

## A COMPARATIVE STUDY OF MENTAL TOUGHNESS OF MEDALIST AND NON-MEDALIST JUDOKAS

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### ABSTRACT

The purpose of the study was to compare Mental Toughness of Male and Female (Medalist and Non-Medalist)Judokas. Sixty six Male Judokas (33 medalist, 33 non- medalist) and Forty four Female Judokas (21 medalist, 21 non-medalist) was selected randomly during the Senior National Judo Championship held at Vishakhapatnam (A.P) in 2019 and All India Inter University Judo Tournament held at Punjab University Chandigarh in 2018 and Guru Nanak Dev University Amritsar in 2018. The age of the subjects were ranged from 16 to 37 years. Sports Mental Toughness Questionnaire(Sheard et al. 2009) was used as an instrument for measuring the Mental Toughness of Judokas. The statistical technique applied in order to examine the hypothesis (There is no significant difference between male medalist and non-medalist judoka and no significance difference between female medalist and female non-medalist judoka) of the study was Descriptive statistics such as Mean and Standard Deviation and t ratio measured to analyzed the dataand level of significance was set at 0.05. The results indicated insignificant difference between male medalist and non-medalist judoka on confidence, control sub factor of mental toughness. Where as in case of constancy another sub factor the difference was significant. The female medalist and non-medalist judokas did not differ significantly on any of the sub factors of mental toughness.

**Keywords:** Mental Toughness, Medalist, Non-Medalist, Judokas.

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## 1.INTRODUCTION

Mental toughness allows athletes to perform at their full potential under pressure, while also remaining calm and being able to bounce back from obstacles and mistakes. Mental toughness is often defined as one of the most important psychological characteristics that support the success of athletes (Cowden R. 2017).

Mental Toughness can be described as providing the link between peak performance and stress management, because you can't operate to the best of your abilities unless you deal effectively with stressors and challenge.

Mental toughness is when you, your body, the competition, nature, or the environment has the best of you so that you're physically tapped out and need to figure out how to pull something out of yourself not in a robotic way—in a way that's mentally aware and engaged. It's not just the ability to keep moving but to keep doing it in a way that's engaged and competitive in the environment you're in, whether that's competing against the clock or other human beings. It's easy when you feel good physically. It's when that physicality leaves you. I think of mental toughness as your ability to deal with pain and to process it. It's your body's ability and your mind's ability—mostly your mind's. Mental toughness could be the ability to get out of your body what your body is capable of that day.

Mental toughness is a factor that helps individuals pull through difficult situations and successfully overcome threatening conditions (Jomhari, 2002 as cited in Rostami and Mohammadi (2015). In elite sports competitions where high performance exists, there are not many factors as important as mental toughness in achieving competitive advantage and success. (Gucciard 2017).

At the beginning judo was learnt as a self-defence martial arts technique. So it is quite clear that most of its actions are to hurt other person, but after that, suitable modifications were made so then after students can learn this art without hurting another person. The individual who practices judo is called Judoka. The main goal of a judo player is to throw his opponent to the ground in such a way as to make them land on their back and immobilize him through locking body's joint parts or by choking him.

In this context, especially in martial sports, the concept of mental toughness is important because athletes are required higher level of competition and physical contact (Chen et al. 2013,Bojanic 2019). Judo sport is seen as a martial sport with high popular- 996 OnurMutluYasar, Murat Turgutity and difficulty in the world. In this context, it is important that elite judo athletes have high mental toughness (Cadenas 2016).

## 2. METHODOLOGY

### 2.1 Selection of Subjects

To serve the purpose (compare mental toughness of medalist and non-medalist judokas) of the investigation, 66 Male Judokas (33 medalist, 33 non- medalist) and 42 Female Judokas (21 medalist, 21 non-medalist)who obtained 1<sup>st</sup>three positions in Senior National Judo Championship held at Vishakhapatnam (A.P) in 2019 and All India Inter University Judo Tournament held at Punjab University Chandigarh in 2018 and Guru Nanak Dev University Amritsar in 2018 were the subjects of the study.

### 2.2 Hypothesis

There is no significant difference between male medalist and non-medalist judoka and no significance difference between female medalist and non-medalist judoka

### 2.3 Questionnaire

The Sports Mental Toughness Questionnaire (Sheard et al. 2009) was used to measure Mental Toughness. This 14-item scale (SMTQ) provides a total Mental Toughness score and three subscales scores: confidence, constancy and control. Participants rated the items on a four point Likert scale anchored by 1: not at all true, 2: a little true, 3: mostly true and 4: very true. Higher combined subscale scores reflect higher levels of each dimension and higher scores a single combined score reflects higher global mental toughness of subject.

### 3. RESULT

To find out the significance of differences between means of mental toughness and its sub factors among medalist and non-medalist judokas, mean, SD, and t- ratio was computed. The result of the study is presented with the help of following table and graph.

**TABLE - 1**  
**DESCRIPTIVE ANALYSIS AND SIGNIFICANCE OF DIFFERENCE BETWEEN**  
**MALE MEDALIST AND NON MEDALIST JUDOKAS ON MENTAL TOUGHNESS**  
**AND ITS FACTORS**

Achievement		Mean	$\hat{\sigma}_m$	SD	MD	$\hat{\sigma}_{Dm}$	Df	t- ratio
Confidence	Medalist	17.8182	.79945	4.59248	1.64	1.18	64	1.392**
	Non Medalist	16.1818	.86214	4.95262				
Constancy	Medalist	10.5152	.42667	2.45104	1.55	.57	64	2.727*
	Non Medalist	8.9697	.37306	2.14308				
Control	Medalist	10.6970	.52492	3.01543	.64	.74	64	.864**
	Non Medalist	10.0606	.51665	2.96795				
Mental Toughness	Medalist	39.1515	1.41496	8.12835	3.91	2.03	64	1.924**
	Non Medalist	35.2424	1.45841	8.37791				

\*Significant at .05 level,  
t .05 (64) = 1.96

The analysis of data in table - 1 shows that confidence, constancy and control sub factors of mental toughness indicate male medalist judoka's (confidence and constancy) means are higher than non- medalist judokas and male medalist judoka's (control) mean are equal to non-medalist judokas. In overall mental toughness male medalist judokas scoring higher than non-medalist judokas. Table 1 depicts that (2.727 for Constancy) greater than the tabulated value of t-ratio (1.960) that means there is significance difference between male medalist and non-medalist judokas. The computed value of t- ratio (1.392 for confidence; .864 for control; 1.924 for total mental toughness) is lesser than the tabulated value of t- ratio (1.96). That means there is no significant difference between male medalist and non-medalist judokas.

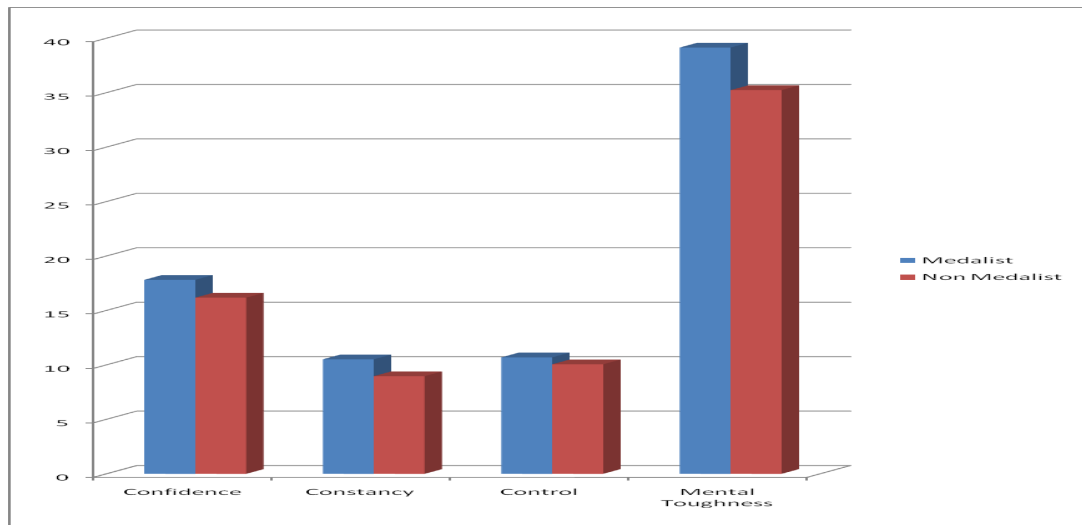


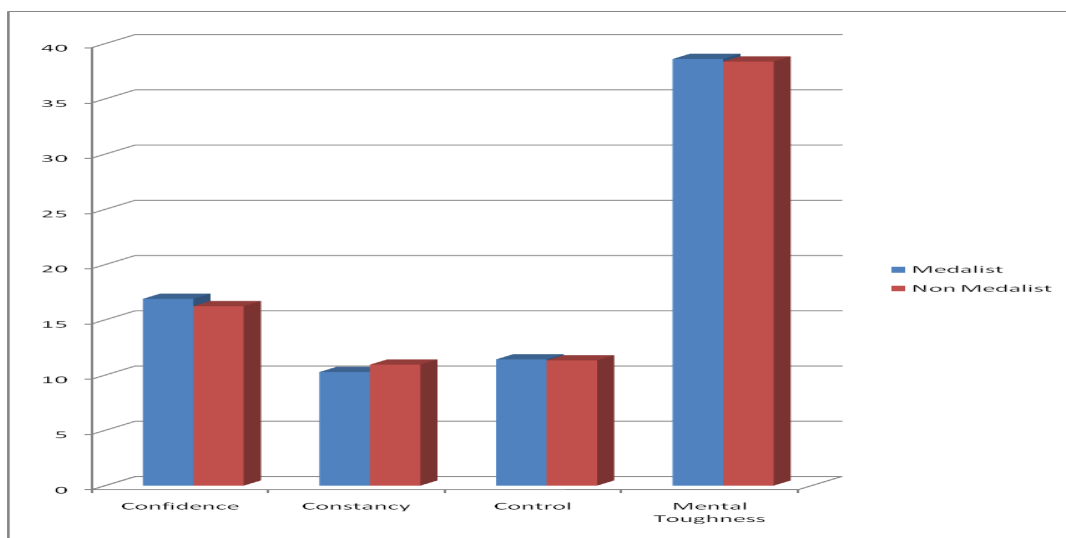
Figure 1: Mean score of Mental Toughness of Male Medalist and Non-Medalist Judokas.

**TABLE - 2**  
**DESCRIPTIVE ANALYSIS AND SIGNIFICANCE OF DIFFERENCE BETWEEN FEMALE MEDALIST ANDNON MEDALIST JUDOKAS ON MENTAL TOUGHNESS AND ITS FACTORS**

Variables	Achievement	Mean	$\sigma_m$	SD	MD	$\sigma_{Dm}$	Df	t- ratio
Confidence	Medalist	16.9048	.76813	3.52001	.67	1.04	40	.640**
	Non Medalist	16.2381	.70341	3.22343				
Constancy	Medalist	10.2857	.47380	2.17124	.67	.69	40	.968**
	Non Medalist	10.9524	.49989	2.29077				
Control	Medalist	11.4286	.55020	2.52134	.10	.85	40	.122**
	Non Medalist	11.3333	.64856	2.97209				
Mental Toughness	Medalist	38.6190	1.24876	5.72255	.24	1.96	40	.112**
	Non Medalist	38.3810	1.50472	6.89548				

\*\*Insignificant at .05 level,  
 $t_{.05}(64) = 1.96$

The analysis of data in table – 2 shows that confidence, constancy and controls sub factors of mental toughness indicate female medalist judokas scoring equal to female non-medalist judokas Table - 2 also depicts that the computed value of t- ratio (.640 for confidence; -.968 for constancy; .122 for control; .122 for total mental toughness) is lesser than the tabulated value of t- ratio (1.96). That means there is no significant difference between female medalist and non-medalist judokas.



**Figure 2:**Mean score of Mental Toughness of Female Medalist and Non-Medalist judokas.

#### 4. DISCUSSION

The result of descriptive analysis indicated that male medalist judoka's (confidence and constancy) means are higher than male non- medalist judokas and male medalist judoka's (control) mean are equal to male non- medalist judokas. In overall mental toughness male medalist judokas scoring higher than male non- medalist judokas. T-Ratio indicated that there is no significant difference between male medalist and non-medalist judoka in the dimension of confidence, control and total mental toughness. But in the dimension of constancy, there is significant difference between male medalist and non-medalist judoka.

In overall mental toughness and its subscale female medalist judokas scoring equal to female non- medalist judokas. Perhaps it is because systematic preparation and appropriate training scheduled prior to competition may improve ability to handle pressure, confidence and ability to control emotion. As well as there is no significant difference between female medalist and non-medalist judoka in all dimension. Though Antony and Antony (2016) findings support that mental toughness is a desired attribute which differentiates a medalist from a non-medalist player. Gould et al. (2002), Connaughton et al. (2007) had stated that elite competitive athletes possessed better mental toughness.

#### 5. CONCLUSION

Male medalist have high confidence and constancy with greater mental toughness as compare to the non- medalist. However, both exhibit somewhat equal control. When scores were compared female medalist and non- medalist judokas have equal level of confidence, constancy and control and they both are equally mentally tough.

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