

Assessment of Psychological Qualities of Selected Elite Indian Track and field athletes

Sanjay Garnaik¹, Ramakrishnan Gandhi²

ABSTRACT

The aim of this study was to identify and organise training, preparation and the development of an athlete from psychological point of view, and three major objectives were : to aid in identifying and appropriate intervention; to maximise the athlete's motivation and adherence to the program; and to monitor any changes over time.

The subjects for the study were 10 track & field athletes attending India camp. The first section was demographic information sheet consisting of several questions describing the sample's age height, weight and number of years they had participated in the sport. The test items selected for psychological parameters for assessing in this study were Task and Ego Orientation in Sport (TEOSQ) by Duda and Nicholls (1992); Competitive State Anxiety Inventory -2 (CSAI-2) by Martens et al (1990) to measure state cognitive state anxiety, somatic state anxiety and state self-confidence in competitive situations and Athletic Coping Skills Inventory (ACSI), to measure individual differences in Psychological Skills with in a context" (Smith et al. 1994)

In ego orientation and task orientation ; the minimum and maximum score was 2.50, 5.00, 3.71 and 4.71, with a mean and SD of 3.58 ± 0.82 ; and 4.25 ± 0.36 , respectively. In CSAI-Cog: CSAI-Som and CSAI-SC the minimum & maximum score was 11.00 & 23.00; 9.00 & 22.00 26.00 and 36.00, with a mean SD score of 18.70 ± 3.47 ; 16.90 ± 4.09 and 30.60 ± 3.41 , respectively. The minimum and maximum score in coping with adversity is 8.00 and 12.00 with a mean score & SD of 9.70 ± 1.70 ; in coach ability 4.00 and 12.00, with a mean score 10.20 ± 2.49 ; in concentration 5.00 and 11.00, with a mean score of 7.70 ± 1.9 ; in confidence and achievement motivation 8.00 and 11.00 with a mean score 9.90 ± 1.99 ; in peaking under pressure 4.00 and 12.00 with a mean score of 7.60 ± 2.46 and in freedom from worry 4.00 and 12.00 with a mean score 7.80 ± 2.15

The present finding indicates that the athletes are task oriented (success as mastery) than outperforming other (ego). In competitive anxiety they were towards high anxiety confidence. The ACSI scores indicate better coping skill among the athletes.

1. Coach Incharge, Athletics, SAI, NSNIS, Patiala and Research Scholar, Karpagam University, Coimbatore

2. Senior Athletic Coach, SAI, NSSC, Bangalore

INTRODUCTION

An elite athlete is a rare combination of talent, hard work and the right psychological profile. In sports today, everyone knows the best training methods, has access to the best facilities and most nutritional foods. Often the difference between the good and the elite is that of the mental qualities of the athletes. The focus of this paper is on three psychological characteristics of athletes: task and ego orientation, anxiety pattern and coping skills. More specifically, here it is a preliminary attempt to look various psychological variables such as task and ego orientation, anxiety pattern and coping skills among selected track and field athletes. In order for any athlete to prepare mentally for competition, a planned programme of all variables must be available. If an athlete is to attain his/her actual potential, the psychological portion of their training must begin early and continue throughout his career. This is currently not the situation. Very few coaches or programmes offer much of a psychological component. At best, the psychological offerings have been spontaneous and/or temporary in nature.

Vernacchia et al (2000) investigated psychosocial characteristics of 15 USA Olympic track and field athletes (9 males, 6 females), who participated in one or more of the Olympic Games. Interviews were conducted with each athlete that explored their dreams, developmental influences, performance

and developmental obstacles, mental preparation, salient mental and physical qualities, and advice to young athletes. A qualitative research design which employed content analysis methodology was used to derive general and emergent themes that categorized and described the athletes' responses to interview questions. Emergent themes included: mental skills and attitudes; developmental concerns; socioeconomic factors; and spiritual/religious factors. Overall, this study provided insight into the psychosocial factors that were important in the athletic and personal development of elite track and field athletes. Particular attention was given to the mental qualities and preparation necessary to become an elite track and field athlete and to succeed at the highest competitive levels.

Gould et al (2002) designed a study to examine psychological characteristics and their development in Olympic champions. Ten U.S. Olympic champions (winners of 32 Olympic medals) were interviewed, as were one of their coaches ($n = 10$), and a parent, guardian, or other significant persons ($n = 10$). A battery of psychological inventories was also administered to the athletes. It was found that the athletes were characterized by:

- (a) the ability to cope with and control anxiety;
- (b) confidence;
- (c) mental toughness/resiliency;
- (d) sport intelligence;

- (e) the ability to focus and block out distractions;
- (f) competitiveness;
- (g) a hard-work ethic;
- (h) the ability to set and achieve goals;
- (i) coach ability;
- (j) high levels of dispositional hope;
- (k) optimism;
- (l) adaptive perfectionism.

Results also revealed that a number of individuals and institutions influenced the athletes' psychological development including the community, family, the individual himself or herself, non-sport personnel, sport environment personnel, and the sport process. Coach and family influences were particularly important. Ways in which these sources influenced the athletes were both direct, like teaching or emphasizing certain psychological lessons, and indirect, involving modeling or unintentionally creating certain psychological environments. Psychological characteristic findings verified current sport psychological research on psychological characteristics associated with peak performance (Williams & Krane, 2001). They also suggest that adaptive perfectionism, dispositional hope, and high levels of optimism are new variables to consider. Results are also discussed relative to Bloom's (1985), Côté's (1999) and Csikzentmihalyi, Rathunde, Whalen, and Wong's (1993) talent development research. Practical implications focus

on implementing parenting and coaching practices related to the development of psychological characteristics associated with athletic success.

Objectives of the study

To identify and organise training, preparation and the development of an athlete from psychological point of view.

Three major objectives

1. To aid in identifying an appropriate intervention.
2. To maximise the athlete's motivation and adherence to the program.
3. To monitor any changes over time.

METHODOLOGY

The subjects for the study were 10 track & field athletes attending the Indian National Coaching Camp. The first section was demographic information sheet consisting of several questions describing the sample's age, height, weight and number of years they had participated in their sport. The test items selected for psychological parameters for assessing in this study were Athletic Coping Skills Inventory 'To measure individual differences in psychological skills within a sports context' (Smith, Schutz, Smoll and Ptacek, 1995) The ASCI was developed to assess specific psychological coping skills such as concentration and control of worry.

Task and Ego Orientation in Sport (TEOSQ)

TEOSQ is to assess individual differences in goal perspectives in sport settings. It also assesses whether the individual is prone to being task or ego orientated in the sporting context. This relates also to the extent that an individual defines success as mastery (task) or outperforming others (ego)

Competitive State Anxiety Inventory 2 (CSAI-2)

The CSAI-2 is an instrument used to measure state cognitive state anxiety, somatic state anxiety and state self-

confidence in competitive situations.

RESULT & DISCUSSION

As a pilot project, 10 athletes were tested on their various psychological characteristics. The descriptive scores are presented in Table 1.

The graphical representation of the score is given in figure 1.

In comparison to the norm presented by the author in ego-orientation mean and SD 2.75 ± 0.73 and task-orientation mean and SD 4.20 ± 0.42 . As per the norm, 9 indicates low anxiety confidence where as 36 indicates high anxiety confidence.

Table-1: Descriptive Statistics of Athletes in Sport Orientation and Anxiety Pattern

	N	Minimum	Maximum	Mean	Std. Deviation
Ego_Orientation	10	2.50	5.00	3.58	.82
Task_Orientation	10	3.71	4.71	4.25	.6
CSAI-Cog	10	11.00	23.00	18.70	3.47
CSAI-Som	10	9.00	22.00	16.90	4.09
CSAI-SC	10	26.00	36.00	30.60	3.41
Valid N (listwise)	10				

In coping with adversity the minimum score was 8.00 and maximum 12.00, with a mean score 9.70 ± 1.70 ; in coachability minimum score was 4.00 and maximum 12.00, with a mean score 10.20 ± 2.49 ; in concentration minimum score was 5.00 and maximum 11.00, with a mean score of 7.70 ± 1.95 ; in confidence and achievement motivation minimum score was 8.00 and maximum 11.00, with a mean score of

10.00 ± 1.33 ; in goal setting and mental preparation the minimum score was 8.00 and maximum 11.00, with a mean score 9.90 ± 1.99 ; in peaking under pressure the minimum score was 4.00 and maximum 12.00, with a mean score of 7.60 ± 2.46 ; and in freedom from worry minimum score was 4.00 and maximum 12.00, with a mean score 7.80 ± 2.15 .

The graphical representation of the score is given in figure 2.

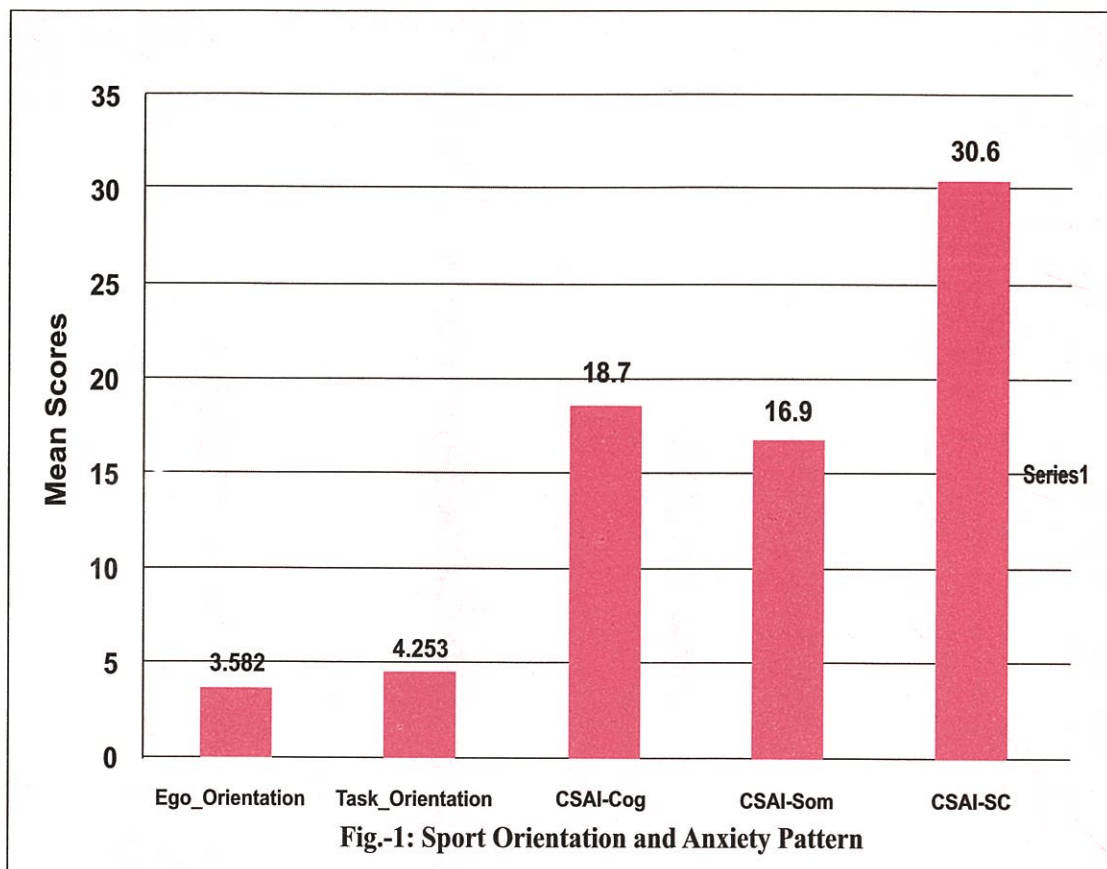
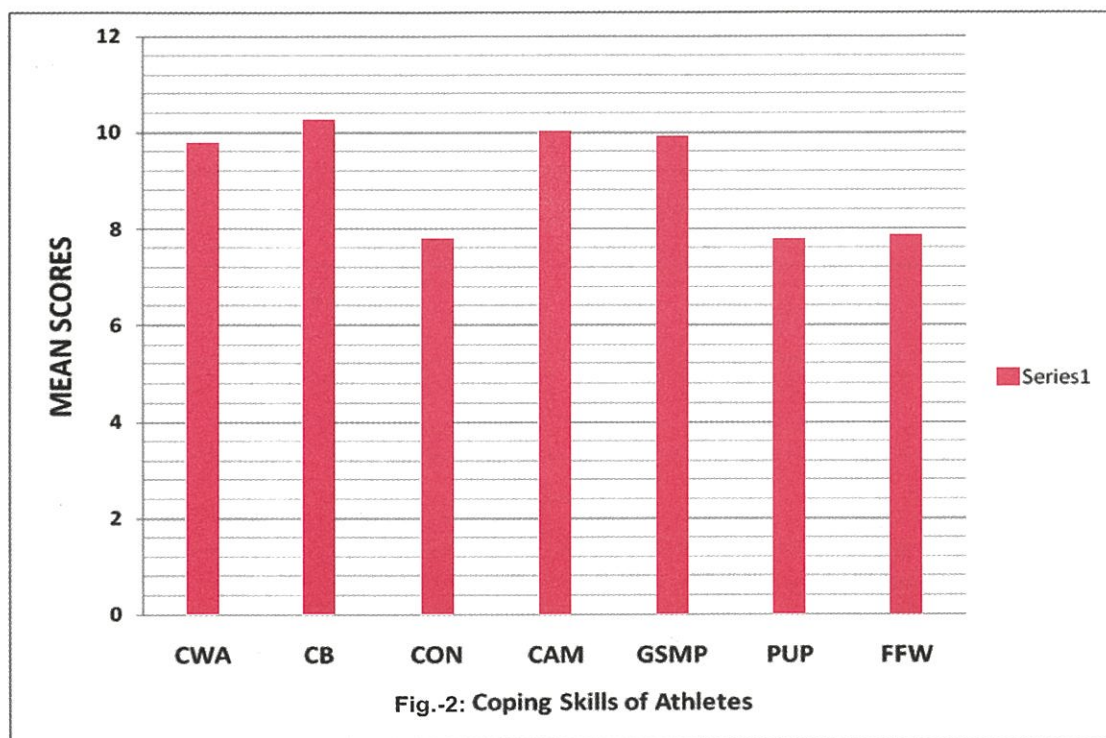


Table-2: Descriptive Statistics of Athletes in Coping Skills

	N	Minimum	Maximum	Mean	Std. Deviation
Coping with Adversity	10	8.00	12.00	9.70	1.70
Coachability	10	4.00	12.00	10.20	2.49
Concentration	10	5.00	11.00	7.70	1.95
Confidence&Achievement Motivation	10	8.00	11.00	10.00	1.33
Goal Setting & Mental Preparation	10	8.00	11.00	9.90	1.19
Peaking Under Pressure	10	4.00	12.00	7.60	2.46
Freedom from Worry	10	4.00	12.00	7.80	2.15
Valid N (list wise)	10				



CONCLUSION

TEOSQ is to assess individual differences in goal perspectives in sport settings

- At this moment, the profiling can very well be done; but, being a pilot project, it was seen that how do the athlete take this type of test as a way and means for their performance enhancement. It was felt that they were curious to know regarding the result of their own characteristic.
- Psychological characteristic findings verified current sport psychological research on psychological

characteristics associated with peak performance (Williams & Krane, 2001). They also suggest that adaptive perfectionism, dispositional hope, and high levels of optimism are new variables to consider. Results are also discussed relative to Bloom's (1985), Côté's (1999) and Csikzentmihalyi, Rathunde Whalen, and Wong's (1993) talent development research.

- Practical implications focus on implementing parenting and coaching practices related to the development of psychological characteristics associated with athletic success.

REFERENCES

- Bloom, B.S. (1985).** *Developing talent in young people*. NY: Ballantine.
- Cote, Jean (1999).** The Influence of the Family in the Development of Talent in Sport *The Sport Psychologist*, 13, 395-417 © 1999 Human Kinetics Publishers, Inc.
- Csikszentmihalyi, M., Rathunde, K. & Whalen, S. (1993).** *Talented teenagers: The roots of success and failure*. NY: Cambridge University Press.
- Daniel Gould, Kristen Dieffenbach & Aaron Moffett (2002).** Psychological Characteristics and their Development in Olympic Champions. *Journal of Applied Sport Psychology* Volume 14, Issue 3, DOI:10.1080/10413200290103482, pages 172-204
- Duda, J. L. (1989).** Relationship between task and ego orientation and the perceived purpose of sport among high school athletes. *Journal of Sport and Exercise Psychology*, 11, p. 318-335
- Martens, R. Vealey, R. & Burton, D. (1990).** *Competitive Anxiety in Sport*. Champaign, IL: Human Kinetics Vernacchia, R. A.; McGuire, R. T.; Reardon, J. P.; Templin, D. P. Psychosocial characteristics of Olympic track and field athletes. *International Journal of Sport Psychology* 2000 Vol. 31 No. 1 pp. 5-23 ISSN 0047-0767
- Williams, J. M. & Krane, V. (2001).** Psychological characteristics of peak performance. In J.M. Williams (Ed.), *Applied sport psychology: Personal growth to peak performance* (4th ed., pp. 137-147). Mountain View, CA: Mayfield.