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Neuroticism of cricket players in relation to their sports achievement

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Abstract

The present study was an attempt to investigate the significant mean difference and correlation between neuroticism & sports achievement of cricket players which are participating at District, State, Inter-university and National level. The sample of the study comprised 300 cricket players of Haryana state. All the players are male participants and their age ranges from 17 to 23 years. Neuroticism of cricket players was incorporated by NEO Five Factor Inventory (FFI): Costa and McCrae, 1995. In order to test the significance of mean difference between the variables descriptive statistics, one way analysis of variance (ANOVA) was applied and for comparison between possible pairs of different achievement groups, Scheffe's post hoc test was applied. The correlations among variables were obtained by using Pearson's product moment method of correlation. The result indicates that the correlation between personality trait neuroticism and different achievement levels of cricket players were found to be significant. Personality dimension neuroticism showed negative correlation with different achievement levels of cricket players. The cricket players of different achievement groups differ significantly on neuroticism. It means, players participating at lower level are more anxious and worried during competitions as compared to those playing at higher level.

Keywords: Neuroticism, Sports achievement, Cricket, Players.

Introduction

Cricket is perhaps the only sport with a tradition that can broadly be classified as culture. Cricket has been regarded as character's mirror, in a manner more complete than faster games of shorter duration. Its effect on and relevance within society has been widely acknowledged. Although still a sport, it has influenced decisions social and, at times, political as well. The game of glorious uncertainties, cricket is now the most popular game in the sub-continent. The people are so crazy for this game that it has attained the dimensions of an industry. One reason behind this popularity may be the unpredictability of the game. Unpredictability is one among its many virtues, a single session/over can change from the dull to the dramatic; it can be polished or rustic, absorbing or boring, scientific or outrageous, ceremonial or irreverent. Till the last ball is bowled the game is wide open. It can take numberless twists and turns till it comes to a thrilling end. It thrills, it keeps you on toes, and it makes you crazy and imparts immense pleasure. Analytically, it is not just a game but as a whole it is a complete package of entertainment and excitement.

Personality

The term personality has traditionally been used by psychologists to try to capture the totality of human behavior. Theorists have tended to use the term to explain human nature - that is, what people are naturally all about. Particularly during the last part of the 19th century and the first half of the 20th, a number of theoretical models of human nature were developed. Each theoretical model expressed explicitly or implicitly a set of basic assumptions about human nature, and these sets of assumptions eventually gave rise to a number of conflicting views of personality. Some theorists, such as Freud (1962) ^[12] and other psychoanalysts viewed the human personality as basically irrational, driven by powerful biological forces over which the individual had little control. Behaviorist theorists assumed little about the moral basis of human conduct, but they believed that human behavior is determined by environment and learning. The issues of whether people are good or evil, rational or irrational, and free or

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determined have remained basic themes in most theories of personality (Coleman, 1979)^[2].

The NEO-Personality Inventory (Costa and McCrae, 1985, 89, 92)^[6, 7] is an extension of an earlier three factors NEO model (neuroticism, extraversion and openness) that now includes the additional Big Five dimensions of Agreeableness and Conscientiousness. The earlier three factor model evolved from a series of studies of the stability of trait structures across age groups (Costa and McCrae, 1976, 78, 80)^[3-5]. In the original NEO Inventory, the three age invariant facets contained six factors which were chosen to be representative of previously identified substantive components and which were thought to provide “a useful level of generality” in representing these components (Costa and McCrae, 1986).

The inventory aimed at five broad dimensions originated in a study in which domain scales from the three factors NEO Inventory were correlated with : (1) a set of adjectival markers of the Big Five developed by Goldberg (1983)^[13] and (2) factor score derived from an extended set of the Big Five adjective which included the Goldberg markers. In this study, NE & O domain scores converged on corresponding Goldberg scales and adjective factor scores, and were found to be uncorrelated with the adjectival measures of Agreeableness and conscientiousness (McCrae and Costa, 1985c). These finding encouraged Costa and McCrae to extend their NEO Inventory by constructing brief questionnaire. Scale to index the domain agreeableness and conscientiousness. Brief, preliminary markers (McCrae and Costa, 1987)^[15] were later expanded into a full complement of facet scales for these two domains (Costa and McCrae and Dye, 1991)^[9]. A convenient 60 item short form of NEO Personality Inventory has recently been published under the title, “Five Factor Inventory (FFI: Costa and McCrae, 1989). These expansions and additions have been incorporated in a recent revision of the NEO-PI (Costa & McCrae, 1992)^[7].

The NEO-FFI provides comprehensive study of Big Five Factors. It comprises 12 items for each dimension making a total of 60 items. It is a fair measure of the five major dimensions of personality and some of the more important traits/facets that define each dimension. The NEO-FFI allows a comprehensive assessment of adult personality. The description of neuroticism domain covered by NEO-FFI is given as under:-

Neuroticism (N): The most pervasive domain of personality scales contrasts adjustments or emotional stability with maladjustment or neuroticism. Although clinicians distinguish among many different kinds of emotional distress, from social phobia to agitated depression to borderline hostility, innumerable studies have shown that individuals prone to any one of these emotional states are also likely to experience others (Costa and McCrae, 1992)^[7]. The general tendency to experience negative effects such as fear, sadness, embarrassment, anger, guilt and disgust is the core of the N domain.

Sports Achievement

Sports achievement is always a many sided phenomenon. In this sense it depends on many factors such as physique, motor fitness, technique, tactics, intelligence, early life experiences, physiological conditioning etc. Various factors and conditions affect the sports achievement of a particular player in particular field. Sometimes quite capable players may not achieve as is expected on the basis of their abilities. The achievement of a cricketer depends indeed on his conceptual

learning and understanding on ground. It further depends on numerous factors like cricketer’s interest and motivation in the game that they play; the devices and methods adopted by coaches on ground, family setup and situational playing habits. It is pertinent to mention that economic, social and cultural factors tend to influence sports achievement of the cricketers.

In addition to all these, there are certain factors associated with affected domain of a player. These factors may be genetically determined or environment based. Among these, the factors of primary importance are psychological factors. Among these psychological factors neuroticism may have a deep and serious effect on the performance of cricket players. Besides, the mental makeup, personality factor neuroticism and surroundings do play an important role in shaping the performance of a cricketer. In this research personality trait neuroticism was judged as the variable affecting sports achievement.

Methodology

The sample of the study comprised 300 cricket players of Haryana state. All the players are male participants and their age ranges from 17 to 23 years. The data has been divided into four achievement groups each having 75 subjects in it. Achievement groups/levels are District, State, Inter-university and National level. The data at hand was collected by the researcher by personal visits to cricket players of various districts of Haryana. The random sampling technique was utilized to collect the required data of the subject during inter-collegiate, inter-university and national camps and competitions and practicing at popular centers of Haryana state.

Tool

NEO Five Factor Inventory (FFI): Costa and McCrae, 1995^[8]. The NEO-FFI is a 60 item version of form S of the NEO PI-R that provides a brief, comprehensive measure of the five domains of personality. It consists of five 12 item scales that measure each domain. The NEO-FFI was developed as a short form of the NEO-PI. Although new norms have been provided, the instrument itself is unchanged. Item selection of the NEO-FFI used the validimax factors (McCrae & Costa, 1989b) from the NEO-PI as the criteria. The sample of 983 men and women from the 1986 administration of the NEO-PI (Costa & McCrae, 1988b) provided data for item selection. All 180 items were factored, and five principal components were extracted. The validimax method was then employed to rotate the item factors to maximize convergent and discriminate validity with the NEO-PI validimax factors.

For each domain, the 12 items having the highest positive or negative loading on the corresponding factor were selected as preliminary NEO-FFI items. After these items were examined, about 10 substitutions were made to diversify item content, eliminate items with joint loadings, and ensure that no more than two-thirds of the items on any scale were keyed in the same direction as a control for acquiescent responding. Each item is responded by the subject on a five point scale represented by the labels of strongly disagree, disagree, neutral, agree and strongly agree. About half of the items are negatively worded, so their scoring is reversed. There is no time limit for the NEO-FFI, but most respondents require 10 to 15 minutes to complete it.

The reliability coefficients of the NEO FFI were obtained in terms of internal consistencies and test-retest. The internal consistency reliability of the scale measured in terms of coefficient alpha were found to be .86, .77, .73, .68, and .81 for

N, E, O, A and C respectively. The test-retest reliability (with three months interval) of NEO-FFI scales were obtained from a college sample, coefficients were found to be .79, .79, .80, .75 and .83 for N, E, O, A and C scales, respectively. For validity, the NEO-FFI scales were correlated with the NEO-PI validimax factors and the NEO-FFI scales showed correlations ranging from .75 for C to .89 for N. When the NEO-FFI was correlated with the domain scales of the NEO PI-R in the ABLSA sample, correlations were .92, .90, .91, .77 and .87 for N, E, O, A and C domains, respectively.

Findings

Table 1: Description of the sample selected

Name of District	ACHIEVEMENT LEVEL				Total
	District	State	Inter-University	National	
Jind	7	2	6	1	16
Hissar	8	6	9	3	26
Sirsa	7	4	8	3	22
Rohtak	8	15	10	18	51
Karnal	7	2	6	1	16
Bhiwani	8	13	12	20	53
Panipat	7	2	2	1	12
Gurgaon	8	12	9	13	42
Sonepat	7	4	4	2	17
Faridabad	8	15	9	13	45
Total	75	75	75	75	300

Table 2: Descriptive Statistics of Combined Sample

Variables	Means	SDs
N	17.98	5.40

Table 3: Inter-correlation Matrix

Variables	Achievement
Neuroticism	-.35

Note: $r \geq .12$ is significant at .05 probability level.
 $r \geq .15$ is significant at .01 probability level.

Table 4: Different achievement groups on the measure Neuroticism. Mean and SDs

Groups	Means	SDs
District	20.16	5.13
State	19.31	5.03
Inter-University	17.25	5.14
National	15.18	4.98

Summary of ANOVA

Source of Variation	SS	df	MS	F	P
Between Groups	1115.94	3	371.98	14.48	.001
Within Groups	7605.01	296	25.69		
Total	8720.95	299			

Scheffe's post hoc test

Dependent Variable	Groups	Mean Difference	Sig.
Neuroticism	District State	.87	n.s.
	Inter-University	2.91	.01
	National	4.98	.001
	State Inter-University	2.06	n.s.
	National	4.12	.001
	Inter-niversity National	2.07	n.s.

Results and Discussion

It is clear from the correlation results that personality trait neuroticism showed significant relation with achievement in cricket and play an important role. The correlation between neuroticism and achievement levels of cricket players is -.35 (table3). However, the negative correlation between these two variables means that people high on neuroticism who possess negatively affect like fear, sadness, embarrassment, anger and disgust perform at lower level in cricket. The negative correlation between this variable and different achievement levels of cricket players indicates that this personality attribute extent detrimental effect on sports performance in a team game like cricket.

The results of ANOVA presented in table 4 reveal that all the achievement groups of cricket players differ significantly on personality dimension neuroticism. The F- ratio for personality dimension Neuroticism equals to 14.48 (df = 3/296) which is significant at .001 probability level. It suggests that the difference among achievement groups on personality factor Neuroticism are much marked. A perusal of mean (table- 4) indicates that District level cricket players are highest with the mean of 20.16 (SD = 5.13) and the National level players are lowest with the mean of 15.18 (SD = 4.98). The mean scores of State and Inter-University level cricket players are close to each other, the means are 19.31 (SD=5.03) and 17.25 (SD = 5.14), respectively.

Scheffe's post hoc test result (table- 4) suggests that the differences between comparison groups District V/s Inter-University, District V/s National and State V/s National are highly significant. It is clear from the means that District level cricket players are higher on Neuroticism as compared to National and Inter-University and State level cricket players. Higher score on Neuroticism points to the general tendency in players to experience negative effects such as fear, sadness, embarrassment, anger, guilt, and disgust. It means, players participating at lower level are more anxious and worried during competitions as compared to those playing at higher level.

Conclusions

The correlation between personality trait neuroticism and different achievement levels of cricket players were found to be significant. Personality dimensions neuroticism showed negative correlation with different achievement levels of cricket players. The cricket players of different achievement groups differ significantly on neuroticism. District level cricket players are higher on Neuroticism as compared to National and Inter-University and State level cricket players. It means players participating at lower level are more anxious and worried during competitions as compared to those playing at higher level.

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