

Comparison of Mental Toughness among Racket Sports and Combat Sports

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Abstract – Gucciardi et. al. (2009) suggest that mental toughness is more a function of environment than domains, and as such, mental toughness is potentially important in any environment that requires performance setting, challenges, and adversities. Due to vital importance of mental toughness in sports, this paper focused on the comparison of sport mental toughness among racket sports and combat sports. For this study a total of fifty (N=50) inter university players were selected, which consist of 25 each from judo and table tennis and their age ranges between 18 to 23 years. Mental toughness of the players was assessed by Mental Toughness Questionnaire (MTQ) given by Alan Heary. Which consists of four variables commitment/motivation, confidence, control under pressure and concentration and each variable consist of six statements. To determine the difference in Sport Mental Toughness level among combat sports and racket sports independent t-test was used as a statistical technique and the significant level was set at 0.05. The mean values of variables, commitment/motivation 2.88 and 3.76, concentration 2.4 and 2.6, confidence 2.44 and 2.32, control under pressure 2.52 and 2.60 respectively for table tennis players and judokas. The findings of independent t-test showed that there were significant differences between racket sports and combat sports in commitment/motivation variable but no significant difference found in other variables. As per the questionnaire scoring 88% players from total subjects were found under surviving zone and remaining 12% found under struggling zone of mental toughness.

Keywords: Sport Psychology, Mental Toughness, Table Tennis, Judo etc.

INTRODUCTION

Sports performance is not simply a product of physiology (fitness factors) and biomechanical (for example technique factors) but psychological factors also play a crucial role in determining performance. However, for optimizing his or her game every athlete has a certain stress level that is needed. That bar depends on factors such as past experiences, coping responses and genetics. Stress may be acute, episodic or chronic during sports, as in anything else in life. It is episodic for the most part in sports, whether during a competitive match between friends, or a championship game. Acute stress actually act as a challenger, if not coupled, it can progress to not only an episodic stressor that can affect one in the long term, but can also obstruct one's play.²

MENTAL TOUGHNESS

Mental toughness is a measure of individual softness and confidence that may predict success in sport, education and the workplace. As a broad thought, it developed in the setting of sports training, in the setting of a set of characteristics that permit a person

to become a better athlete and able to cope tough training and tough competitive situations and emerge without losing confidence. In recent years, the term has been commonly used by coaches, sport psychologists, sports critics, and business leaders.

There are several issues as to why a positive mentality or mental toughness is a huge supporter to success. An elite athlete must be able to handle pressure, have self-belief and avoid any lifestyle troubles. They must have that urge to win and know that they have all the abilities to do anything they desire.³

MENTAL TOUGHNESS AND SPORT

Mental toughness is commonly used conversation to any set of positive attributes that helps a person to cope with difficult situations. Coaches and sport critics freely use the term mental toughness to define the mental state of athletes who continue through difficult sport situations to succeed. In backing of this, a number of studies have associated mental toughness to sporting success or achievement. However, it is often simply applied as a default

explanation for any victory, which is highly problematic as an attribution.⁴

The term mental toughness plays a vital role in sports performance and many studies support its role in success. Table tennis and judo both are individual sports. In both games we have to face the opponent but in table tennis there is no body contact and judo is body contact game. So the researcher intended to examine mental toughness difference between these two groups.

OBJECTIVE:

To compare the mental toughness among combat sports and racket sports.

DELIMITATIONS:

1. The study was delimited to university level Judo and table tennis players.
2. The study was delimited to the subjects belonging to the age group from under 18 to 23years.
3. The study was further delimited to 50 subjects (25 table tennis and 25 judo).
4. The study was delimited on the Questionnaire of Mental Toughness prepared by Alan Heary.

LIMITATIONS:

1. Responses given by the subject on questionnaire may act as limitation of the study.
2. Daily routine, training age, individual differences and environmental factors may act as a limitation for the study.

METHODOLOGY

Selection of subjects:

For the present study purposive sampling technique was used to select the subjects. A total of fifty (N=50) inter university players, which consist of 25 each from judo and table tennis and their age range between 18 to 23 years, were selected as subjects.

Criterion measure:

Alan Heary Mental Toughness Questionnaire was used as the tool for data collection. The questionnaire measures four mental toughness variables such as commitment/motivation, concentration, control under pressure and confidence. Each variables was consist six statement and the subject had to tick that statement which he/she feels was true for him otherwise he/she was allowed to leave that statement unattempted.

Collection of data:

The researcher took permission from the concerned for the data collection and explained the questionnaire to the subjects and asked to fill their responses to the questions. The researcher clarified the doubts of the subjects regarding the questions.

Analysis of the data:

For statistical analysis of the data, descriptive statistics such as arithmetic mean (AM), Standard Deviation (SD) were calculated in order to get basic idea about the data distribution. Two sample t-test was used to find out the significance difference. Level of significance set at .05.

RESULTS:

Table1

Independent t-test of Commitment/Motivation

	N	AM	Cal. T	p-value
Table tennis	25	2.88	2.33*	0.023
Judo	25	3.76		

*at 0.05 level of significance, with 48 degree of freedom t(critical) value is 1.67

Table 1 reveals that the mean value of commitment/motivation for table tennis and judo group is 2.88 and 3.76 respectively. Since the calculated t value i.e. 2.33 is greater than the t (critical) value i.e. 1.67, at .05 level of significance with 48 degree of freedom, we conclude that there is significant difference exists between judo and table tennis players.

Table2

Independent t-test of Concentration

	N	Mean	Cal. T	p-value
Table tennis	25	2.4	0.69*	.491
Judo	25	2.6		

*at 0.05 level of significance, with 48 degree of freedom t(critical) value is 1.67

Table 2 reveals that the mean value of concentration for table tennis and judo group is 2.4 and 2.6 respectively. Since the calculated t value i.e. .69 is lesser than the t(critical) value i.e. 1.67, at .05 level of significance with 48 degree of freedom, we conclude that there is not a significant difference exists between judo and table tennis players.

Table3

Independent t-test for Confidence

	N	mean	Cal. T	P-Value
Table tennis	25	2.44	0.35*	.722
Judo	25	2.32		

*at 0.05 level of significance, with 48 degree of freedom t(critical) value is 1.67

Table 3 reveals that the mean value of confidence for table tennis and judo group is 2.44 and 2.32 respectively. Since the calculated t value i.e. .35 is lesser than the t(critical) value i.e. 1.67, at .05 level of significance with 48 degree of freedom, we conclude that there is not a significant difference exists between judo and table tennis players.

Table 4

Independent t-test for Control Under Pressure

	N	mean	Cal. T	p-value
Table tennis	25	2.52	0.23*	.818
Judo	25	2.60		

*at 0.05 level of significance, with 48 degree of freedom t(critical) value is 1.67

Table 4 reveals that the mean value of control under pressure for table tennis and judo group is 2.52 and 2.60 respectively. Since the calculated t value i.e. .23 is lesser than the t(critical) value i.e. 1.67, at .05 level of significance with 48 degree of freedom, we conclude that there is not a significant difference exists between judo and table tennis players.

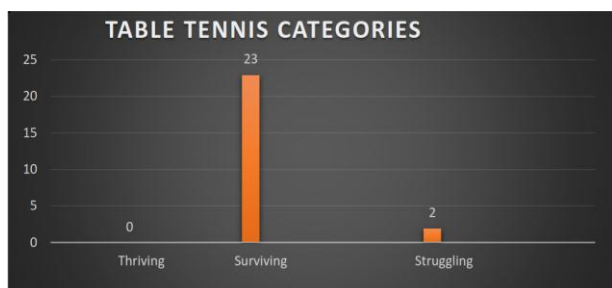


Fig1: Table Tennis Players Scoring Zone

Figure 1 reveals that out of 25 table tennis players 23 players were found to be in surviving zone and 2 players were found to be in struggling zone.

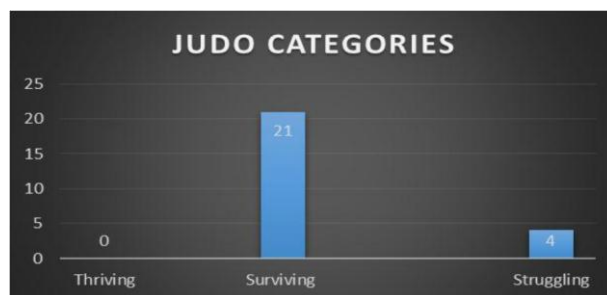


Fig2: Judo Players Scoring Zone

Figure 2 reveals that out of 25 judokas 21 judokas were found to be in surviving zone and 4 judokas were found to be in struggling zone.

DISCUSSION:

Table -1 shows that there was significant difference in commitment/motivation between judo and table tennis players. Table 2, 3 and 4 shows that there was no significant difference in confidence, concentration and control under pressure between table tennis and judo sports. Based on Mental Toughness Questionnaire given by Alan Heary, total the score for the questionnaire 0-4 will come under thriving zone, 5-14 will come under surviving zone and 15-24 will come under struggling zone. Figure 1 shows that 92% of Table tennis players were scored in under surviving zone and remaining 8% were in struggling zone. Figure 2 shows that 84% of judokas were found to be in surviving zone and 16% were in struggling zone.

CONCLUSION:

On the basis of result it can be concluded that there was significance difference in commitment/motivation variable of judo and table tennis players. No significance difference exist between concentration, confidence, control under pressure variable of judo and table tennis players. The reason of significance difference between motivation/commitment may be because judo is a contact game and table tennis is non-contact sport. In judo players may be anxious because of opponent physique which ultimately loosen their motivation. Most of the players from both the sports are appearing in surviving zone means they are not likely performing at their best very often. In order to reach their highest goals, they need to improve their mental skill through the mental skill training. Mental skill training helps the players to overcome their mental weakness so they can give their best in competition.

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