

**A COMPARATIVE STUDY OF MENTAL TOUGHNESS BETWEEN NATIONAL AND STATE LEVEL WRESTLERS****Acharya Ashutosh<sup>1</sup>, Parida Nrusingha<sup>2</sup> and Mishra Anshuman<sup>3</sup>**<sup>1</sup> Lecturer, Govt. College of Physical Education, Bhubaneswar<sup>2</sup> Sports Officer, Odisha Engineering College, Bhubaneswar<sup>3</sup> PhD Scholar, LNIPE, Gwalior

**Abstract**-The primary objective of the study was to compare mental toughness of the National and State level wrestlers. To address the objective of the study 15 National level (Male only) and 15 State level (Male only) wrestlers of Odisha state were selected as the subjects. The age group of the wrestlers ranged from 16-21 years. Mental Toughness Questionnaire (Goldberg, 1998). Results revealed statistically significant differences between the national and state level wrestlers' scores of overall Mental toughness ( $t_{0.05(28)} = 2.43 > 1.701$ ) and also significant difference was found sub-variable i.e. Motivation (3.18) but insignificant differences were found in ability to handle the pressure (1.20), concentration (1.43), confidence (1.25) and Rebound ability (1.66).

**Keywords:** Mental Toughness, National Level, State Level, Wrestling.

**I. INTRODUCTION**

Sport psychologists (researchers and practitioners), coaches, sports commentators, sports fans, and athletes acknowledge the importance of mental toughness in sporting performance (Goldberg, 1998; Hodge, 1994; Tunney, 1987; Williams, 1988). In early work on the issue, Loehr (1982, 1986) emphasized that athletes and coaches felt that at least fifty percent of success is due to psychological factors that reflect mental toughness. Similarly, Gould, Hodge, Perterson, and Petlichkoff (1987) emphasized that coaches feel that mental toughness is important in achieving success, while Norris (1999) has emphasized the importance of mental toughness in developing champion athletes.

Gould et al. (1987) expressed that some view mental toughness. The concept of mental toughness in sport has long been explored and developed (A.S. Goldberg, 1998; J.E. Loehr 1986). Both athletes and coaches admitted that at least fifty percent of the success is influenced by psychological factors that are related to mental toughness (J.E. Loehr, 1982; 1986). Some researchers also who found out that when two teams who share the same strength, skills and tendency to win, 90% of the determining factor to be the champion depends on the mental aspect (B. Gould smith, 2006).

All wrestlers have experienced pain at various levels, mentally and physically. Often they are tied together. Wrestlers must deal with countless injuries, ranging from twisted fingers to broken noses, from damaged knees to separated shoulders. No athlete who has been in the sport for long will escape an injury of some type. They come in all forms and shapes, and in various degrees of discomfort and seriousness. The objective of the present study is to compare the mental toughness of national and state level wrestlers.

**II. METHODOLOGY**

To address the objective of the study 15 National level (Male only) and 15 State level (Male only) wrestlers of Odisha state were selected as the subjects. The age group of the wrestlers ranged from 16-21 years. Purposive sampling method was used to select the subject. There was only one variable to be measured in this study and that is mental toughness. Alan Goldberg's Mental Toughness Questionnaire (Goldberg, 1998) was used as an instrument to collect relevant data from

the subjects. Alan Gold berg’s mental toughness questionnaire measures the following aspects of mental toughness

- Rebound ability
- Ability to handle pressure
- Concentration
- Confidence
- Motivation

### III. RESULTS

The objective of the present study is to compare the mental toughness of national and state level wrestlers. All the data collected were organised and were subjected to statistical analysis. For the purpose of data analysis IBM SPSS 20 software was used. To compare the significant differences between the two groups, an independent t-test was employed. For this particular study, the level of significance was fixed at 0.05.

**Table-1 Descriptive and Comparative Analysis Outcomes of the Mental Toughness Variables of State and National Level Wrestlers**

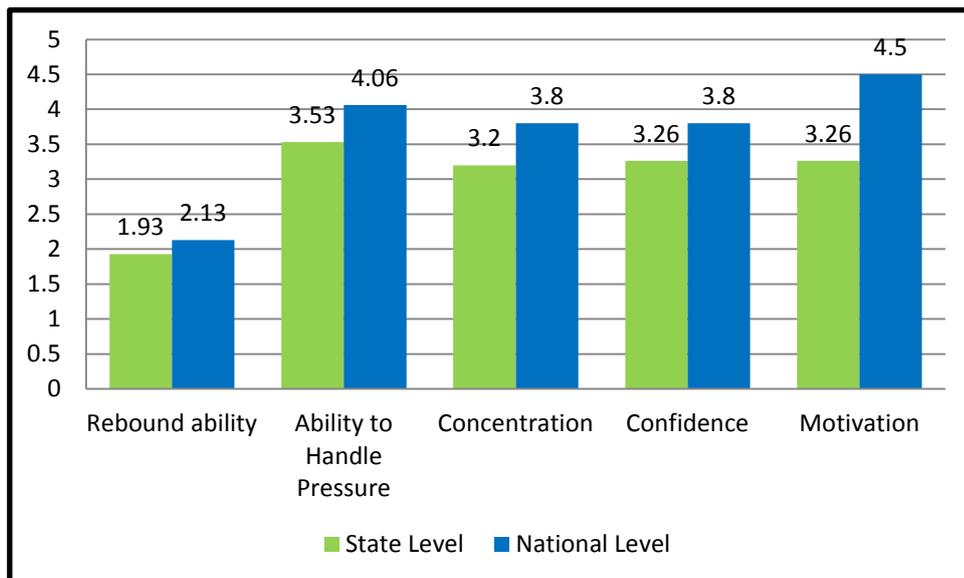
Variables	National		State Level		Mean Differences	Standard Error	t-ratio
	Mean	SD	Mean	SD			
	Rebound ability	2.13	0.95	1.93			
Ability to Handle Pressure	4.06	1.37	3.53	1.66	0.54	0.44	1.25
Concentration	3.8	1.16	1.6	0.6	0.6	0.42	1.43
Confidence	2.8	1.16	2.23	0.54	0.5	0.43	1.25
Motivation	4.47	0.96	3.26	1.23	1.2	0.08	3.18*
Overall Mental Toughness	8.26	1.29	6.26	1.84	2	0.82	3.43*

\*Significant at 0.05 level

Tabulated  $t_{0.05}(28) = 1.701$

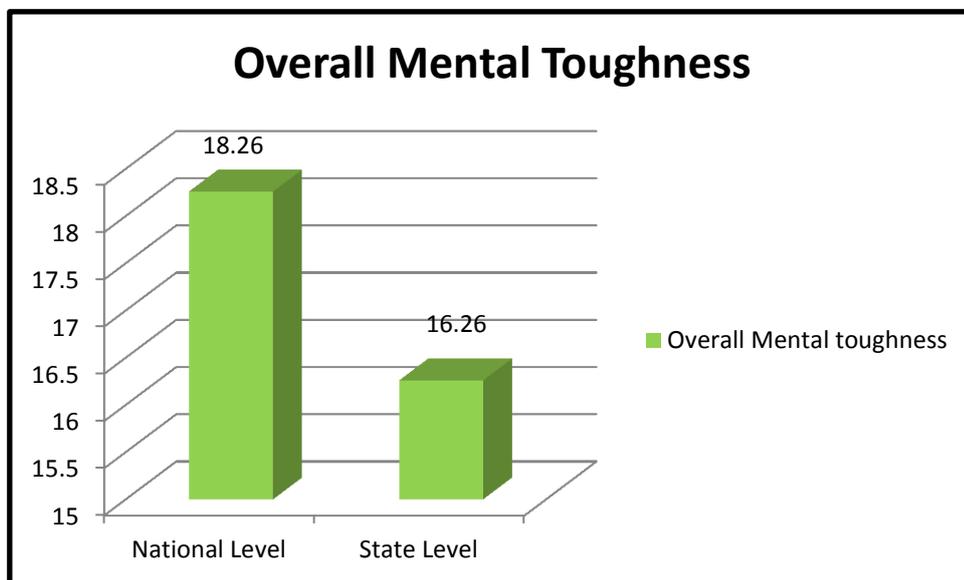
Table-1 presents the results of National level and state level wrestlers with regard to the variable mental toughness. The descriptive statistics shows the Mean value of National and state level wrestlers on the sub-variable rebound ability were  $2.13 \pm 0.95$  and  $1.93 \pm 0.99$  respectively. However, the ‘t’-value shown no significant difference between state and national level wrestlers at 0.05 level of significance. In the sub- variable of Ability to Handle Pressure the mean score of national and state level wrestlers were  $4.06 \pm 1.37$  and  $3.53 \pm 1.66$  respectively. In concentration the mean score of national and state level wrestlers were  $3.8 \pm 1.16$  and  $1.6 \pm 0.6$  respectively. The descriptive statistics shows the Mean and SD values of National level wrestlers on the sub- variable confidence as 2.8 and 1.16 respectively. However, State level wrestlers had Mean and SD values as 2.23 and 0.54 respectively. The ‘t’-value 1.25 as shown in the table above was found statistically insignificant at 0.05 level of confidence. Statistically it was shown that the Mean and SD values of National level wrestlers on the sub- variable motivation as 4.47 and 0.96 respectively. However, State level wrestlers had Mean and SD values as 3.26 and 1.23 respectively. The ‘t’-value 3.18 as shown in the table above was found statistically significant at 0.05 level of confidence.

The mean scores of national and state level wrestlers in all the sub variables of mental toughness are graphically represented in the figure 1.



**Figure-1. Graphical Representations of the Mean Scores of National Level and State Level Wrestlers on the Sub Variables of Mental Toughness**

So far as the overall mental toughness scores of national and state level wrestlers are concerned, the mean scores were  $18.26 \pm 4.29$  and  $16.26 \pm 5.84$  respectively. The 't'-value 2.43 as shown in the table above was found statistically significant at 0.05 level of confidence. National level wrestlers were found to be more mentally tough than that of their state level counterparts. The mean scores of the national and state level wrestlers in overall mental toughness score are graphically represented in figure 2.



**Figure 2. Over all mental toughness score of national and state level wrestlers.**

#### IV. DISCUSSION

It is evident from the findings of table-1 that significant differences have been observed on the overall mental toughness between the two groups and also insignificant differences have been observed on sub-variables; rebound ability, ability to handle pressure, concentration, confidence, but with regard to motivation found significant difference. When compared the mean values of the both the groups, it has been found that National level wrestlers have performed significantly better on sub

variables and over all mental toughness. The finding of above results may due to the motivational drive; similar results also found by Kuan (2007), the athletes who were mental toughness were more likely to be selected into main teams to play in crucial competition. Golby and Sheared found that mental toughness improves sport performance in athletes. He found in his study in team sports the individual has more opportunities than team athletes and they require greater effort for progress and achieving fame and that is the reason why they exhibit more mental toughness. Gould et al. (1987) indicated that coaches felt the importance of being mentally tough in achieving success in sports. The well et al. (2008) identified its attributes from single sport perspective of professional soccer players closely resemble the attributes that mental toughness investigated in those individuals who have achieved the ultimate outcome in their sports.

## V. CONCLUSION

On the basis of findings it is concluded that there was statically significant difference on over all mental toughness between National level and State level wrestlers and also found significant difference in sub-variable with regard to Motivation but insignificant differences were found on rebound ability, ability to handle pressure, concentration, confidence.

## REFERENCES

- [1] Bull, S.J., Shambrook, C.J., James, W., & Brooks, J.E. (2005). Towards an understanding of mental toughness in elite English cricketers. *Journal of Applied Sport Psychology*, 17, 209–227.
- [2] Connaughton, D., & Hanton, S. (2009). Mental toughness in sport: Conceptual and practical issues. In S.D. Mellalieu & S. Hanton (Eds.), *Advances in applied sport psychology: A review* (pp. 317–346). London: Routledge.
- [3] Connaughton, D., Hanton, S., Jones, G., & Wadey, R. (2008). Mental toughness research: Key issues in this area. *International Journal of Sport Psychology*, 39, 192–204.
- [4] Connaughton, D., Wadey, R., Hanton, S., & Jones, G. (2008). The development and maintenance of mental toughness: Perceptions of elite performers. *Journal of Sports Sciences*, 26, 83–95.
- [5] Durand-Bush, N., & Salmela, J. (2002). The development and maintenance of expert athletic performance: Perceptions of world and Olympic champions. *Journal of Applied Sport Psychology*, 14, 154–171.
- [6] Feltz, D.L., Short, S., & Sullivan, P. (2008). *Self-efficacy in sport: Research and strategies for working with athletes, teams, and coaches*. Champaign, IL: Human Kinetics.
- [7] Gould, D., Dieffenbach, K., & Moffett, A. (2002). Psychological characteristics and their development in Olympic champions. *Journal of Applied Sport Psychology*, 14, 172–204.
- [8] Gucciardi, D.F., & Gordon, S. (2008). Personal construct psychology and the research interview: The example of mental toughness in sport. *Personal Construct Theory & Practice*, 5, 118–129
- [9] Gucciardi, D.F., Gordon, D.F., & Dimmock, J.A. (2008). Towards an understanding of mental toughness in Australian Football. *Journal of Applied Sport Psychology*, 20, 261–281.
- [10] Gucciardi, D.F., Gordon, S., & Dimmock, J.A. (2009a). Advancing mental toughness research and theory using personal construct psychology. *International Review of Sport & Exercise Psychology*, 2, 54–72.
- [11] Hanton, S., Croypley, B., Miles, A., Mellalieu, S.D., & Neil, R. (2007). Experience in sport and its relationship with competitive anxiety. *International Journal of Sport and Exercise Psychology*, 5, 28–53.
- [12] Jones, G., Hanton, S., & Connaughton, D. (2002). What is this thing called Mental Toughness? An investigation with elite performers. *Journal of Applied Sport Psychology*, 14, 211–224.
- [13] Jones, G., Hanton, S., & Connaughton, D. (2007). A framework of mental toughness in the world's best performers. *The Sport Psychologist*, 21, 243–264.