Assessment of Mental Toughness among High and Low Achievers of State Level Yoga Competitors: A Comparative Study

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Abstract

This study examined the mental toughness and its influence on performance outcomes in competition. For this study 60 young yoga competitors competing in open state championships at Barasat Municipality Auditorium, Barasat, 24 Parganas North were selected as sample. The Sample was further divided in two groups as per performance outcomes in competition one is successful yogis who had won the medals (n=30) and other one is non successful yogis who had not won any medals in state championship 2011. Psychological Performance Inventory (PPI; Loehr, 1986) was administered to measures the mental toughness to the both group in this study. Analysis of the fundamental areas of mental toughness revealed that the successful yogis scored significantly higher on all subscale of mental toughness and significant differences were observed between two groups (successful and non-successful) in self confidence ($p = 0.001$), negative energy control ($p = 0.019$). Attention Control ($p = 0.011$), Visual / Imagery Control ($p=0.266$), Motivational Level ($p = 0.002$), Positive Energy ($p = 0.001$) and Attitude Control ($p =$
0.012)

KEYWORDS: Goal orientation, Mental toughness, Yogis, Stress and Anxiety.

Introduction

Sven Goran-Eriksson, England Football Manager described effectively that… "little is required to be successful in sport. It's certainly mostly a matter of psychology and in the end it's that psychological difference that decides whether you win or lose."

The aim of Physical Education is total personality development of an individual. The objective of Physical education is physical development, mental development, spiritual development and social development. The aim of yoga is the union of mind body and soul which is same as the aim of physical education. The objective of yoga is social development, physical development, mental development and spiritual development. By the practice of Yama and Niyama one can develop their social ability. By the help of Kriya, Asana, Mudra one can develop physical and physiological potential. By the practice of the practice of Pranayama, Pratyahar, Dharana one can develop mental faculty and by exercising Dhyana and Samadhi one can attain spirituality.

Yoga is a science of right living and it works when integrated in our daily life. It works on all aspects of the person: the physical, mental, emotional, psychic and spiritual.

The classical techniques of Yoga date back more than 5,000 years. In ancient times, the desire for greater personal freedom, health and long life, and heightened self-understanding gave birth to this system of physical and mental exercise which has since spread throughout the world. The word Yoga means "to join or yoke together," and it brings the body and mind together into one harmonious experience.

The whole system of Yoga is built on three main structures: exercise, breathing, and meditation. The exercises of Yoga are designed to put pressure on the glandular systems of the body, thereby increasing its efficiency and total health. The body is looked upon as the primary instrument that enables us to work and evolve in the world, and so a Yoga student treats it with great care and respect. Breathing techniques are based on the concept that breath is the source of life in the body. The Yoga student gently increases breath control to improve the health and function of both body and mind. These two systems of exercise and breathing then prepare the body and mind for meditation, and the student finds an easy approach to a quiet mind that allows silence and healing from everyday stress. Regular daily practice of all three parts of this structure of Yoga produce a clear, bright mind and a strong, capable body. The practice of yoga makes the body strong and flexible; it also improves the functioning of the respiratory, circulatory, digestive, and hormonal systems. Yoga brings about emotional stability and clarity of mind.

Now a day in the entire world Yoga has become competitive sports. The men and women who are taking in Yoga competitions share incredibly similar penchants for being projected into athletic contexts of existential thoroughness as a response to late-modern boundary-crossing tendencies. In particular, they share preferences for entire physical cultural styles of life which consciously subvert the idea that health, movement and athletics are merely technological or rational modernist 'things'.

Yoga is one of those that's definitely an individual sport and at the same time, a part of the larger "team" concept. Some sports are tougher than others; some require physical strength and the ability to run fast. Others require the ability to jump long and high while repossessing acute hand-eye coordination. The athleticism derived from yoga will be beneficial in almost any sports. Participation in yoga provides: greater coordination, more endurance, increased strength, better flexibility, improved balance, better mental balance and better reaction time.

Athletes are constantly under severe levels of stress and anxiety to perform well. They fight for every inch and often put their bodies through excruciating pain to secure a win. Yet how is it done? How does one get the subconscious mind and body to work together without consulting the conscious and rational mind which surely would prevent such nonsense from continuing? As is the case with any competition, there are situations that require the utmost concentration in face of difficult circumstances.

Most coaches and athletes acknowledge that anything between forty and ninety percent of sporting success is due to mental factors (Williams, & Krane, 2001). In fact, only mental readiness was seen as significant for Olympic success (Orlick & Partington, 1998).

According to Loehr (1982), mentally tough athletes respond in varying ways which enable them to remain feeling relaxed, calm and energized because they have learned to develop two skills; firstly, the ability to increase their flow of positive energy (i.e. using energy positively) in crisis and adversity, and secondly, to think in specific ways so that they have the right attributes regarding problems, pressure, mistakes and competition. (Jones, Hanton, & Connaughton, 2002).

A factor often associated with successful performance in competition is mental toughness. Mental toughness can be considered as a mental skill factor. Some research findings has identified mental skills as a psychological construct that distinguishes between more and less successful performance across a number of sports; for example,

golf (Thomas and Over, 1994), and equestrian, (Meyers et al., 1998). Mental toughness and its importance in competitive sports have been documented in literature (see Goldberg, 1998; Hodge, 1994; Tunney, 1987; Williams, 1988). Loehr (1982; 1986) suggested that fifty percent of success in competitions could be attributed to mental toughness in athletes.

Therefore, in this study the researcher has considered the seven fundamental attributes of mental toughness suggested by Loehr (1986), specifically, the mental toughness attributes include (1) self-confidence (i.e. belief that one can perform well and be successful), (2) negative energy control (i.e. to cope with negative emotions such as fear, anger, frustration and temper for achieving success), (3) attention control (i.e. stay focused and to perform well),(4) visualization and imagery control (i.e. creating positive mental images), (5) motivation level (i.e. the energy and willingness to persevere), (6) positive energy control (i.e. energized with fun, joy and satisfaction), and (7) attitude control (i.e. habits of thought and unyielding).

Methodology

Total 50 male wrestlers took part in this study. All participants were State level yogis from the Indian State of West Bengal. The sample included 30 high achiever Yogis (N=30) who had won the Gold, Silver and Bronze medals in this championship and 30 low achiever Yogis who could not won the medals (N=30). The sample was selected by random sampling technique. Sample was taken from the venue of The Open State level Yoga championship held at Barasat Municipality Auditorium, Barasat, 24 Parganas North, West Bengal, India. The data was collected one day prior to the championship.

Instrument

Mental toughness: Psychological Performance Inventory

(*PPI*; Loehr, 1986) a 42 items self report inventory with seven subscales, designed to measure factors that reflect mental toughness in an athlete were administered to the athletes. Each subscale consisted of six items measuring the seven fundamental areas of mental toughness viz. self-confidence (e.g., “I believe in myself as a player”), negative energy control (e.g., “I can remain calm during competition when confused by problems”), attention control (e.g., “I can clear interfering emotion quickly and regain my focus”), visualization and imagery control level (e.g., “Before competition, I picture myself performing perfectly”), positive energy control (e.g., “I can keep strong positive emotion flowing during competition”), and attitude control (e.g., “I am a positive thinker during competition”). The responses are indicated on a 5- point Liker type scale where 1=Almost always, and 5=Almost never).

***Performance measure*:** Winning a medal in the Open State Championship was considered as successful performance outcome for the purpose of this study.

Data analysis

Descriptive statistics were computed for all measures assessed, the data obtained were analyzed with the help of statistical software (SPSS 11.5 version). The mean, standard deviation along with t test has been applied to check the differences between samples mean of two groups viz. high achievers and low achievers yogis. The criterion for statistical significance was set at 0.01 level of confidence.

Results

Table-1
Descriptive Statistics of Successful Yogis (n=30)

Mental Toughness	Mean	S.D
Self Confidence	19.63	2.34
Negative Energy Control	19.46	1.75
Attention Control	18.06	2.49
Visual / Imagery Control	18.80	2.77
Motivational Level	19.63	2.55
Positive Energy	18.96	2.56
Attitude Control	19.60	2.56

Table-2
Descriptive Statistics of Non-Successful Yogis (n=30)

Mental Toughness	Mean	S.D
Self Confidence	17.16	3.09
Negative Energy Control	17.83	3.25
Attention Control	16.30	2.70
Visual / Imagery Control	18.10	1.98
Motivational Level	17.33	2.83
Positive Energy	16.73	2.57
Attitude Control	17.83	2.73

Table-3
Comparison of Mental Toughness Successful and Non-Successful Yogis (n=60)

Mental Toughness	t	df	*Sig. (2-tailed)*	Mean Difference
Self Confidence	3.48	58	.001	2.46
Negative Energy Control	2.41	58	.019	1.63
Attention Control	2.63	58	.011	1.76
Visual / Imagery Control	1.12	58	.266	.70
Motivational Level	3.30	58	.002	2.30
Positive Energy	3.36	58	.001	2.23
Attitude Control	2.58	58	.012	1.76

Analysis of the fundamental areas of mental toughness revealed that the successful yogis scored significantly higher on all subscale of mental toughness and significant differences were observed between two groups (successful and non-successful) in self-confidence (p = 0.001), negative energy control (p = 0.019). Attention Control (p = 0.011), Visual / Imagery Control (p=0.266), Motivational Level (p = 0.002),

Positive Energy (p = 0.001) and Attitude Control (p = 0.012) the finding of our research is also supported by Kuan, G., Roy, J. (2004) who also observed significant differences between athletes (medalist and non medalist) in self confidence (p=0.001) and negative energy control (p=0.042). Medalist's scored significantly higher on self-confidence and negative energy control than the non-medalists (self confidence and negative energy control. The results of this experiment clearly showed that affecting some one's confidence will affect their performance. In our case also successful yogis were reported more self confidence than non successful yogis as 't' 3.48 is significant at 0.01 level of significance. The finding of this study is also supported by the Golby and Sheard (2003) who studied mental toughness at different levels of rugby league and reported that the athletes scored significantly higher on two of the seven mental toughness subscales (negative energy control and attention control).

The another study carried by Bortoli and Robazza (1997) and Stephaniel L and Stolz had clearly shown that in the motor and sport domain, the confidence which subject places on their own capacities is one of the most important factors affecting performance also found that there is a significant increase in the performance of individuals with higher self-confidence The results of this experiment clearly showed that affecting some one's confidence will affect their performance. In this case also successful yogis were reported more self confidence than non successful yogis as 't' 3.48 is significant at 0.01 level of significance.

Conclusion

At high level sport competitions it is difficult to beat the opposition by raw physical talent and game skill alone but sport performance is depend upon mental preparation and psychological strength so mental preparation must be done along with physical preparation for upcoming competition. The mental training may include setting up short-term goals, building confidence and control the negative thoughts. Present study is focusing on the implication and importance of psychological training by understanding affects of yogi's mind on their sports performance may beneficial for achieving maximum potential in sports.

Implication

Sports psychology is the key to sports excellence. Therefore, through the implementation of the psychology performance inventory, which highlights the mental toughness of players and the information obtained, would be specific to the psychological demands of yogis to achieve success in yoga. A greater understanding of psychological needs and demands of yogis would offer coaches, physical educationist, and trainer the opportunity to provide better support and advice to individual yogi. Therefore this study is useful to enhance the yogis overall performance.

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