



ISSN: 2456-0057
IJPNPE 2019; 4(2): 315-318
© 2019 IJPNPE
www.journalofsports.com
Received: 19-05-2019
Accepted: 21-06-2019

Tanvi Singh
Ph.D. Scholar, Department of
Physical Education and Sports,
Raksha Shakti University,
Lavad, Ta: Dahegam,
Gandhinagar, Gujarat, India

Comparative analysis among the players of selected team sports on mental toughness

Tanvi Singh

Abstract

The aim of the study was to compare mental toughness among the players of selected team sports: Football, Volleyball and Cricket. These sports were chosen on the basis of nature of sports: contact sports, noncontact sports and characteristics of both. For the purpose of the study, 60 players from Guru Gobind Singh Sports College, Lucknow were chosen: Football (N=20,) Volleyball (N=20) and Cricket (N=20).The age of the players ranges from 15 -20 years. To measure their mental toughness, Psychological Performance Inventory (PPI) developed by James E. Loehr (1986) was used. One Way Analysis of Variance (ANOVA) and LSD (Post hoc) was used as a statistical technique. The result revealed that Volleyball players were found better mental toughness skills than Cricket and Football players. On the basis of that it was concluded that the mental toughness was influenced by the nature of the sports (contact, non-contact and both).

Keywords: Mental toughness, psychological skills, contact sports, non-contact sports

1. Introduction

Psychological skills: mental toughness, goal setting, motivation, self-talk etc. are deliberate practice or pre-practice of arranging the thought process and behavioral pattern of human being. These skills considered to affect and support the sports person to improve the sports performance. Many researches in this field concluded that increased psychological demand in sports is directly associated with performance. Survey studies shows that successful athletes pose good psychological skills and coping strategy, whereas controlled studies show that the athletes who practice these skills perform well in competition and learn faster in comparison to others ^[1]. Excelling in sports is difficult because majority of people will not reach to their fullest potential. The thin line between gold medalist and non-medalist in Olympics is psychological skills, better psychological skills leads to perform well and cope better with the opponent ^[2].

A psychological skill - mental toughness works same as the theory of individual differences. It depends upon individual, type of task and the environment, it has to be executed and learned. The present study is based on this theme and attempted to put a keen observation on mental toughness of team sports players: Football, Volleyball and Cricket. After the reviewing the related literature, the research gap was found that all the studies were conducted on the similar idea and were comparing the mental toughness among the sportsmen and non-sportsmen or the comparison had been done among the team sports and the individual sports. This particular study is comparing the mental toughness among the team sports players, where nature of play is completely different. Football is a contact team sport where the opponents have the contacts with the team members whereas Volleyball is a non-contact sports in which opponents play in separate court and Cricket has different playing nature in which individual performance is equally important to win the match; it comprises of both the characteristics individual as well as team sports.

2. Materials and Methods

2.1 Participants

For the purpose of the study, 60 male players of team sports: Football, Volleyball and Cricket were selected from Guru Govind Singh Sports College, Lucknow. Each group was comprised of 20 players.

Correspondence

Tanvi Singh
Ph.D. Scholar, Department of
Physical Education and Sports,
Raksha Shakti University,
Lavad, Ta: Dahegam,
Gandhinagar, Gujarat, India

2.2 Measures

The data was collected through the administration of Psychological Performance Inventory (PPI), developed by James E. Loehr (1986) containing 42 items. Seven factors: Self-Confidence, Negative Energy, Attention Control, Visual & Imagery Control, Motivation Level, Positive Energy and Attitude Control were administered to measure the mental toughness.

2.3 Data Collection

Prior permission was taken from the concern authority of Guru Govind Singh Sports College, Lucknow and briefed them the purpose and significance of the study. The players of the selected team sports: Volleyball, Football and Cricket were called out one by one. Then the researcher explained the purpose and significance of the study to them too and asked

them to fill the consent form if they wish to be the part of research study. The questionnaires were distributed and questions were explained one by one to them. Researcher checked and ensured that all the questions were attempted by the participants.

2.4 Statistical Techniques

To find out the significant difference among the players of selected team sports on mental toughness, One Way ANOVA was applied and level of significance was set at 0.05. LSD (Post Hoc) test was used in case of significant difference was found.

3. Results

The data was represented in the following tables and graphs.

Table 1: Descriptive and Inferential Statistic of Mental Toughness among Football, Volleyball & Cricket players

Descriptive Statistics			Inferential Statics					
Variables	Group	Mean± SD	Variance	SS	Df	MSS	F-Value	Sig.
Self-Confidence	F	21.30±3.92	B	162.90	2	81.45	4.353*	.017*
	V	24.15±4.72	W	1066.5	57	18.71		
	C	20.25±4.90						
Negative Energy	F	19.50±3.98	B	96.70	2	48.35	3.277*	.045*
	V	20.50±4.45	W	840.95	57	14.75		
	C	17.45±2.92						
Attention Control	F	21.60± 3.53	B	65.10	2	32.55	3.606*	.034*
	V	19.20± 3.22	W	514.55	57	9.02		
	C	19.65± 2.05						
Visual & Imagery Control	F	21.60±4.90	B	14.63	2	7.317	.372	.689
	V	22.50±3.91	W	1114.35	57	19.55		
	C	21.35±4.39						
Motivation Level	F	22.50 ±4.33	B	172.43	2	86.21	3.875*	.026
	V	24.70±4.98	W	1268.15	57	22.248		
	C	20.55±4.80						
Positive Energy	F	21.80±5.25	B	85.30	2	42.65	1.616	.208
	V	23.55±5.24	W	1504.35	57	26.39		
	C	27.40±4.90						
Attitude Control	F	22.30±3.58	B	168.23	2	84.11	4.134*	.021*
	V	21.45±4.69	W	1159.70	57	20.34		
	C	25.35±4.89						

Abbreviations: F- Football, V- Volleyball, C- Cricket, B- Between, W- Within, SD- Standard Deviation, SS- Sum of Square, DF- Degree of Freedom, MSS- Mean Sum of Square, Sig- Significance.

The analysis presented in Table - 1, shows descriptive: mean and standard deviation and inferential statistics: One Way ANOVA. The findings of the descriptive statistics indicates that Volleyball player’s mean scores were higher in self-confidence, negative energy, motivation level whereas Football player’s mean score were higher in attention control although Cricket player’s mean score were higher in attitude

control. Inferential statistics was applied to compare the mean differences among all the three sports and P-Value was found significant on Self-Confidence, Negative Energy, Attention Control, Motivation Level, Attitude Control whereas Visual and Imagery Control and Positive Energy were found insignificant.

Table 2: Post Hoc comparison of Psychological Performance Inventory test between the players of Football, Volleyball and Cricket

Dependent Variables	Sports- 1	Sports- 2	Mean difference (1-2)	Sig.
Self Confidence	Football	Volleyball	2.805*	.042*
	Volleyball	Cricket	3.900*	.006*
Negative Energy	Volleyball	Cricket	3.050*	.015*
Attention Control	Football	Volleyball	2.400*	.014*
		Cricket	1.950*	.045*
Motivation Level	Volleyball	Cricket	4.150*	.007*
Attitude Control	Football	Cricket	3.050*	.037*
	Volleyball	Cricket	3.900*	.008*

Table- 2 represents the Post Hoc comparison among all the three sports and the significant differences were evident in all the three groups. Football and Volleyball players were found

significantly different in self-confidence and attention control. Football and Cricket players were significantly different in attention control and attitude control although Volleyball and

Cricket players were significantly different in self-confidence, negative energy, motivation level, and attitude control.

Table 3: Mental Toughness Status of Football, Volleyball and Cricket Players

Variable	Group	Mean	Status
Self-confidence	Football	21.30	Room for Improvement
	Volleyball	24.15	Room for Improvement
	Cricket	20.25	Room for Improvement
Negative energy	Football	19.5	Need Special Attention
	Volleyball	20.5	Room for Improvement
	Cricket	17.45	Need Special Attention
Attention control	Football	21.6	Room for Improvement
	Volleyball	19.2	Need Special Attention
	Cricket	19.65	Room for Improvement
Motivation level	Football	22.5	Room for Improvement
	Volleyball	24.7	Room for Improvement
	Cricket	20.55	Room for Improvement
Attitude control	Football	22.3	Room for Improvement
	Volleyball	21.45	Room for Improvement
	Cricket	25.35	Room for Improvement

*Note: Categories are divided in three group as per the norms: 26-30 = Excellent Skill, 20-25= Room for Improvement and 6-19 = Need Special attention.

Table 3 represents the status of mental toughness among all the team players. The table reveals that all the three sports players: Football, Volleyball and Cricket have some room for improvement and need to work upon. Football and cricket players need special attention to improve to reduce the negative energy, Volleyball players need special attention to improve attention control.

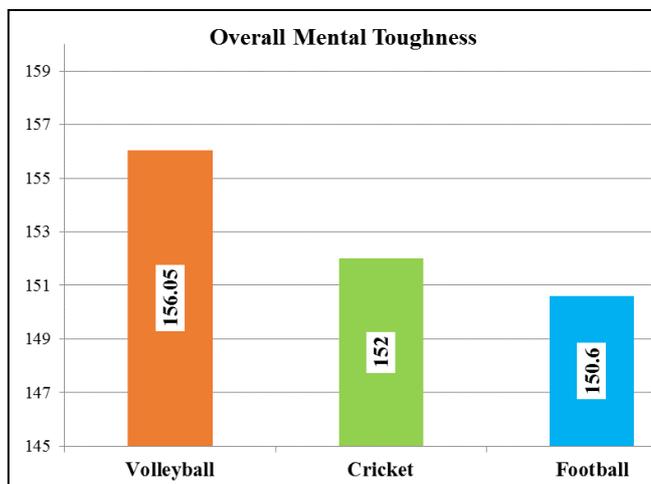


Fig 1: Graphical Representation of Overall Mental Toughness of Football, Volleyball and Cricket players

To compare overall Mental Toughness of selected team sports; it was concluded that Volleyball players; non-contact sports were having better mental toughness than Cricket players; combination of both the characteristics, followed by Football; contact sports.

4. Discussion

The purpose of the study was to compare the mental toughness of the players among different team sports: Football, Volleyball & Cricket and to analyze whether the nature of the sports differentiate mental toughness. The natures of all the three sports were different; contact, non-contact and combination of both the characteristics. On the basis of that it was assumed that there may be difference in

their mental toughness because every sports is unique in nature and requires different psychological skills^[3].

Finding of the present study showed that there was a significant difference among the players of different sports on self-confidence, negative energy, attention control, motivation level, and attitude control. There was no significant difference among the players of selected sports on visual and imagery control and positive energy.

The mean scores show that the Volleyball players poses good mental toughness in comparison to Footballers and Cricketers. Volleyball players scored high in self-confidence, negative energy, and motivation level. Volleyball is considered as a non- contact sports and the nature of the game requires the players to be self-dependent, confident and also requires that all the players work as a team. This might be the reason that mental toughness among Volleyball players were found higher, the research study in this regard already concluded that mental toughness varies according to the age, gender, sporting experience, achievement level and sports type in terms of contact and non-contact sports^[4].

However, Cricket players pose higher mental toughness in comparison to Football players and they scored high in attitude control. The reason might be the variety found in the nature of the sports; bating, fielding, and bowling. Cricket is also considered as a team sports, but it's totally dependent on the individual performance. More the individual performance, better the chances of results is expected.

Similarly, Football players' scored higher in attention control it could be due to the requirement of the game. Football is a fast and agile sport which is considered as contact sports; the field area of this game is quite huge that requires players to be more focused and good in selective attention. This could be the reason that Football players were found better in attention control in comparison to Volleyball and Cricket players^[5].

Although, it is highly required in this field that more research should be carried upon to know the exact reason why the selected team sports differentiate in terms of mental toughness as well as whether the difference found in this study equally lies among the players of international standards. The important aspect is that the drawbacks and stagnation in sports performance barrier due to psychological reasons can be broken down, if continues research in this area is executed.

5. Conclusion

The finding of the study indicates that Volleyball; non-contact sports players were having better mental toughness than Cricket and Football players. Although every sports players fall in the category of needs special attention in one variable i.e. Football and Cricket players in negative energy and Volleyball players in attention Control.

6. Acknowledgement

The author would like to express her gratitude to Dr. Nimbu R. Krishna, Assistant Professor, LNIPE, Gwalior, MP for his valuable direction and support in completing this research work. My special thanks to the staff members of Guru Govind Singh Sports College Lucknow for their support to help me in the data collection. Last but most important the participants of the study who gave their valuable time and data for this research work.

7. References

- Hardy L, Gould D, Jones G. Understanding psychological preparation for sport: theory and practice of elite performers. Chichester: Wiley, 1996.

2. Abbott A, Collins D. Eliminating the Dichotomy between Theory and Practice in Talent Identification and Development: Considering the Role of Psychology. *Journal of sports sciences*. 2004; 22(5):395-408. doi: 10.1080/02640410410001675324
3. Lowell Cooper. Athletics, Activity and Personality: A Review of the Literature, *Research Quarterly*. American Association for Health, Physical Education and Recreation, 1969: 40(1):17-22. doi: 10.1080/10671188.1969.10616637.
4. Nicholls AR, Polman RCJ, Levy AR, Backhouse SH. Mental toughness, optimism, pessimism, and coping among athletes. *Personality and individual difference*. 2008; 44(5):1182–1192. doi.10.1016/j.paid.2007.11.011
5. Hüttermann S, Memmert D, Simons DJ. The size and shape of the attentional spotlight varies with differences in sports expertise. *Journal of Experimental Psychology: Applied*. 2014; 20(2):147-157. doi: 10.1037/xap0000012.