inter university championship held at CSJMU and Lucknow university. The age of players ranged between 19-25 years.

**Table 1:** Distribution of Sample

Basketball	Volleyball
<b>50</b>	
25	25

### 2.5 Tools used for data collection

The mental toughness questionnaire (Dr. Allan Goldberg, 2004) was used to evaluate the mental toughness of the subjects. This questionnaire is a Free Online Resource by Dr. Goldberg. It is a sport specific questionnaire to evaluate overall mental toughness. It consists of thirty questions. The questionnaire encompasses five subscales namely rebound ability, pressure handling, confidence, concentration and motivation each consisting of six questions. The subjects had to respond by either saying True or False. Each correct answer gives one point and a wrong answer gives zero point. The score for this questionnaire ranges from zero to thirty. A score of 6 in any one of the five subscales indicates a special strength in that area. A 5 indicates solid skill and 4 or less highlights that particular area as a mental weakness that needs to be addressed. A score of 26-30 indicates strength in overall mental toughness. Scores of 23-25 indicates average to moderate skill in mental toughness. Scores of 22 or below mean that you need to start putting more time into the mental training area.

### 2.6 Procedure

To enhance the cooperation of the subjects the researcher personally met the subjects, explained the purpose of investigation and gave a clear instruction regarding the method for answering the questions. The researcher distributed the questionnaire booklet for marking the responses. The researcher in person in a face to face relationship administered the entire questionnaire. The subjects went through the instructions, read each statement carefully and indicated their responses. All the filled in questionnaires were collected from the subjects and scoring was done according to the scoring key. Usually an individual took 5 to 10 minutes in completing the test.

### 2.7 Statistical Tools

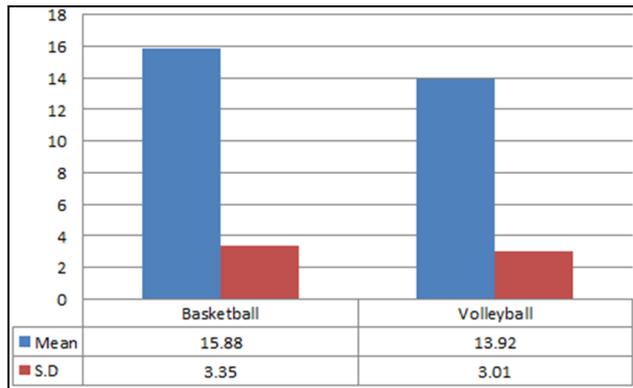
To evaluate the score of mental toughness descriptive statistics were used. The “independent sample t test” was applied to find out the significant differences between Basketball and Volleyball players. To test the hypotheses, the level of significance was set at 0.05.

### 3. Results and Discussion

**Table 2:** Comparison of Mean of Mental Toughness score of Inter University players of Basketball and Volleyball Players

Variable	Group	N	Mean	S.D	t-value
Mental Toughness	Basketball	25	15.88	3.35	2.29
	Volleyball	25	13.92	3.01	

Table 2 shows that the mean of mental toughness score of Basketball Players ( $M=15.88$ ,  $SD=3.35$ ) was significantly higher than those of Volleyball players ( $M=13.92$ ,  $SD=3.01$ ) as the obtained t-ratio ( $t=2.29$ ;  $d=48$ ) was significant beyond 0.05 level of confidence. It shows that the mean scores of the mental toughness of Basketball and Volleyball players were significantly different.



**Fig 1:** Graphical representation for Mental Toughness of Basketball and Volleyball players

### 4. Discussion and Conclusion

From the findings it was observed that the Basketball Players were more mentally tough than the Volleyball Players. On the basis of result it may be concluded that the Basketball players were more mentally tough as compared to Volleyball players.

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