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A study of mental toughness among elite female taekwondo and Olympic weightlifting athletes

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Abstract

The objective of the research paper was to analyze the mental toughness of Elite Sportswomen of Taekwondo and Olympic style weightlifting. The study covered Female (n=20) in which Taekwondo (n=10) and Weightlifting (n=10) Elite players aged between 17 to 26 years. To assess mental toughness, questionnaire by Goldberg (1998) [6] which consist of 30 items was applied to all players. The statistical technique employed for analyzing the data were Mean, Standard Deviation and 't' test. The level of significant chosen was .05. The result of the study indicated that there was no significant difference was found between two groups but descriptive statistic shown that taekwondo players were more mental tough than weightlifting players.

Keywords: mental toughness, taekwondo, key weightlifting

Introduction

Sports in India are at its developing stage from the last two decades. The high Sports performance in 2012 Olympic game and Asian game, world championships are big examples of Indian Players in International sports arenas. High sports performance in sports is based on Physiological, Psychological, Sociological, and other factors. The contribution of psychological factor plays key role in sports performance. The terms 'Victory' and 'Defeat' in the sports and game psychology are to be broadly understood. Success leads to positive psychological state of the sportsman while failure causes negative psychological feelings. Sports competitions influence personality of a sports person and this influence starts before the competition & moves during and after the competitions.

Previous studies show that psychological factors contribute 90% for high performance in field of sports. An athlete face different type of situation like before, during and after the training or sports performance. Some research indicate that mental tough athlete give his/her high performance in the competition. The Personality traits, anxiety, mental toughness, confidence, self-stream etc. are those personality traits are generally take up as psychological parameters to asses sports performance (Anizu *et al.* 2003) [2]. Bull *et al.* (2005) [3] observed that mental toughness varied from sports to sport and event to event. Jones *et al.* (2002) [2] experienced that coping strategies also play dominant role which help players to prepare better in different conditions. Gould *et al.* (1987) [8] also revealed in their study that most of wrestling coaches were mentally tough which precede them to achieve competitive success. In the process of exploring mental toughness Physical fitness considered to be important factor illustrated by Williams (1998). Johans *et al.* (2002) [10] acknowledged twelve characteristics of mental toughness and Stratton (2004) added eight more characteristics in mental toughness. In a study conducted by Jones *et al.* (2007) 30 characteristics of mental toughness were developed during construction of a questionnaire. In an another study significant difference were found on the motivation and over all mental toughness between open and close athletes and insignificant difference were observed on confidence, concentration, rebound ability etc.

Mental roughness is a quality of athlete to perform better than his/her opponents. In other words psychological factor are widely regarded to be very important for high performance in individual sport like Taekwondo, Judo, Wrestling, boxing and Olympic style weightlifting. Weightlifting and Taekwondo sport need high level of fitness as well psychological preparation for optimum performance in the competitions.

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In these every athlete face deferent physiological pressure or environments for execution of skill before and during the competition. Therefore, present study was designed to investigate the significant differences between elite Taekwondo and Weightlifting athletes with handling the competition Pressure, Concentration, Confidence and Mental Toughness.

Purpose of the study

The purpose of the study was to analyze the relationship of Psychology factors Pressure, Concentration, Confidence & Mental toughness among the Women Elite (Medial’s Winner) in Taekwondo and Olympic style weightlifting sports.

Methodology

Twenty (n=20) Young Indian Elite Woman Taekwondo (20.5±5.7 years old) and Weightlifting athletes (21.9±5.3) who were member of state national teams, Both the game Players had 5 to 7 year training experience selected for the study. They were further divided in to two groups which includes taekwondo (n=10) and weightlifting (n=10) women,

who had participated in National Weightlifting and Taekwondo Competitions. All the subjects were very high Professional Taekwondo and weightlifting players with 5 to 8 years of experience in the different level of competitions.

Tool used

After the Taekwondo and weightlifting competition the mental toughness questionnaire consists of 30 items to assess for the sport and game by Goldberg (1998) [6] was applied to the subjects. Questionnaire consists of six fundamental area of mental toughness viz. Rebound ability, Ability of handle pressure, concentration, confidence, motivational and over all mental toughness. Each dimension measured by six questions, option with ‘Yes’ or ‘No’ by tick mark responses.

Statistical Techniques

‘t’ test was applied to find out the significance of differences among Taekwondo and weightlifting women athletes. The level of Significance was set at 0.05 levels.

Findings

Table 1: Shown the Significant differences in the Mean Scores of Elite Taekwondo and Weightlifting Players on the Variables of Mental toughness

Variables	Weightlifting = (n=10)		Taekwondo = (n=10)		Mean Difference	SEDM	t-value
	Mean	SD	Mean	SD			
Reboundability	2.80	1.04	2.70	1.18	0.10	0.50	0.20
Ability to Handle Pressure	3.40	1.11	3.10	1.13	0.30	0.50	0.60
Concentration	3.90	1.10	3.50	1.56	0.40	0.60	0.67
Confidence	3.90	1.13	3.50	1.56	0.40	0.60	0.54
Motivation	4.80	0.87	4.60	0.80	0.20	0.37	0.54
Overall Mental toughness	18.40	3.00	17.60	2.24	0.80	0.37	2.16

Table 1 reveals that rebound ability mean and standard deviation of weightlifters were (2.80±1.04) and Taekwondo players mean and standard deviation were (2.70±0.20) whereas ‘t’ ratio was 0.20 found in significant (p>.05). Ability to Handle Pressure mean and standard deviation of weightlifters were (3.40±1.11) and Taekwondo players mean and standard deviation (3.10±1.13)whereas ‘t’ ratio was 0.60 found in significant (p>.05). Concentration mean and standard deviation of weightlifters were (3.90±1.10) and Taekwondo players mean and standard deviation were (3.50±1.56) whereas ‘t’ ratio was 0.67 found in significant (p>.05).

Confidence mean and standard deviation of weightlifters were (3.90±1.13) and Taekwondo players mean and standard deviation were (3.50±1.56) whereas ‘t’ ratio was 0.54 found in significant (p>.05). Overall Mental toughness mean score of weightlifting players (M=18.40) higher than Taekwondo players (M=17.60) whereas ‘t’ ratio was 2.16 found significant (p>.05). Data disclosed that weightlifting players were higher mean score than Taekwondo players in regard to rebound ability, Ability to Handle Pressure, Concentration, Confidence and Motivation.

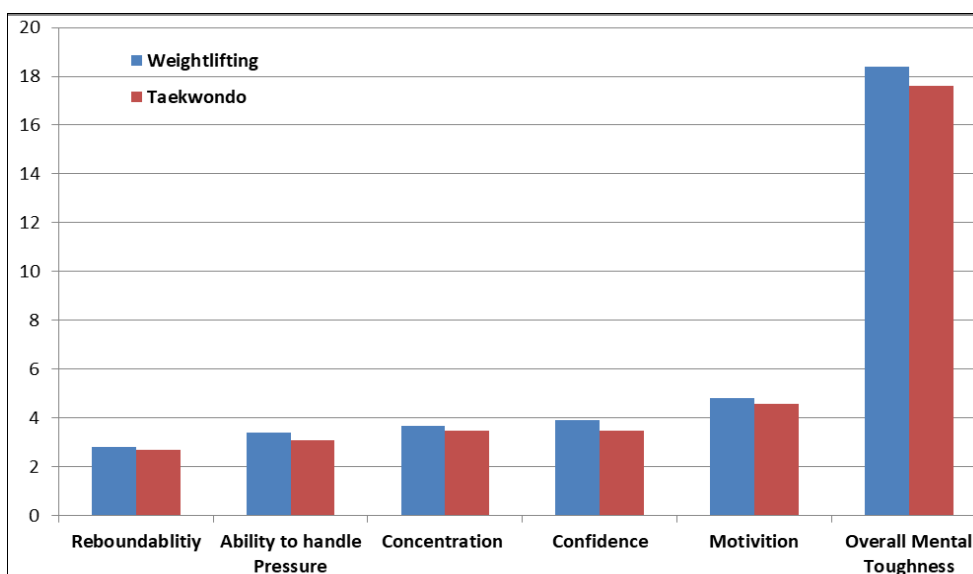


Fig 1: Mental Toughness Variables

Discussion of finding

The result of study shown that women weightlifters were better on rebound ability, ability to handle pressure, concentration Confidence Motivation and Overall Mental Toughness as compared to the Taekwondo Player. The study has also examined psychology factor which influence the Olympic style weightlifting game performance. Williams (1998) denoted that mental toughness might be more important in determining the final outcome of a sporting event than Physical fitness factors.

Implication of research Findings

This study had several limitations that may the Psychology effect on women Taekwondo and Weightlifting performance. This study is not in itself enough to formulate a concrete training plan, it suggest to coaches that they must consider systematic and tailor made Psychology training program and Mental perpetration to help the women Taekwondo and weightlifting players to improve their performance on different level of competitions.

Conclusion

The aim of this study was to highlight mental Toughness variables of Elite National level Women and Men weightlifting athletes. It was found from the finding that significant differences were noticed between women and men weightlifting athletes on the variables i.e. overall mental toughness. Hence it is concluded that the no significant differences were noticed on variables rebound ability, ability to handle pressure, concentration, confidence and motivation.

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