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## Mental toughness between selected outdoor and indoor games athletes

**Dr. L Santosh Singh, Sumit Kr Thapa, Dr. Mantu Baro and Dr. O Jiten Singh**

### Abstract

The present study was conducted to examine the mental toughness between selected outdoor and indoor games athletes. To obtain data for this study, the investigators had selected one hundred and twenty (N=120) male university level athletes of 19 to 25 years of age group to act as subjects. They were further divided into two groups which includes sixty (n= 60) outdoor game athletes and sixty (n=60) indoor game athletes of various games and sports. The purposive sampling technique was used to obtain the required data. To measure the level of mental toughness of the subjects, the mental toughness battery constructed by Goldberg (1998) was administered. The 't' test was applied to find out the significant differences between selected outdoor and indoor games athletes. To test the hypotheses, the level of significance was set at 0.05. The results revealed significant differences between selected outdoor and indoor games athletes on the sub-variables i.e. motivation and overall mental toughness. However, no significant differences were noticed with regard to the sub-variables i.e. reboundability, ability to handle pressure, concentration and confidence.

**Keywords:** Mental toughness, outdoor game and indoor games, athletes

### 1. Introduction

In today's competitive scenario, the sportspersons, coaches, trainers and all other concerned with sports cannot depend only on physical fitness alone, they have to indentify and determine psychological attributes which affects the performance. Research of the last two decades has made considerable progress and contributes to our understanding of the psychological and biological/ physiological components important to individual and team game athletes. Each psychological variable has its unique contribution towards sports performance but some of the variables are preferably and specifically suitable for few games. The psychological parameters such as personality traits, anxiety, self-esteem and mental toughness are among the factors that can be considered to determine psychological predictors (Anizu *et al.*, 2003). The mental toughness is utmost pre-requisite of individual and team athletes. Bull *et al.* (2005) [2] observed on the basis of research that there is also the potential for difference in mental toughness from one sports and event to the other. It is further illustrated that mental aspects affect the athlete's performance in competition. It is only when the mind gets tense then the body gets tense. The mind then is the source of our success or failure.

Mental toughness is a collection of values, attitudes, behaviors and emotions, which enable an individual to persevere and overcome any obstacle, adversity or pressure experienced, but also to maintain concentration and motivation when things are going well, to consistently produce high levels of performance.

Mental toughness is a quality of players to cope up better than your opponents and unshakeable pre service conviction towards same goal despite pressure and adversity. Jones *et al.* (2002) [8] defines that cope better than your opponents with the many demands (competition, training, and lifestyle) that sports places on a performer. Specifically be more consistent and better than your opponents in remaining determined, focused, confident, and in control under pressure. Gould *et al.* (2002) [5] examined the psychological characteristics of Olympic champions and identified mental toughness as a significant contributor to sports performance enhancement. Therefore, the present study was designed to investigate the

significant differences between selected outdoor and indoor games athletes with regards to mental toughness.

## 2. Method and Procedure

### 2.1 Sample of respondents

To obtain required data, the investigators had selected one hundred and twenty (N=120) male university level athletes of 19 to 25 years of age group to act as subjects. They were further divided into two groups which includes sixty (n= 60) outdoor game athletes and sixty (n=60) indoor game athletes of various games and sports. The purposive sampling technique was used for the collection of data. All the subjects, after having been informed about the objective and protocol of the study, gave their consent and volunteered to participate in this study.

**Table 2:** Significant differences in the Mean scores of selected outdoor and indoor games athletes on the variable mental toughness

Variables	Outdoor games		Indoor games		Mean Difference	SEDM	t-value	Sig.
	Mean	SD	Mean	SD				
Rebound ability	3.73	1.11	3.48	1.06	0.25	0.19	1.25	0.21
Ability to Handle Pressure	3.80	0.98	3.55	0.94	0.25	0.17	1.41	0.159
Concentration	3.66	1.13	3.65	1.11	0.016	0.20	0.08	0.93
Confidence	4.05	0.98	3.81	0.99	0.23	0.18	1.29	0.19
Motivation	4.01	1.06	3.38	1.01	0.63	0.18	3.34*	0.001
Overall Mental toughness	19.43	1.96	18.08	2.30	1.35	0.39	3.45*	0.008

\*Significant at 0.05 level 't' .05 (118) =2.35

### 2.4 Rebound ability

Table-2 presents the results of selected outdoor and indoor games athletes with regard to the variable mental toughness. The descriptive statistics shows the Mean and SD values of outdoor games athletes on the sub-variable rebound ability as 3.73 and 1.11 respectively. However, indoor games athletes had Mean and SD values as 3.48 and 1.06 respectively. The Mean Difference and Standard Error Difference of Mean were 0.25 and 0.19 respectively. The 't'-value 1.25 as shown in the table above was found statistically insignificant ( $P>.05$ ). But while comparing the mean values of both the groups, it has been observed that outdoor games athletes have demonstrated better rebound ability than the indoor games athletes. The comparison of mean scores of both the groups has been presented graphically in figure-1.

### 2.5 Ability to Handle Pressure

The descriptive statistics shows the Mean and SD values of outdoor games athletes on the sub-variable ability to handle pressure as 3.80 and 0.98 respectively. However, indoor games athletes had Mean and SD values as 3.55 and 0.94 respectively. The Mean Difference and Standard Error Difference of Mean were 0.25 and 0.17 respectively. The 't'-value 1.41 as shown in the table above was found statistically insignificant ( $P>.05$ ). While comparing the mean values of both the groups, it can be noticed that outdoor games athletes have exhibited better ability to handle pressure than the indoor games athletes. The comparison of mean scores of both the groups has been presented graphically in figure-1.

### 2.6 Concentration

The Mean and SD values of outdoor games athletes on the sub-variable concentration were 3.66 and 1.13 respectively. However, indoor games athletes had Mean and SD values as 3.65 and 1.11 respectively. The Mean Difference and Standard Error Difference of Mean were 0.016 and 0.20 respectively. The 't'-value 0.08 as shown in the table above was found statistically insignificant ( $P>.05$ ). When compared mean

**Table 1:** Details of selected outdoor and indoor games athletes

Sr. No	A-Outdoor game	Sample	B-Indoor game	Sample
1	Basketball	20	Badminton	20
2	Hockey	20	Table Tennis	20
3	Football	20	Gymnastic	20

### 2.2 Tools

To measure the level of mental toughness of the subjects, the mental toughness questionnaire constructed by Goldberg (1998) [4] was administered.

### 2.3 Statistical techniques

The 't' test was applied to find out the significant differences between selected outdoor and indoor games athletes. To test the hypotheses, the level of significance was set at 0.05.

values of both the groups, it can be seen that outdoor games athletes have shown better concentration than the indoor games athletes. The comparison of mean scores of both the groups has been presented graphically in figure-1.

### 2.7 Confidence

The Mean and SD values of outdoor games athletes on the sub-variable confidence were 4.05 and 0.98 respectively. However, indoor games athletes had Mean and SD values as 3.81 and 0.99 respectively. The Mean Difference and Standard Error Difference of Mean were 0.23 and 0.18 respectively. The 't'-value 1.29 as shown in the table above was found statistically insignificant ( $P>.05$ ). But while comparing the mean values of both the groups, it has been observed that outdoor games athletes have demonstrated better confidence than the indoor games athletes. The comparison of mean scores of both the groups has been presented graphically in figure-1.

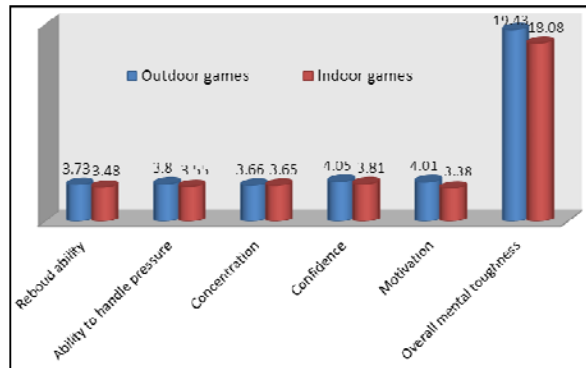
### 2.8 Motivation

The Mean and SD values of outdoor games athletes on the sub-variable motivation were 4.01 and 1.06 respectively. On the other hand indoor games athletes had Mean and SD values as 3.38 and 1.01 respectively. The Mean Difference and Standard Error Difference of mean were 0.63 and 0.18 respectively. The 't'-value 3.34 as shown in the table above was found statistically significant ( $P<.05$ ). It has been observed that outdoor games athletes have demonstrated significantly better on motivation than the indoor games athletes. The comparison of mean scores of both the groups has been presented graphically in figure-1.

### 2.9 Overall Mental Toughness

The Mean and SD values of outdoor games athletes with regard to the variable overall mental toughness were 19.43 and 1.96 respectively. However, indoor games athletes had Mean and SD values as 18.08 and 2.30 respectively. The Mean Difference and Standard Error Difference of Mean were 1.35

and 0.39 respectively. The 't'-value 3.45 as shown in the table above was found statistically significant ( $P < .05$ ). It has been observed that outdoor games athletes have demonstrated significantly better on overall mental toughness than the indoor games athletes. The comparison of mean scores of both the groups has been presented graphically in figure-1.



**Fig 1:** Graphical representation of mean scores of selected outdoor and indoor games athletes on the variables i.e. rebound ability, ability to handle pressure, concentration, confidence, motivation and overall mental toughness

### 3. Discussion

It is evident from the findings of table-2 with regard to mental toughness that significant differences have been observed on the sub-variables; motivation and overall mental toughness between selected outdoor and indoor games athletes. When compared the mean values of both the groups, it has been found that outdoor games athletes have performed significantly better on motivation and overall mental toughness. The outcome of the above results might be due to the motivational drive, successful completion, ability to accomplish the goals and mental toughness present in the outdoor games athletes that enabled them to outdo the indoor games athletes. However, no significant differences have been observed on the sub-variables; rebound ability, ability to handle pressure, concentration and confidence between selected outdoor and indoor games athletes. It can be safely surmised that both the groups equally developed on mentally bouncing back from setbacks and mistakes, ability to stay calm in the clutch, ability to focus and unshaken by setbacks and failures. But a microscopic look at these variables shows that outdoor games athletes demonstrated better mental toughness in contrast to indoor games athletes.

### 4. Conclusion

It is concluded from the above findings that significant differences were found between selected outdoor and indoor games athletes on the sub-variables i.e. motivation and overall mental toughness. However, no significant differences were noticed regarding the sub variables i.e. rebound ability, ability to handle pressure, concentration and confidence.

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