



## Mental Toughness of Taekwondo and Karate Players: An Analysis

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**Abstract:** The most popular Martial Art styles are Taekwondo and Karate. To perform and excel, both demand a strong mind and intense attention. Karate may be more well-known around the world because to its appearance in movies and other forms of media; nonetheless, Taekwondo is an Olympic sport. As a result, each sport has its own worth. Because both sports need their participants to be intellectually strong, they can be played by anybody interested in improving their mental strength. Though either form can be performed according to the interests of the individual doing it, the question of which is better for developing mental toughness was identified as gap and prompted this study

Twenty Taekwondo players were selected by the investigator from the Taekwondo Martial Arts School [TMAS] and twenty Karate players were selected from a school in Puducherry called Shito-Ryo Do India. They were between the ages of 12 and 18. Dr. Alan Goldberg's Mental Toughness Questionnaire was used to test mental toughness. Each participant's Mental Toughness ratings were obtained through the questionnaire. The T Test was applied to statistically examine the gathered data. For the purposes of this study, the level of significance for all variables was set at 0.05.

The study found a substantial difference in Mental Toughness between Taekwondo and Karate athletes. In terms of mental toughness, Taekwondo athletes outperformed Karate competitors.

**Keywords:** Players of karate, Martial arts, Taekwondo Players, Olympic sport

### INTRODUCTION

“The mentally tough individual has a great sense of self-belief and an unwavering trust that they control their own fate,” according to Clough. Mental toughness refers to a person's ability to persevere in the face of adversity and an inner will to accomplish (internet sources). Mental toughness is unquestionably a vital component of athletic performance; basically, athletes with mental toughness can lift their game to the maximum level at critical periods throughout a game (internet sources). Mental Toughness has four fundamental components they are Maintain control, Provide a challenge, Commitment and Confidence (internet

sources). Tae-Kwon-Do, a Korean martial art, necessitates a requirement of mental toughness which is high though for a short period of time. Both Tae-Kwon-Do, and Karate, a very popular martial art form of Ryukyu Kingdom, necessitates a short amount of high mental strength (internet sources).

An individual's self-assurance and spirit can be accessed through their mental toughness. Indirectly such assessments can be used to predict success in sports, education, and jobs. It first appeared as a broad notion in the context of sports training, as a combination of characteristics that enable a person to improve as an athlete and cope with rigorous training and competitive situations (internet sources). It arose as a wide notion in the context of sports training, as a combination of characteristics that enable a person to improve as an athlete and to cope with challenging training and competing situations without losing confidence. Coaches, sport psychologists, sports pundits, and corporate leaders have all used the word in recent decades. "Mental toughness" is a term that is commonly used to describe a set of good characteristics that aids a person's ability to deal with adversity. Coaches and sports experts do use the term mental toughness often to describe the mental state of their players especially during adversity (internet sources; Jaiswal, & Jaiswal, 2013).

The word Taekwondo owes its origin to three Korean words, "Tae" which means foot, "Kwon" which means the fist, and "Do" which means the way. Hence, it could be said that the word Taekwondo translates to "the way of the foot and fist" literally. Yet, Taekwondo came into being since 1955 only, despite the fact that the disciplines dates back to two thousand three hundred years in Korea. Taekwondo evolved as a martial art due to some historic events in Korea many years ago. It is important to understand the history if one has to properly comprehend Taekwondo (internet sources).

The popular martial art of Karate traces its origin among the Ryukyuan's Pechin era as a widespread fighting method known as *te* Okinawan: *ti*. Visitors from China, mainly from Fujian Province, introduced several kinds of Chinese martial arts to the Ryukyu Islands after King Satto of Chzan established commercial links with the Ming dynasty of China in 1372. A significant number of Chinese families shifted to Okinawa in the year 1392 for cultural exchange. They established the Kumemura community and shared their wide ranging knowledge of Chinese science and skills which included martial arts from China. In 1429, the king of Okinawa ShHashi consolidated his political position and King Sh Shin's policy of outlawing weapons in 1477, which was later adopted in Okinawa during the Shimazu clan's invasion in 1609, aided the development of unarmed combat methods (Jaiswal, 2013; internet sources).

## **METHODOLOGY**

For the purpose of this study, a total of forty participants comprising of twenty Taekwondo and twenty karate players were selected. Taekwondo Martial Arts School provided the twenty

players and remaining twenty Karate players were from the Shito-Ryo Do India of Pondicherry were chosen for the study. The participants ranged in age from 12 to 18 years old. The participants were chosen at random. Mental toughness was one of the psychological variables that the participants were assessed on. The authors discussed how the collected surveys were translated into standard scores. Alan S Goldberg's Mental Toughness Questionnaire (1998; Jaiswal, 2012) was used for assessment. The acquired data was statistically analyzed to see if there were any differences. To test the study's hypothesis, descriptive statistics like mean and standard deviation were used, and independent sample "t" test and analysis of variance was applied for comparison.

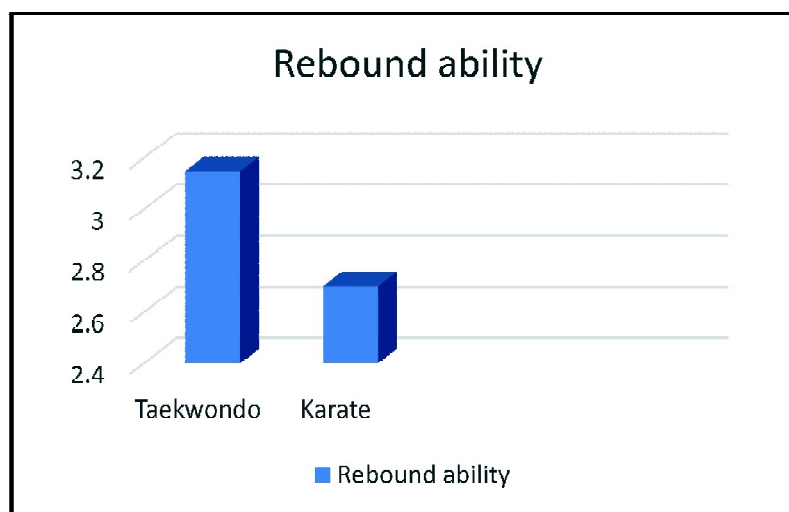
## RESULT

**Table 1 : Comparison of Taekwondo and Karate Players on Rebound Ability using t Test**

<i>Variables</i>	<i>Group</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Df</i>	<i>T</i>
Rebound	Taekwondo	20	3.15	1.90	38	1.16
Ability	Karate	20	2.7	1.08		

The t test in Table 1 revealed that mental toughness was significantly different in their means ( $t=1.16$ ). Due to this it could be said that Taekwondo players' Rebound ability scores (mean was 3.15, SD was 1.90) were greater than the Karate group (mean was 2.7, SD was 1.08).

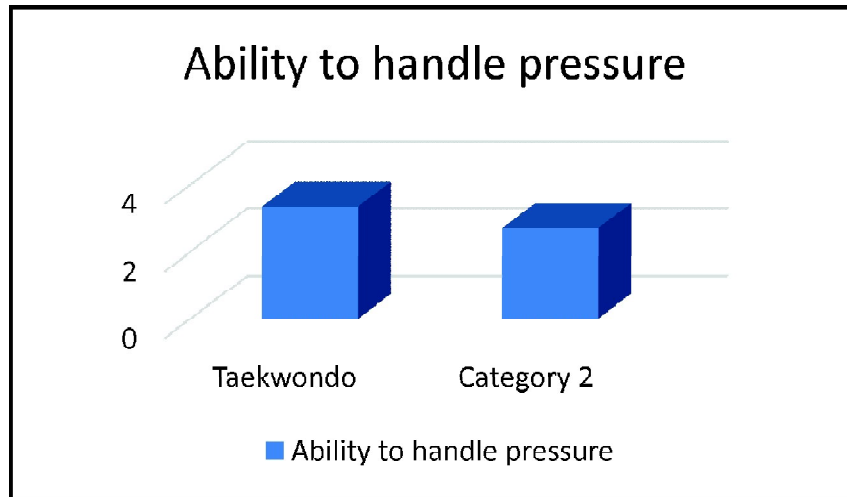
**Figure 1: The graphical representation of Rebound Ability of Taekwondo and Karate Players**



**Table 2: Results of the t test on the variable 'Handle Pressure' between Taekwondo and Karate players**

<i>Variables</i>	<i>Group</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Df</i>	<i>T</i>
Rebound	Taekwondo	20	3.35	1.39	38	1.55
Ability	Karate	20	2.7	2.11		

The t test results in Table 2 revealed that the mean difference was significant among the two groups in the variable handle pressure ( $t=1.55$ ). Hence, it could be said that the Taekwondo players' ability to Handle Pressure (mean was 3.35, SD was 1.39) was better than that of Karate group (mean was 2.7, SD was 2.11). Figure 2 shows a comparison bar diagram of Taekwondo and Karate players' capacity to tolerate pressure.

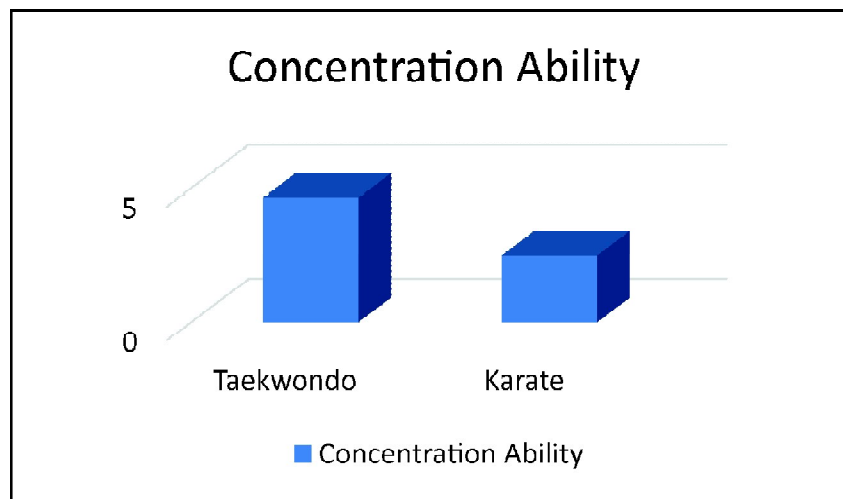
**Figure 2: Taekwondo and Karate players' ability to handle pressure is depicted in a bar diagram****Table 3: t Test result data of the variable 'Concentration Ability' between Taekwondo and Karate Players**

<i>Variables</i>	<i>Group</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Df</i>	<i>T</i>
Rebound	Taekwondo	20	4.65	2.13	38	2.83*
Ability	Karate	20	3.2	3.11		

The t test results in Table 3 revealed that significant mean difference existed in the mental toughness ( $t=2.83^*$ ) of both the groups in the variable Concentration Ability. The results shows that Taekwondo players' concentration ability scores (mean was 4.65, SD was

2.13) were greater than that of Karate group (mean=3.2, SD=3.11). There existed significant difference in the concentration ability of Taekwondo and Karate players because the calculated value of 2.83\* was greater than the table value of 2.021.

**Figure 3: Showing the results of Concentration Ability of Taekwondo and Karate players through bar diagram**



**Table 4: Results Data of t Test on the variable Confidence' of Taekwondo and Karate Players**

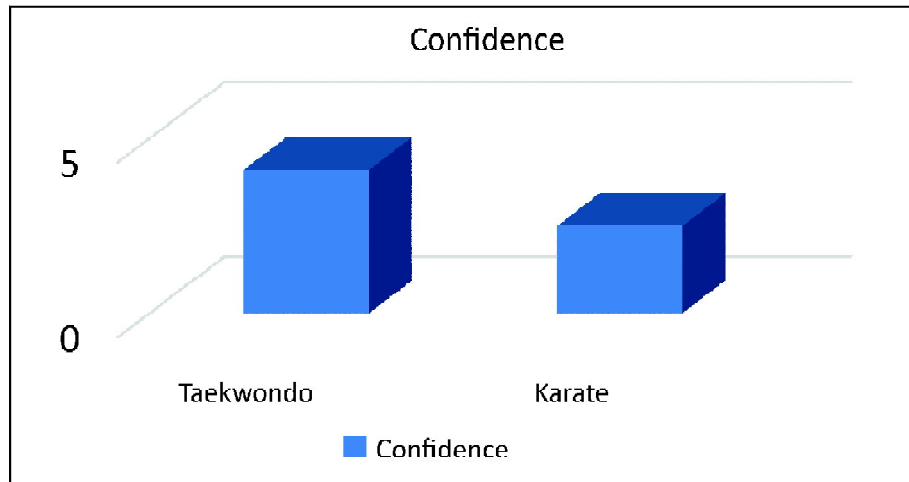
Variables	Group	N	Mean	SD	Df	T
Rebound	Taekwondo	20	4.1	1.25	38	1.16
Ability	Karate	20	3.65	1.71		

The results from the t test in table 4 showed that the mean difference between the two martial arts group was significant in the variable confidence ( $t=1.16$ ). Therefore we can say that the Taekwondo players (mean=4.1, SD=1.25) exhibited much better confidence when compared to Karate group (mean was 3.65, SD was 1.71).

**Table 5: The t Test results on the variable 'Motivation' between Taekwondo and Karate Players is shown**

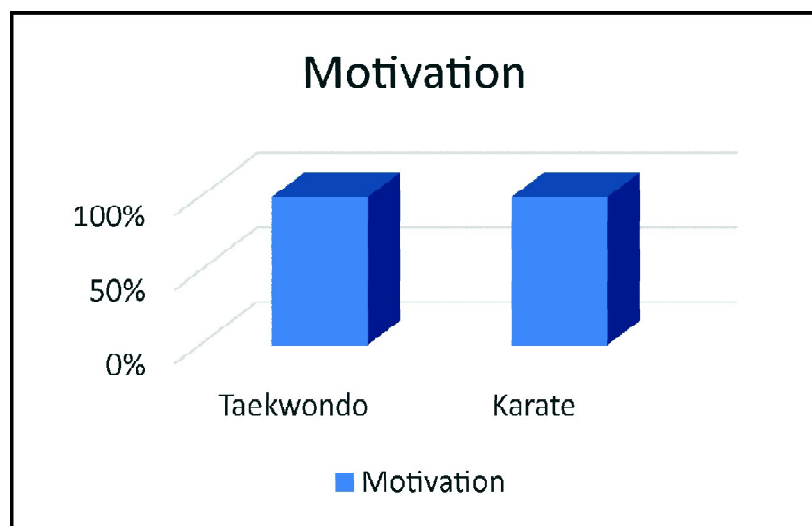
Variables	Group	N	Mean	SD	Df	T
Rebound	Taekwondo	20	3.65	1.86	38	1.16
Ability	Karate	20	3.65	1.86		

Figure 4: The results of variable Confidence among the Taekwondo and Karate groups is presented in a bar diagram



The t test in Table 5 revealed that the mean difference was not much in the variable Motivation ( $t = 0$ ) between the Taekwondo and Karate players. No significant difference in motivation was observed between the Taekwondo and Karate groups, because the calculated value 0 was smaller than the table value 2.021. Hence, the results demonstrated that both the Taekwondo and Karate groups had similar motivation levels (mean was 3.65, SD was 1.86).

Figure 5: Figure showing the bar diagram of Taekwondo and Karate players' motivation levels

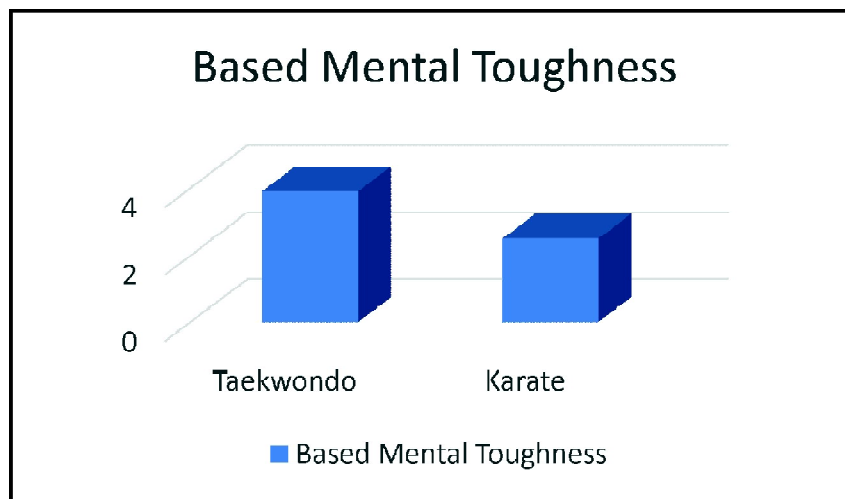


**Table 6: Results of t Test on the Based Mental Toughness between Taekwondo and Karate Players**

Variables	Group	N	Mean	SD	Df	T
Based Mental Toughness	Taekwondo	20	3.91	1.72	38	3.73*
Ability	Karate	20	3.18	2.11		

The t test results in table 6 revealed that the variable 'Based Mental Toughness' exhibited a significant difference in the means of Taekwondo and Karate groups ( $t= 3.73^*$ ). It was observed that there was a difference in mental toughness between Taekwondo and Karate players because the calculated value of  $3.73^*$  was higher than the table value of 2.021. Hence, it could be concluded that the Taekwondo players' mental toughness scores (mean was 3.91, SD was 1.72) were better than that of Karate group (mean was 3.18, SD was 2.11).

**Figure 6: Figure 6 showing the bar diagram of the Taekwondo and Karate groups performance on the variable Based Mental Toughness**



## FINDINGS

The data analysis yielded the following significant findings based on the study's purpose. The rebound ability of the Taekwondo group (mean was 3.15, SD was 1.08) was significantly better than that of Karate group (mean was 2.7, SD was 1.90). Taekwondo participants (mean was 3.35, SD was 1.39) also exhibited better ability to handle pressure when compared to Karate participants (mean was 2.7, SD was 2.11). Further, Taekwondo participants (mean was 4.65, SD was 2.13) also demonstrated better ability to concentrate as well in comparison to Karate participants (mean was 3.2, SD was 3.11). The level of Confidence was also

significantly higher in Taekwondo participants (mean was 4.1, SD was 1.25) in comparison with Karate participants (mean was 3.65, SD was 1.71). However, on the variable motivation, the results did not yield any significant difference between both the groups (mean was 3.65, SD was 1.86). Lastly, the T test on t mental toughness revealed a substantial difference between Taekwondo and Karate groups ( $t=3.73^*$ ). Therefore, it could be observed that Taekwondo players were indeed mentally tougher (mean=3.91, SD=1.72) than the Karate players (mean=3.18, SD=2.11).

## DISCUSSION

Mental toughness was important in sports it enables Athletes to perform at their best under pressure. Kumar (2017), also conducted similar study on mental toughness between players of team sports and individual sports from that study he concluded that players of team sports having higher mental toughness than the player of individual sport he also used Alan Goldberg's Mental Toughness Questionnaire (Alan , 1998; Jaiswal, 2004). Not only in sports but also it is very important to be mentally tough so that we can overcome any obstacles without giving up.

## CONCLUSION

The Taekwondo players outperformed the Karate players in most of the selected variables such as mental toughness, Concentration, Rebound Ability, Pressure Handling, and Confidence according to data analysis. Only variable motivation did not yield any difference among the two groups. Hence, it can be concluded that in order to improve mental toughness, training in Taekwondo is a better option than Karate.

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