



ISSN Print: 2394-7500  
ISSN Online: 2394-5869  
Impact Factor: 5.2  
IJAR 2017; 3(4): 538-541  
www.allresearchjournal.com  
Received: 15-02-2017  
Accepted: 16-03-2017

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## Assessment of mental toughness among the various sports of Madhya Pradesh players

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### Abstract

Mental toughness is the ability to consistently sustain one's ideal performance state during adversities in competition. Performing to one's potential requires good technique and mental skills. Objectives The main objective of the present study was to describe of mental toughness among various sport (Badminton, Boxing and Taekwondo) of stale level players of Jawaharlal Nehru sports Stadium, Indore. And the secondary objective of the present study was to compare the mental toughness among various sports of stale level players. Sample: For the purpose of present study total number of subjects (N=75) male Badminton, Boxing and Taekwondo players equal number of subjects from each group twenty five (25) age limit 18 to 25 years were selected from Jawaharlal Nehru sports stadium, Indore. Tools To assess mental toughness, inventory, prepared by sports psychology services & Resources: A (Dr Alan Goldberg), 2012. The inventory is highly reliable and valid. The inventory is highly reliable and valid. Scoring: A score of 26-30 indicates strength in overall mental toughness. Score of 23-25 indicates average to moderate skill in mental toughness. Score of 22 or bellow mean that you need to start putting more time into the mental training area. The total subjects were seventy five (N=75), which were various games of equal no of subject size (25). The analysis of data has been presented in this chapter. In order to compare the mental toughness of players participation in various games at state level. The descriptive statistics and analysis of variance (ANOVA) with the help of post hoc test (LSD) was used at 0.05 level of significant. To get the final result Mean, SD, Analysis Of Variance (ANOVA) Mean Difference (MD) and critical difference (CD) were calculated. Data analysis was performed using SPSS 21 software. The players participated in various games (Badminton, Boxing and Taekwondo) showed a significant difference in their Mental Toughness. Taekwondo players had the highest Mental Toughness as its mean value is high among all participated in various games. And Boxing players had the lowest Mental Toughness as its mean value is low among all participated in various games.

**Keywords:** Mental toughness, sports, Madhya Pradesh players

### Introduction

The ability to consistently perform towards the upper range of your talent and skill regardless of competitive circumstances. Having the natural or developed psychological edge that enables you to: generally, cope better than your opponents with the many demands (competition, training, and lifestyle) that sport places on a performer; specifically, be more consistent and better than your opponents in remaining determined, focused, confident, and in control under pressure.

Mental toughness is the ability to consistently sustain one's ideal performance state during adversities in competition. Performing to one's potential requires good technique and mental skills. Ups and downs in performance are often directly traceable to psychological ups and downs. Players who create a special atmosphere within them perform consistently. Mental toughness is learnt, not inherited. The ultimate measure of mental toughness is consistency.

The mentally tough competitor is self-motivated and self-directed. He/she does not need to be pushed from outside as he is controlled from within. The player is in total control of his emotions. He/she is positive and realistic about his/her goals and success. The individual is generally calm and relaxed under pressure situations. The person is also mentally alert, focused, confident and responsible for his actions. He is ready for action, usually energetic and determined.

The beginning of Badminton can be traced to the mid-1800s India, where it was created by British military officers stationed there.

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Badminton is particularly popular in the British Garrison town Poona (now Pune), the game also came to be known as Poona. The International badminton Federation (IBF) (now known as Badminton World Federation) was established in 1934 with Denmark, Canada, France, England, Ireland, Netherland, Scotland, New Zealand and Wales as its founding members. India joined as an affiliate in 1936. The BWF now governs International Badminton and develops the sport gloriously.

In 1966, International Taekwondo Federation (I.T.F.) was formed. Thus Taekwondo assumed the place of a global martial art. In 1973 World Taekwondo Federation (W.T.F.) was which effectively replaced the International Taekwondo Federation (I.T.F.). This is a sport in which the winner is decided by direct physical contact and forceful collisions between the 2 contestants, but within the rules. The age limit of this sport is from 14 to 35 years. Taekwondo is also popular in countries like Japan, China, South Korea, North Korea, India, Nepal, Bhutan, USA, Spain etc. Taekwondo has also been included in SAF games and Asian games.

A combat sport, boxing is a game in which two participants, generally of same weight, fight against each other with their fists. The game engages in during a series of one to three minute intervals called rounds and its is supervised by a referee. The evidence of first-fighting contests first appears on the ancient Sumerian, Egyptian and Minoan reliefs. Boxing as a sport was part of the ancient Olympic Games held in 688 BC. As a modern game, boxing evolved on the European soil. In the early historic period, there were instances when some king had banned the game, as they considered it an insult on God, because it disfigures the face, the image of God. For example, Theodoric the great had thoroughly banned boxing in 400 A.D.

**Objectives of the study**

1. The main objective of the present study was to describe of mental toughness among various sports (Badminton, Boxing and Taekwondo) of state level players.
2. The secondary objective of the present study was to compare the mental toughness among different sports of state level players.

**Materials and Methods**

Following methodological steps are used for the present study

**Variables**

The variable selected for this study was Mental Toughness.

**Sample**

For the purpose of present study total number of subjects (N=75) male Badminton, Boxing and Taekwondo players equal number of subjects from each group twenty five (25) age limit 18 to 25 years were selected from Jawaharlal Nehru sports stadium, Indore.

**Tools**

To assess mental toughness, inventory, prepared by sports psychology services & Resources: A (Dr Alan Goldberg), 2012. The inventory is highly reliable and valid.

**Procedure**

As per availability and convenience mental toughness Inventory prepared by Dr Alan Goldberg, was administered to selected subjects. After scoring mental toughness as per author’s manual, it was tabulated according to their respective study groups. To find out the difference in mental toughness of subjects comprising of three groups analysis of variance (ANOVA) was used.

**Overall Scoring**

A score of 26-30 indicates strength in overall mental toughness. Score of 23-25 indicates average to moderate skill in mental toughness. Score of 22 or below mean that you need to start putting more time into the mental training area.

**Statistical Procedure**

The analysis of data has been presented in this study in order to compare the mental toughness of player’s participation in various sports at state level. The descriptive statistics and analysis of variance (ANOVA) with the post hoc test (LSD) was used at 0.05 level of significant.

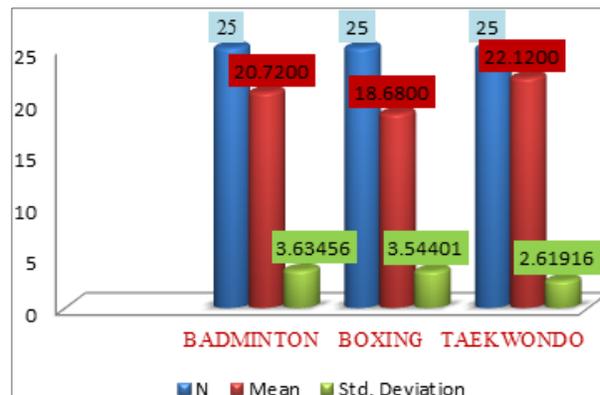
**Results and Interpretation**

The total subjects were seventy five (N=75), which were various sports. The equal number of subject twenty five (25) to get the final result Mean, SD, Analysis Of Variance (ANOVA) Mean Difference (MD) and critical difference (CD) were calculated. Data analysis was performed using SPSS 21 software.

The results pertaining to the study are present with the help of following tables and Graphs.

**Table 1:** Represents the Mean, Standard Deviation, among Badminton, Boxing and Taekwondo Players of Jawaharlal Nehru Sports Stadium, Indore, state level players of Madhya Pradesh.

Groups	N	M	SD
Badminton	25	20.72	3.63456
Boxing	25	18.68	3.54401
Taekwondo	25	22.12	2.61916
Total	75	20.50	3.55031



**Fig 1:** Graphical Representation of mean and SD mental toughness among difference sports of Badminton, Boxing and Taekwondo male Players of Jawaharlal Nehru Sports Stadium, Indore State Level players of Madhya Pradesh

**Table 2:** Analysis Of Variance (ANOVA) of Mental Toughness among Badminton, Boxing and Taekwondo Male Players of Jawaharlal Nehru Sports Stadium, Indore State Level Players

Groups	Sum Of Squares	Df	Mean Square	F	Sig.
Between Groups	149.627	2	74.813	6.878	.002
Within Groups	783.120	72	10.877		
Total	932.747	74			

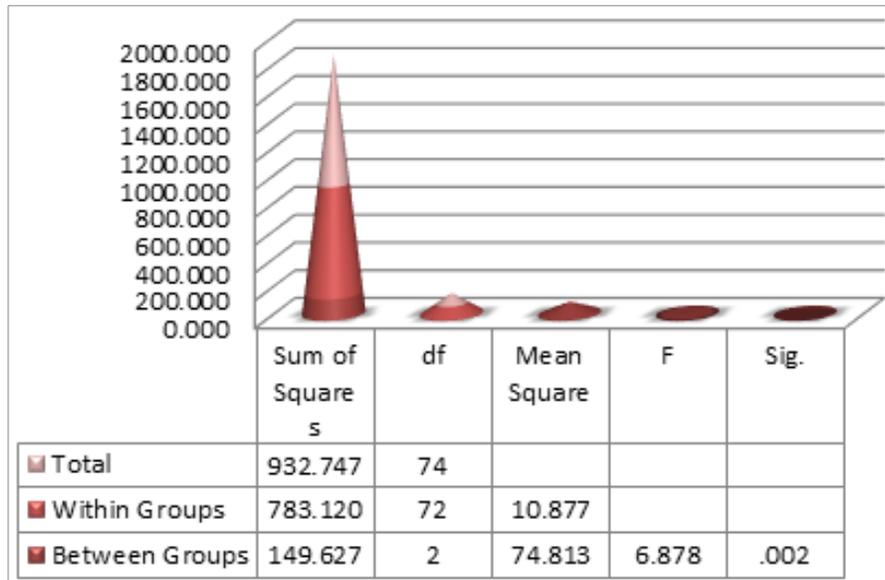
\*Significant at.05 level

Tab  $F_{0.05}$  level (2, 72) = 3.12

The obtained value of 'F' (6.878) from table-3 is statistically significant at 0.05 level.

F value is found significant because calculated value is more than tabulated value. When we compared to the Mental Toughness it is documented that there was significant

different found within the groups of state level players of Madhya Pradesh of deference sports (Badminton, Boxing and Taekwondo) male player of Jawaharlal Nehru sports stadium, Indore. The LSD post hoc test was applied, which is shown with the help of table 3.



**Fig. 2:** Graphical Representation of Analysis of Variance (ANOVA) mental toughness among difference sports of Badminton, Boxing and Taekwondo male Players of Jawaharlal Nehru Sports Stadium, Indore State Level players of Madhya Pradesh

**Multiple Comperition of Badminton, Boxing and Taekwondo**

**Table 3:** Analysis of Variance with the help of (LSD) Post Hoc Test Mean Difference (MD), Critical Difference (CD) Of Mental Toughness among Badminton, Boxing and Taekwondo Male Players of Jawaharlal Nehru Sports Stadium, Indore State Level players of Madhya Pradesh

S.N.	Badminton	Boxing	Taekwondo	MD	CD
1	20.72	18.68		2.04000*	1.8656
2	20.72		22.12	-1.40000	
3		18.68	22.12	-3.44000*	

- Table-3 reveal that the mean value of badminton players (20.72) and boxing players (18.68), boxing players were found inferior to badminton players, hence it is concluded that there is significant difference between badminton and boxing players. And badminton (20.72) and Taekwondo players (22.12), badminton players were found inferior to Taekwondo players, obtained mean difference value (MD) is (1.400). The mean of Boxing players (18.68) there was significant difference between groups, as obtained mean difference value (MD) (2.04\*) which was more than critical difference value (1.8656).

- The mean value of Boxing players (18.68) and Taekwondo players (22.12), Taekwondo players show superior to Boxing players, hence it is concluded that there is significant difference between boxing players and Taekwondo players as obtained mean difference value (MD) is (3.440) which was more than critical difference value (CD) (1.837)

**Discussion of Findings**

Analysis of the data reveals that there is a significant difference in the mental toughness of the various games of Jawaharlal Nehru sports stadium, Indore has been found in the selected significance level, which has determined that various games of mental toughness. After applying the post-hoc test (LSD test) it was found to have a significant difference in all games three (3) in their mental toughness. This is probably due to the different nature of the training components and pre-requisite for players. These results may be due to a small sample size and other factors such as different types of body, differences in body composition, etc.

**Conclusions**

- The players participated in various games (Badminton, Boxing and Taekwondo) showed a significant difference in their Mental Toughness.

2. Taekwondo players had the highest Mental Toughness as its mean value is high among all participated in various games.
3. Boxing players had the lowest Mental Toughness as its mean value is low among all participated in various games.

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