



Exploring Mental Toughness Dynamics in Combat Versus Non-Combat Athletes: A Comparative Analysis

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ABSTRACT

The purpose is to compare the levels of mental toughness between combat and non-combat athletes. Those athletes have taken part in the all India inter university tournament. A total of 60 players are part of the all India inter university tournament. The age of the subjects were ranging from 18-25 years. Among the 60 subjects, there are 30 combat athlete (judo, wrestling & taekwondo) and 30 non-combat athletes (volleyball, swimming & badminton). Comparison was made between combat and non-combat athletes. Psychological performance inventory (James E. Loehr 1982) was administered. The questionnaire consists of 42 statements. These 42 statements are further divided into 7 sub-scales namely; Self confidence, Negative energy control, Attention control, Visual/ imaginary control, Positive energy control, Attitude control and Motivation which were designed to measure factors that reflect mental toughness of sports athlete. Descriptive statistics were computed for all measures. The data obtained were analyzed with the help of statistical software (SPSS 22 version). The mean, standard deviation along with independent t test were computed to check the differences between samples mean of Combat and Non-Combat Athletes. The level of statistical significance was set at 0.05 levels. Based on the analysis it was observed that there was a significant difference between combat and non-combat athletes as the p-value is less than 0.05 in all the factors except negative energy control and attention control the p-value was greater than 0.05. and in terms of other factors ; positive energy control, attitude control, visual imaginary, motivation, self control there were having significance differences.

Keywords: *Mental Toughness, Combat Athletes, Non combat Athletes, Motivation, Self Control*

Introduction

The Greek word psycho, which means mind or soul, and logos, which means science, are the roots of the English word psychology. Psychology, then, is the study of the mind and soul. Psychology does not create situations; rather, it investigates human nature. The most widely recognized definition of psychology is the study of experience and behavior. Psychology is largely concerned with the methodical study of behavior and other verification by experiments. Behavior encompasses all manifestation of life (Saha et al., 2024). One such personal quality that merits more scientific study is mental toughness (MT) (Roy et al., 2023). Mental toughness (MT) is identified as an important psychological resource to overcome challenging and difficult circumstances. It is defined as the ability or a natural/developmental psychological attribute that enables athletes to cope better than their opponents do with many demands in life or sports and to be more consistent and outperform their rivals under pressure while remaining determined, focused, confident, and under control (Jones et al., 2002), (loehr, 1995).

Some researchers defined MT as a stable trait that enables athletes to confront and handle all kinds of physical, mental, and emotional pressures in order to achieve optimal performance (Gucciardi et al., 2009). In a study involving ten Olympians, they reported mental toughness is one of the highest ranked psychological characteristics that determine at successful performance (Gould et al., 2002). Specifically, it is often used to describe a broad term that reflects the ability of an athlete to cope effectively with training and competition demands in an effort to remain resilient (Bull et al., 2005), (Connaughton et al., 2008), (Fourie & Potgieter, 2001), (Jones et al., 2007), (Thelwell et al., 2005). The relationship between mental state and athlete's physical performance has been for concern for coaches and even for athletes for long time especially with the knowledge that the mental state does have enormous impact on athlete's performance (Weinberg, 1988).

Methodology

A total of sixty boys athletes were selected as the subjects for the present study. The age of the subjects were ranging from 18-25 years. All the selected subjects represented LNIPE in All India inter university competition. Among the 60 subjects, there are 30 combat athlete (judo, wrestling & taekwondo) and 30 non-combat athletes (volleyball, swimming & badminton). Comparison was made between combat and non-combat athletes.

Psychological performance inventory (James E. Loehr 1982) was administered to each subject in a peaceful environment. The response given by the subjects were scored as per the instruction manual.

Tools

Psychological performance inventory (James E. Loehr 1982) was administered. The questionnaire consists of 42 statements. These 42 statements are further divided into 7 sub-scales namely; Self confidence, Negative energy control, Attention control, Visual/ imaginary control, Positive energy control, Attitude control and Motivation which were designed to measure factors that reflect mental toughness of sports athlete.

Statistical Analysis

Descriptive statistics were computed for all measures. The data obtained were analyzed with the help of statistical software (SPSS 26 version). The mean, standard deviation along with independent t test were computed to check the differences between samples mean of Combat and Non-Combat Athletes. The level of statistical significance was set at 0.05 levels.

Results

Table 1. Mean score and standard deviation of combat and non-combat athletes on factors of mental toughness

Group Statistics					
Factors	Group	N	Mean	Std. Deviation	
Self-control	Combat	30	15.10	3.19	
	Non-combat	30	18.60	3.44	
Negative energy control	Combat	30	18.90	4.22	
	Non-combat	30	18.80	3.35	
Attention control	Combat	30	17.86	2.89	
	Non-combat	30	18.40	3.95	
Visual imaginary	Combat	30	10.96	4.20	
	Non-combat	30	17.26	6.04	
Motivation	Combat	30	12.93	2.43	
	Non-combat	30	18.03	4.49	
Positive energy control	Combat	30	12.23	3.95	
	Non-combat	30	18.10	4.92	
Attitude control	Combat	30	12.53	3.55	
	Non-combat	30	18.16	5.03	

Table No 1. shows the descriptive statistics of mental toughness of combat athletes and non-combat athletes. As we were observed various factors of mental toughness such as Self-control, Negative energy control, positive energy control, attention control, attitude control, motivation and visual imaginary. From this table it was observed that in the case of factor 1; self control, the mean score and standard deviation of combat athletes (15.10 ± 3.19) was lesser than non-combat athlete (18.60 ± 3.44). In the case of factor 2; Visual imaginary, the mean and standard deviation score of combat athletes (10.96 ± 4.20) was lesser than non-combat athlete (17.26 ± 6.04). In case of factor 3; Motivation, the mean and standard deviation score of combat athletes (12.93 ± 2.43) was lesser than non-combat athlete (18.03 ± 4.49). In the case of factor 4; Positive energy, control mean and standard deviation score of combat athletes (12.23 ± 3.95) was lesser than non-combat athlete (18.10± 4.92). In case of factor 5; Attitude control, mean and standard deviation score of combat athletes (12.53 ± 3.55) was lesser than non-combat athlete (18.16± 5.03). In case of factor 6; Negative energy

control, mean and standard deviation score of combat athlete (18.90 ± 5.35) was higher than non-combat athletes (18.80 ± 4.22) And in case of factor 7; attention control, mean and standard deviation score of combat athlete (18.40 ± 3.95) was higher than non-combat athletes (17.86 ± 2.89).

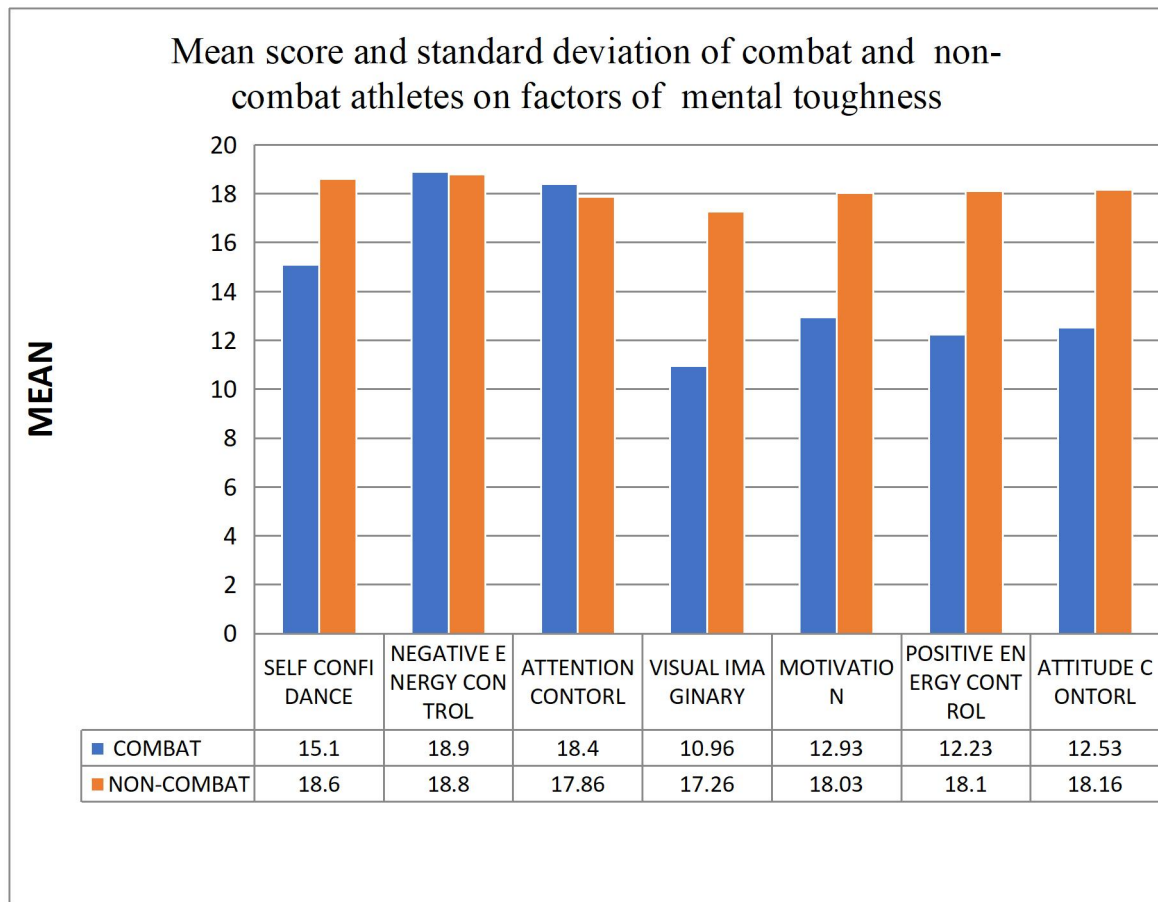


Figure 1. (Mean score of non-combat and combat athletes on factors of mental toughness)

Table 1. Result of Independent t-test of mental toughness

		Levene's Test for Equality of Variances		T-test for Equality of Means		
		F	Sig.	T	Df	Sig. (2-tailed)
Self Control	Equal variances assumed	0.76	0.38	4.081	58	0.00
	Equal variances not assumed			4.081	57.69	0.00
Negative energy control	Equal variances assumed	1.92	0.17	-0.10	58	0.92
	Equal variances not assumed			-0.10	55.20	0.92
Attention control	Equal variances assumed	1.35	.250	0.59	58	0.55
	Equal variances not assumed			0.59	53.18	0.55
Visual imaginary	Equal variances assumed	2.24	0.139	4.68	58	0.00
	Equal variances not assumed			4.68	51.74	0.00
Motivation	Equal variances assumed	6.819	0.011	5.46	58	0.00
	Equal variances not assumed			5.46	44.64	0.00

From the table no 2 it was observed that there was a significant difference between combat and non-combat athletes as the p-value is less than 0.05 in all the factors except negative energy control and attention control the p-value was greater than 0.05. and in terms of other factors ; positive energy control, attitude control, visual imaginary, motivation, self control there were having significance differences.

Discussions

It is evident that there was significance difference in most of factors of mental toughness between non-combat and combat. The objectives of the study was to analysis and compare the mental toughness of non-combat and combat and to explore which category has maximum strength in overall mental toughness. Moreover, various factors such as status, of previous achievements, level of competition, age, nature of the sport, and individual differences are involved in the desirable shaping of mental toughness. Mental toughness among non-combat and combat athletes was difference because they may be used different strategies to overcome obstacles and achieve success. A study was conducted to compared mental toughness of Taekwondo and cricket players by Solanki and Singh (2013). It was concluded that sports persons participating in team game are mentally tougher as compared to sports persons participating in individual games. Additionally, psychological preparedness is one of the factors contributing to success, preparing athletes for competitions and teaching them how to react when confronted with various processes. However, participation in sports has been considered as a factor contributing to social interactions of individuals. Considering the findings of this research and the importance of the crucial role of mental toughness, it can be expected that the performance of athletes can be enhanced through greater awareness of these components of mental toughness. Nowadays, competition is not any longer restricted to superior techniques, however successful athletes get success from bigger psychological readiness (Joshi Kritika, 2016). It is essential that think about and schedule substantial psychological intervention programs for the cluster of athletes. This conjointly sounds imperative to own a sport scientist for players whereas active and competitive.

Conclusions

Based on the analysis and within the limitations of the present study, it was inferred that in terms of self control, attitude control, motivation, visual imaginary and positive energy control non-combat athletes were more tougher than the combat athletes and significant different also observed. In term of negative energy control & attention control there was combat athletes were more tougher than non-combat athletes but insignificant different was observed.

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