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A study of personality traits among senior national, all India inter-university and inter-college level hockey players

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Abstract
For this purpose, seventy-five (N=75) Female Hockey Players of 18 to 25 years of age group were selected to act as subjects. They were divided into three groups which includes: Group-A: (n_1=15; Senior National Level Hockey Players); Group-B: (n_2=25; All India Inter-university Level Hockey Players); Group-C: (n_3=35; Inter-College Level Hockey Players). The purposive sampling technique was used to attain the objectives of the study. The sample were taken from the three states of northern India viz. Punjab, Haryana and Himachal Pradesh. All the subjects, were informed about the objective and protocol of the study. The Statistical Package for the Social Sciences (SPSS) version 14.0 was used for all analyses. The differences in the mean of each group for selected variable were tested for the significance of difference by One-way Analysis of Variance (ANOVA). For testing the hypotheses, the level of significance was set at 0.05. Neuroticism (N): The f-ratio value is 1.10123. The p-value is .337996. The result is not significant at $p < .05$. Extraversion (E): The f-ratio value is 0.41729. The p-value is .660415. The result is not significant at $p < .05$. Openness to experience (O): The f-ratio value is 1.26277. The p-value is .28906. The result is not significant at $p < .05$. Agreeableness (A); The f-ratio value is 0.40203. The p-value is .670452. The result is not significant at $p < .05$. Conscientiousness (C): The f-ratio value is 0.02537. The p-value is .974962. The result is not significant at $p < .05$ and Personality Traits: The f-ratio value is 1.49877. The p-value is .230291. The result is not significant at $p < .05$.

Keywords: Hockey Players, Neuroticism (N), Extraversion (E), Openness to experience (O), Agreeableness (A), Conscientiousness (C), Personality Traits

Introduction
Enhancing athletic performance is one of the main goals of sport psychology. In fact, sport can be viewed as a laboratory in which the efficiency of functioning is being investigated under high pressure and accompanying intense emotions (Jarvis, 2006) [4], creating unique conditions for exploring the role of personality and individual differences in human performance. Across various theories, approaches, and measures of perfectionism, these two factors emerge as higher-order dimensions in factor analysis (Bieling, Israeli, & Antony, 2004; Hill *et al*., 2004; Stairs, Smith, Zapolski, Combs, & Settles, 2012) [1, 3, 5]. Currently, those two forms are regarded as "perfectionistic strivings" and "perfectionistic concerns" (Stoeber & Otto, 2006) [6] or "personal standards perfectionism" and "evaluative concerns perfectionism" (Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000) [2].

Subjects
For this purpose, seventy-five (N=75) Female Hockey Players of 18 to 25 years of age group were selected to act as subjects. They were divided into three groups which includes:
- Group-A: (n_1=15; Senior National Level Hockey Players);
- Group-B: (n_2=25; All India Inter-university Level Hockey Players);
- Group-C: (n_3=35; Inter-College Level Hockey Players).

The purposive sampling technique was used to attain the objectives of the study. The sample were taken from the three states of northern India viz. Punjab, Haryana and Himachal Pradesh. All the subjects, were informed about the objective and protocol of the study.

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Variables

Big Five Personality Inventory

The organizations of psychological trades determine the unique adjustment and behaviour of the person. Personality has always been a challenging aspect for the psychologist especially from the measurement point of view. However, various psycho-metrics measures are available for assessing personality.

However, the given inventory presents a unique step in the direction of measurement of personality. The research work of Allport & Odbert (1936) finalized about 4500 personality traits. However, these innovative works encouraged other researcher to examine simplified description of these traits with a variety of populations leading to the derivation of five relatively strong factors. The analysis resulted into the emergence of five factors such as Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness. These big five factors are found to be abscart and broad in personality hierarchy. All these five factors considered to possess considerable reliability and Validity to remain relatively stable throughout the childhood.

- **Neuroticism (N):** It is well clarified that neuroticism indentifies persons quite prone to psychological distress. It leads to development of unrealistic ideas, coping strategies and excessive cravings. High Score in this count is characterized by being insecure, emotional, nervous and hypochondriacal. The low score in these categories are because of the relaxed, calm, unemotional and self-satisfied behaviour.
- **Extraversion (E):** These qualities assess the quantity and intensity of interpersonal interaction activity level need for simulation and capacity to enjoy. High Score in this count is characterized by being active, social, optimistic and affectionate. Low scores are characterized being aloof, reserved, task-oriented, quiet, sober and retiring.
- **Openness to experience (O):** It means receptiveness to new ideas, approaches and experiences. High scores in this category characterizes being curious, creative, original and imaginative. Low scores relives as being conventional, unartistic and unanalytical and showing narrow interest.
- **Agreeableness (A):** This quality refers to the tendency to agree with others and assess the quality of one's interpersonal orientation. High scores characterized by being helpful, good nature, forgiving, soft-hearted and companionate. Low scores point out being rude, cynical, unhelpful and ruthless, irritable, vengeful and manipulative.
- **Conscientiousness (C):** It refers to the person's degree of organization, persistence and motivation in goal-directed behaviour. High scorers label one as organized, hardworking, self-disciplined, punctual, ambitious and preserving. Low scorers point out as being unreliable, aimless, careless, negligent, weak-willed and hedonistic.

The cultivation of various personality traits have been put forth by BFPI. The most important difference pointed out in human interactions has been labeled as single term in about all the languages. It has been evidenced that in different cultures used different languages and form the basic personality with the five models. Nearly reviews of studies in different languages in references to different cultures appear to support be fundamental flexible hypothesis.

Method

Different dimensions were included in the BFPI bounding like Extraversion, Neuroticism, Openness to experience, Agreeableness and Conscientiousness. For example, Extraversion was said to consist of sub factors like Activity level, Assertiveness, Excitement seeking, Positive emotion and Gregariousness. Similarly, each of the remaining four dimensions consisted of five sub- factors. The decision to include the respective five sub- factors was done in light of review of literatures obtained through various sources.

Table 1: Big Five Dimensions and their sub- factors

Dimensions	Sub- Factors
Neuroticism (N)	1. Anxiety 2. Angry hostility 3. Impulsiveness 4. Depression 5. Self- Consciousness
Extraversion (E)	1. Activity level 2. Assertiveness 3. Excitement seeking 4. Positive emotion 5. Gregariousness
Openness to experience (O)	1. Aesthetics 2. Action 3. Ideas 4. Fantasy 5. Value
Agreeableness (A)	1. Altruism 2. Compliance 3. Tender mindedness 4. Straight forwardness 5. Trust
Conscientiousness (C)	1. Competence 2. Order 3. Dutifulness 4. Self- discipline 5. Deliberations

For testing the orthogonality of these five dimensions on Indian samples (N= 100) with age range from 20 to 38 years person, inter dimensional correlations were computed.

Statistical Application

The Statistical Package for the Social Sciences (SPSS) version 14.0 was used for all analyses. The differences in the mean of each group for selected variable were tested for the significance of difference by One-way Analysis of Variance (ANOVA). For testing the hypotheses, the level of significance was set at 0.05.

Results

Table 2: Neuroticism (N)

Summary of Data				
	Treatments			
	Senior National Level	All India Inter-university Level	Inter-College Level	Total
N	15	25	35	75
∑X	915	1452	2069	4436

Mean	61	58.08	59.1143	59.147
$\sum X^2$	56287	85224	123559	265070
Std. Dev.	5.8064	6.0959	6.0671	6.0352

Result Details				
Source	**SS**	**df**	**MS**	
Between-treatments	80.0038	2	40.0019	F = 1.10123
Within-treatments	2615.3829	72	36.3248	
Total	2695.3867	74		

The f-ratio value is 1.10123. The p-value is .337996. The result is not significant at $p < .05$.

Table 3: Extraversion (E)

Summary of Data				
	Treatments			
	Senior National Level	**All India Inter-university Level**	**Inter-College Level**	**Total**
N	15	25	35	75
$\sum X$	956	1570	2204	4730
Mean	63.7333	62.8	62.9714	63.067
$\sum X^2$	61118	98802	139150	299070
Std. Dev.	3.6736	2.9297	3.2583	3.2146

Result Details				
Source	**SS**	**df**	**MS**	
Between-treatments	8.7619	2	4.381	F = 0.41729
Within-treatments	755.9048	72	10.4987	
Total	764.6667	74		

The f-ratio value is 0.41729. The p-value is .660415. The result is not significant at $p < .05$.

Table 4: Openness to experience (O)

Summary of Data				
	Treatments			
	Senior National Level	All India Inter-university Level	Inter-College Level	Total
N	15	25	35	75
$\sum X$	940	1517	2156	4613
Mean	62.6667	60.68	61.6	61.507
$\sum X^2$	59160	92349	133330	284839
Std. Dev.	4.2538	3.5204	3.9123	3.8708

Result Details				
Source	**SS**	**df**	**MS**	
Between-treatments	37.5733	2	18.7867	F = 1.26277
Within-treatments	1071.1733	72	14.8774	
Total	1108.7467	74		

The f-ratio value is 1.26277. The p-value is .28906. The result is not significant at $p < .05$.

Table 5: Agreeableness (A)

Summary of Data				
	Treatments			
	Senior National Level	**All India Inter-university Level**	**Inter-College Level**	**Total**
N	15	25	35	75
$\sum X$	947	1543	2164	4654
Mean	63.1333	61.72	61.8286	62.053
$\sum X^2$	60559	95481	134752	290792
Std. Dev.	7.4245	3.2083	5.2998	5.1933

Result Details				
Source	**SS**	**df**	**MS**	
Between-treatments	22.0419	2	11.021	F = 0.40203
Within-treatments	1973.7448	72	27.4131	
Total	1995.7867	74		

The f-ratio value is 0.40203. The p-value is .670452. The result is not significant at $p < .05$.

Table 6: Conscientiousness (C)

Summary of Data				
	Treatments			
	Senior National Level	All India Inter-university Level	Inter-College Level	Total
N	15	25	35	75

∑X	962	1596	2240	4798
Mean	64.1333	63.84	64	63.973
∑X²	62040	102154	143962	308156
Std. Dev.	4.955	3.3252	4.2078	4.0469

Result Details				
Source	**SS**	**df**	**MS**	
Between-treatments	0.8533	2	0.4267	F = 0.02537
Within-treatments	1211.0933	72	16.8207	
Total	1211.9467	74		

The f-ratio value is 0.02537. The p-value is .974962. The result is not significant at $p < .05$.

Table 7: Personality Traits

Summary of Data				
	Treatments			
	Senior National Level	**All India Inter-university Level**	**Inter-College Level**	**Total**
N	15	25	35	75
∑X	4710	7675	10820	23205
Mean	314	307	309.1429	309.4
∑X²	1481812	2358969	3350448	7191229
Std. Dev.	14.3228	10.6927	12.7444	12.5213

Result Details				
Source	**SS**	**df**	**MS**	
Between-treatments	463.7143	2	231.8571	F = 1.49877
Within-treatments	11138.2857	72	154.6984	
Total	11602	74		

The f-ratio value is 1.49877. The p-value is .230291. The result is not significant at $p < .05$.

Conclusions
- **Neuroticism (N):** The f-ratio value is 1.10123. The p-value is .337996. The result is not significant at $p < .05$.
- **Extraversion (E):** The f-ratio value is 0.41729. The p-value is .660415. The result is not significant at $p < .05$.
- **Openness to experience (O):** The f-ratio value is 1.26277. The p-value is .28906. The result is not significant at $p < .05$.
- **Agreeableness (A);** The f-ratio value is 0.40203. The p-value is .670452. The result is not significant at $p < .05$.
- **Conscientiousness (C):** The f-ratio value is 0.02537. The p-value is .974962. The result is not significant at $p < .05$.
- **Personality Traits:** The f-ratio value is 1.49877. The p-value is .230291. The result is not significant at $p < .05$.

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Conflict of interests
- The authors declare no conflict of interest.

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