

## A Study of Personality Dimensions in Sports Performance

Shrivastava<sup>1</sup>, P., Reeta VenuGopal<sup>2</sup>, Yaushpal Singh<sup>2</sup>

<sup>1</sup>. School of studies in Psychology, Pt. Ravishankar Shukla University, Raipur

<sup>2</sup>. School of studies in Physical Education, Pt. Ravishankar Shukla University, Raipur

### Abstract

The present study examined the cognitive, affective and conative aspects of personality contributing in high level sports performance. Tests of FDI cognitive style, sensation seeking, attribution style (locus of control scale) were administered on the interuniversity players (high level performance group) and on intercollegiate players (low level performance group). The results of the discriminant analysis indicates that the two groups of players were significantly different in their cognitive style, attribution style, and sensation seeking personality dimensions discriminant function (Wilks lambda=0.82,  $p < .001$ ). Significant F ratio indicates that the three personality dimensions differentiate individually, the two groups in sports performance. The personality dimension attribution style (external locus of control) in sports performance contributed for high level performance, 50.72% of the total discriminantes, contribution of FI cognitive style for the high level performance in sports was 32.80%. Sensation seeking contribution was found to be lowest of the total variance.

**Key Words: Cognitive Style, Attribution Style, Sensation seeking, Sports Performance**

### Introduction

Predicting the likely hood of success in a promising junior athlete in to an accomplished senior performer has been dream of every recruiter in sports or any other job. Personality attributes feature quite prominent in important life outcomes; as in academic achievement (Ferguson & James, 2000) vocational choice, as well as in sports and exercise related behavior, (Aidman & Chofield, 2004, Auweele et al, 2000). A wide variety of personality variables have been found to be associated in levels of achievement (Davis & Mogak, 1994; Kirkcadly, 1982) in a number of sports , including basketball (Evans & Quarterman, 1983), hockey (William & Parkman, 1980), football (Wilson & Freeman, 1986). Growing evidence suggest that emotional stability is associated with athletic success (Garfield

& Bennett, 1984; Terry, 1995). Researches also reveal that successful outcome by and large attributed to stable, controllable and internal causes (Robinson & Howel, 1987). Extroverts have been found to excel in sports Eysenck (1995). In sports information processing style of the sports person is important. How the players perceive the game and respond to it. A person high on field independence is said to seek differentiated information with well distinguished parts, where as field dependent person lacks internal organization ability. The field independent players have been found to be more physically active (Liu.w., 2006; Guillet & Collet, 2004; Lu & Suen, 1995; Skaggs et al, 1990).

Optimal level of stimulation, arousal or excitation is necessary. It has been proposed by scholars that risk taking and sensation seeking have been reported to be related with sports behavior. It is

also reported that numerous outdoor activities are related with sensation seeking (Zukerman, 1983).

Sports and games have their specific physical and activity requirement, attribution to success or failure makes an important impact on the performance of the players (Maureen & Lisen, 1993; Robinson & Hove, 1987; Kerr & Beh, 1995, Hamilton & Jordon, 2000). Locus of control is related to an athlete's perception and description about the outcome of the situation. There are two types of locus of control, one is internal locus of control and second is external locus of control. Athlete with internal locus of control describes the outcome within his control.

The literature on sports psychology reveals that the cognitive domain, affective domain, co native domain of the players makes difference in his performance. In sports arena there has been little evidence about the relationship, and contribution of personality dimensions specifically FDI cognitive style, sensation seeking and attribution style. It is important to know which of the personality dimensions contribute most in the high level performance. The knowledge of sportsman's personality when made available may be useful in achieving excellence in sports.

The study aims at examining the contribution of the personality dimensions FDI cognitive style, sensation seeking, and attribution style in high level sports performance.

*Method:* - The subjects of the study were 500 interuniversity players and 500 intercollegiate players with a mean age of 22.5 years. The psychological tests used to were,. the hidden figures test assess the

FD I cognitive style ,Hindi version of Zukerman's scale of sensation seeking to assess sensation seeking and Hindi adaptation of Rotters scale of locus of control to assess the attribution style of the subjects. The subjects were personally met and were asked to give the responses on the questionnaires after proper instruction for filling the questionnaire.

The dependent variable in the study was taken as the sports performance and the independent variables were the personality dimensions, cognitive style, sensation seeking and attribution style.

### **Results and Discussion**

The dependent variable being non metric the most suitable analysis discriminate analysis was computed to find out the set of personality components which discriminate high level and low level sports performance the results of the analysis is presented in the tables 1, 2.

**Table 1:-Summary of the set of personality components discriminating high and low level of sports performance**

PERSONALITY DIMENSION	WILKS LAMBDA	F- RATIO	SIGNIFICANCE
Fd-I cognitive style	0.956	46.42	0.00
Sensation seeking	0.937	67.60	0.00
Attributive style	0.871	147.51	0.00

**Table 2- showing canonical discriminant function**

FUNCTION	CANONICAL CORRELATION	WILKS LAMBDA	CHI SQUARE	P
1	0.418 (16% variation)	0.82	191.43	0.001

Table 2 shows the coefficient of multiple correlation among Mental Health, Spiritual Intelligence, Altruism, School Environment and Academic Achievement. The coefficient is 0.368 and its square is 0.135. this means that 13.5 % variance in mental health is explained jointly by gender, location of residence,

type of school, Spiritual Intelligence, Altruism, dimensions of School Environment and Academic Achievement of senior secondary school students.

**Table 3: Summary of ANOVA for regression model**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	9211.274	12	767.606	11.994	0.001
Residual	58942.565	921	63.998		
<b>Total</b>	<b>68153.839</b>	<b>933</b>			

Table 3 shows that F value is 11.994 which is significant at 0.01 level of significance with df 12/933. This means that the model presented is significant in predicting Mental Health of students. Thus the null hypothesis that there is no linear relationship of Mental Health to the independent variables is rejected. Two groups correctly classified 68.9%.

**Table 4- Relative importance values of the personality factors discriminating high and low performance in sports. Variable description standardized discriminate function difference relative importance.**

COGNITIVE STYLE	.088	2.036	32.80
Sensation seeking	.068	1.321	16.18
Attributive style	.0171	1.636	50.72

Wilks lambda is found to be significant (0.82,  $p < .001$ ), which indicates that two groups of players were significantly different in terms of their discriminate function. The canonical correlation associated with this function is .418 indicates 16% of variation among the two groups, constituting dependent variable, sports performance. The significant f ratio indicates that the predictors differentiate the two groups significantly in sports performance.

It is revealed from the table 3 that the relative importance of the personality dimensions discriminating between the

players of high and low sports performance groups. It further indicate that among the three variables the attributive style was found to be the most significant discriminating variable in sports performance groups accounting 50.72% of the total variance. The second important discriminating variable is FD-I cognitive style which account for 32.80 of the total variance. The third discriminating variable for sports performance groups is sensation seeking which contribute only 16.18 % of the total variance. on the basis of mean of the relative values the present study indicates that higher level sports performance showed external locus of control ,field-independent cognitive style, high sensation seeking in comparison to low sports performance group. It is clear from the findings of the study that for higher performance, external locus of control plays an important role in finding the avenues for better training, environment incentives etc. In various studies researchers have reported that players mostly attribute the internal factors for their success, whereas in the present study the high performing group has shown external locus of control.

The field independent cognitive style is also an important contributor in high level sports performance. The field-independent person has the ability to differentiate the information easily and comparison to the field-dependents (Liu, 2006).

It was thought earlier for sports activity stimulation or arousal is necessary. The sensation seeking personality factor may have role in determining the higher level performance in sports the results of the study reveals that amongst the three personality factors

sensation seeking least contributes in the high sports performance. The external locus of control and field independence cognitive style seems to be potential contributors for higher level performance in sports.

## References:

- Aidman, E.V. & Scheffield G. 2004. Personality and Individual differences in sports. In T.Morris & J Samme (eds), Sports psychology: Theory Applications and Issues (2<sup>nd</sup> ed.) pp, 22. 47 Milton & wiley.
- Auweele, V.Y., Nys., K., Rzewniciki, R, & Vanmele, V. 2001. *Personality and the Athlete*. In Singer, R.W., Hausenblas, H.A., & Janelle, C.M. (eds).Hand book of sports psychology.(2<sup>nd</sup> eds ) pp.239-268 , New York Wiley.
- Davis, C.S. & Mogk, J.P. 1994. Some personality correlates of interest and excellence in sports. *Int. J. Sports Psychology*, 25: 131-143.
- Evans, V., and Quarterman, J. 1983. Personality characteristics of successful and unsuccessful black female basketball players. *Int. J. Sports Psychology*, **14**: 105-115.
- Eyesenck, H.J. 1995. Science and Psychology of Sports –The place of personality theory. *Sportonomics*, **1(1)**: 3-9.
- Ferguson, E., Sanders, A.O., Heir, F., & James, D. 2000. Predictive validity of personal statements and the role of five factor model. *J. Occ. Org. Psychology.*, **73(3)**: 321-344.
- Guillet , A., & Collet 2004. Analyzed relationship between fd-I and complex motor skills.Perceptual Motor Skills, **98(2)**: 575-583
- Hamilton, P.R. & Jordan, J. S. 2000. Most successful and least successful performance; perceptions of causal attributions in high school track athletes. *J. Sports Behav.*, **23(3)**: 245-254.
- Kerr, R.H., & Beh, H.C. 1995. Attributions of causality in different grades of Australian football league players. *Aust. Psych.*, **30(2)**: 102-108.
- Kirkcaldy, B.D. 1982. Personality profiles of various level of athletic participation. *Personality and Individual Differences*.
- Kumar & Shrivastava , S. 1985. *Hindi version of Rottres Locus of control scale*. Kumar Publications.
- Liu, W. 2006. Field dependence –independence and participation in physical activity by college students. *Percept. Motors Skills*, 102(3): 8-14.
- Lu, C., & Suen, J. 1995. Aassessment approaches and cognitive styles. *J. Educat. Meas*, **32**: 1-17.
- Maureen, A., & Lisa 1993. The devil made me to do it childrens attribution for performance in physical domain. *News paper abstracts*.
- Robinson, D.W. & Howe, B.L. 1987. Causal attributions and mood state relationships of soccer players in sports achievement setting. *Journal of sports Behav.*, **10(3)**: 137-146.
- Singh, A.J. 1987. Competitive trait anxiety of top level Indian athelets & hockey players, *NIS Scientific Journal*.
- Skags, L.P., Rocklin, T., Danserell, D., & Hall, R.H. 1990. Diyadic learning of technical material. Individual differences social interaction, and recall. *Contemp. Educat. Psych.*, **15**: 47-63.
- Zuckerman, M. 1983. Sensation seeking and sports. *Personality and Individual Differences*, **4**: 285-293.

