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Study of Cognitive Style among Individual and Team Game Players

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Abstract

Main purpose of this study was to compare the cognitive style among individual game players and team game players, and second was to examine interaction effect between individual and team game players according to type of game (individual game and team game) and gender of player (male player & female player). A sample of 300players (150individualgame players and 150team game players) was selected through simple random sampling method of probability sampling. For this study Cognitive Style Inventory (CSI) developed by Praveen Kumar Jha(2001) was used for data collection. Mean, SD, and two way ANOVA etc. statistics techniques were used for data analysis and interpreting.

The results show that, significant difference between individual and team game players in terms of cognitive style. The results show that, individual game players have more intuitive style than team game players in terms of cognitive style. The results also show that male players have more systematic style than female players for their cognitive style. The results further show that male individual game players have more intuitive cognitive style than female individual game players and male team game players have more systematic cognitive style than female team game players. The gender difference in terms of cognitive style is found in individual and team game players.

Keywords: Cognitive Style Game Players

Introduction

Games or sports play crucial role in our personality development and they are also helpful to enrich our physical and mental health. Games are superior and advanced manifestation of our culture (Alegaonkar, 2010).

For success or failure in any sport, innate characteristics of sport persons are more important than the characteristics of that sport itself. Several psychologists believe that quality of performance and participation in sport are determined by personality (Cox,&Devon, 2000).

Sport performance is influenced by various factors in modern sport era, such as anthropometric, biomechanical, physical, physiological, psychological, social-economical, environmental, technical etc. Personality is central factor in these psychological factors and there are huge differences among us in the ways we think, feel and behave in response to particular situations (Devon, 2000; Allport, 1987; Rotter, 1956; Bandura, 1925).

Coaches can make more precise decisions in choosing athletes talent for certain sports by having knowledge of their personality and they can act more wisely in guiding their athletic abilities and planning for improving their strengths and coping with their weaknesses (Rathore, 2012).

Sport persons on field and off field behavior is also a matter of keen interest among general public.Whether players' particular behaviour pattern or temperament may contribute in success of particular type of game along with sound physical health is a topic of applied research. Common sense also suggests that playing a particular type of game for a long duration may results in to a particular behavior, cognitive style along with positive aspects of personality.

Cognitive Style

Cognitive styles are characteristics of self-consistent, mode of function which individual's show in their perceptual and intellectual activity (Witkin, 1977). Cognitive style refers to information processing habits such as perceiving, thinking, remembering and problem solving (Goldstein and Black Man.1978). It is innate and affects a wide range of individual functioning.

In education, cognitive style refers to how the students acquire knowledge (cognition) how they process information (conceptualization) and how it is applied in problem solving (Epstein, 1994).

Keen (1973), McKenney and Keen (1974), and Botkin (1974) described the two extremes styles of cognitive style. Many researchers address the same basic elements identified earlier as the systematic and intuitive styles (Sargent, 1981; Martin, 1983; Buzan 1983; Wonder &1984).

1) Systematic Style: An individual who typically operates with a systematic style uses logical, rational, sequential and a well-defined step-by-step approach when solvinga problem; looks for an overall method or pragmatic approach; and then makes an overall plan for solving the problem.

2) Intuitive Style: The individual, whose style is intuitive, uses spontaneous, holistic, visual approach and an unpredictable ordering of analytical steps when solving a problem, relies on experience patterns characterized by universalized areas or hunches and explores and abandons alternatives quickly.

The present study is concerned with thecognitive style among district level individual and team game players.

Objectives

1. To find out cognitive styleamong district level individual and team game players.
2. To compare the cognitive style among district level individual and team game players.
3. To find out the gender differences among district level individual and team game players in terms of their cognitive style.

Hypothesis

1. Team game players would experience higher systematic cognitive style than individual game players.

2. Female players would experience higher systematic cognitive style than male players.
3. Individual game players would experience higher intuitive cognitive style than team game players.
4. Male players would experience higher intuitive cognitive style than female players.
5. There would be significant interaction between types of players and gender in terms of the cognitive style.

Method

- **Sample**

In the present study, researcher was select total 300 samples; out of them 150 was individual game players, male players (75) and female players (75) and 150 was team game players, male players (75) and female players (75). Samples was selected from colleges of Aurangabad, Beed and Jalana district affiliated to Dr. BabasahebAmbedkarMarathwada University, Aurangabad by random sampling method for each category.

- **Research design**

In the present study 2 x 2 factorial design have been used types of players (individual and team game players) x gender of the player (male and female players).

- **Variables**

In this present research, types of players (individual and team game players) and gender of players (male and female players) are independent variables and cognitive styleis dependent variables.

- **Research Tool*(Cognitive Style Inventory)***

Cognitive style inventory (CSI) developed by Dr. Praveen Kumar Jha (2001). It is a bio-dimensional measure of systematic style and intuitive cognitive style consisting of 20 items each.The full length split half reliability of CSI was 0.653 and for systematic and intuitive cognitive styles are 0.83 and 0.78 ($p<0.01$) respectively.

- **Statistical Techniques**

The research data was analyzed statistically by using Mean, SD, and ANOVA as per the need of the study.

Results

Table 1 Descriptive statistics - mean and SDofindividual and team game players regarding systematic cognitive style variable

DVs	Types of Players	Gender	Mean	SD	N
SCS	Individual Game Players	Male	75.60	8.05	75
		Female	72.94	8.20	75
		Total	74.27	8.21	150
	Team Game Players	Male	85.42	8.79	75
		Female	70.10	8.62	75
		Total	77.76	11.59	150
	Total Players	Male	80.51	9.74	150
		Female	71.52	8.51	150
		Total	76.02	10.18	300

Table 2 Summary of the ANOVA results for types of players and gender as independent variables and systematic cognitive style as dependent variable

Source	SS	df	MS	F	η^2
Type of players (A)	915.25	1	915.25	12.88**	.042
Gender (B)	6057.01	1	6057.01	85.28**	.224

A X B	3008.33	1	3008.33	42.35**	.125
Within error	21023.28	296	71.02		
Corrected total	31003.88	299			
Total	1764716	300			

**** *F* .01(1,296) = 6.70, **F* .05(1,296) = 3.86, NS = Not significant**

Table 2 shows that, the *F* ratio for the first main effect of types of players on systematic style is significant, $F_{(1,296)}$ =12.88; p<0.01. It reveals that the systematic cognitive style of team game players (M=77.76) is significantly greater than individual game players (M=74.27).

The $F_{(1,296)}$ = 85.28; p<0.01, an indicator of the second main effect of gender on systematic cognitive style is also significant. It is observed that (table 1), male players mean score (M=80.51) of systematic cognitive style is higher than the female players (M=71.52).

The $F_{(1, 296)}$ = 42.35; p<.01), an indicator of types of players and gender interaction upon systematic style, is found to be statistically significant. This suggests that there is relationship between types of players and systematic cognitive style and it is moderated by gender.

Line graph showing interaction profile of types of players and their gender (AxB) regarding systematic cognitive style (SCS) variable

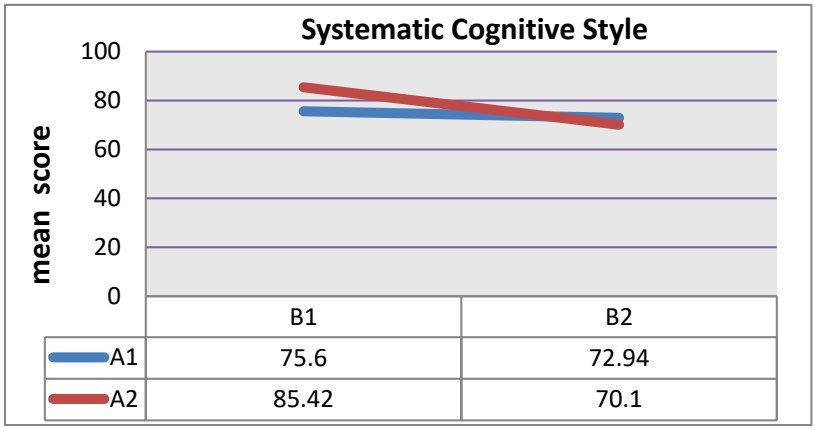


Table 3 Descriptive statistics - mean and SDofindividual and team game players regarding intuitive cognitive style variable

DVs	Types of Players	Gender	Mean	SD	N
ICS	Individual Game Players	Male	85.17	7.51	75
		Female	73.41	7.56	75
		Total	79.29	9.55	150
	Team Game Players	Male	71.54	8.32	75
		Female	70.22	8.61	75
		Total	70.88	8.46	150
	Total Players	Male	78.36	10.44	150
		Female	71.82	8.23	150
		Total	75.09	9.94	300

Table 4 Summary of the ANOVA results for types of players and gender as independent variables and intuitive cognitive style as dependent variable

Source	SS	df	MS	F	η^2
Type of players (A)	5300.40	1	5300.40	82.44**	.218
Gender (B)	3207.87	1	3207.87	49.89**	.144
A X B	2043.63	1	2043.63	31.78**	.097
Within error	19030.66	296	64.29		
Corrected total	29582.57	299			
Total	1721135	300			

**** *F* .01(1,296) = 6.70, **F* .05(1,296) = 3.86, NS = Not significant**

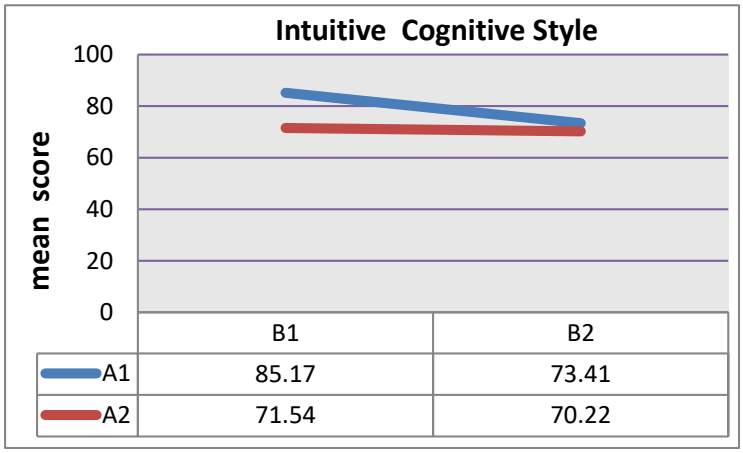
As shown in above table 4, when the individual game players and team game players were compared on their mean score of intuitive cognitive style, the derived $F_{(1,296)}$ = 82.44;

p<.01, indicated that there is significant difference between the individual game players and team game players in their intuitive cognitive style.

When male and female players were compared on their scores on intuitive cognitive style, the derived $F_{(1, 296)} = 49.89$, $p<.01$, indicated that there is statistically significant gender difference on the intuitive cognitive style of the participants.

The results show that the interaction between types of players and gender is significant on intuitive cognitive style, $F_{(1, 296)} = 31.78$; p<.01). This suggests that there is relationship between types of players and intuitive cognitive style and it is moderated by gender.

Line graph showing interaction profile of types of players and their gender (AxB) regarding intuitive cognitive style (ICS) variable



Conclusions

1. It has been found that individual game players have more intuitive style than team game players in terms of cognitive style.
2. It is found that the male players have more systematic style than female players for their cognitive style.

3. It has been found that the male individual game players have more intuitive cognitive style than female individual game players.
4. It has been found that the male team game players have more systematic cognitive style than female team game players.

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