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Study of Cognitive Style Among Male and Female Adolescence

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Abstract

Present study investigates the gender differences on cognitive style and its dimensions of adolescence. The sample of the study is male and female adolescents. The sample is consisting of total 100 respondents including two groups i.e. 50 Male and 50 Female from Jalna district of Maharashtra State. For the data collection used psychological test Cognitive style Inventory (CSI-J) developed by the Praveen Kumar Jha. There is significant difference between male and female adolescence on systematic dimension of cognitive style. Female adolescence having higher level in the systematic cognitive style compare to the male adolescence. There is significant difference between male and female adolescence on cognitive style. There is significant difference between male and female adolescence on cognitive style

Introduction:

Cognitive Style is made up of the information processing methods of an individual. It is not focused on the specific decisions that a person makes but the mental processes that are used to make the decisions. People vary in cognitive style and how they perceive, gather, process, and recall information. Methods of problem solving are also components in cognitive style. Cognitive styles can influence social interactions and attitudes. Gardner's theory of multiple intelligences points to the idea that people differ in their cognitive equipment. This idea comports well with another long-standing idea: that people differ not only in their abilities, capacities, and the efficiency with which they use each one but also in terms of their cognitive style, that is, their habitual and preferred means of approaching cognitive tasks.

Cognitive styles were thought of as optional modifiable manners or problem-solving approaches that were independent of both intelligence and age. More recent research has challenged these assumptions. Cognitive styles do not appear to be easily modified through training. Moreover, cognitive styles show developmental differences; younger children are more likely to display impulsive and field-dependent styles, and older children tend to show more reflective and field-independent styles

The evidence reviewed suggests that gender differences in cognition occur for only a few very specific tasks and that even then the gender differences are often small.

This, in turn, suggests we have yet to find evidence those men and women have different basic cognitive capacities, skills, or abilities except perhaps for certain specific spatial and quantitative tasks.

However, women and men, as well as girls and boys, certainly often appear to teach- ers and instructors to have differential aptitudes or preferences. More women than men exhibit a "fear of mathematics" and avoid quantitative or analytical courses (such as those in mathematics, science, and logic) when had given a choice, beginning in high school (Oakes, 1990). Certainly, it seems to teachers and others who work with students that cognitive gender differences abound. What accounts for the dis- creamy between this anecdotal information and the studies reviewed earlier? One possibility is that gender differences arise not so much in basic cognitive resources (capacities, abilities, etc.) as in how these resources are used. Recall our earlier dis- cession of cognitive styles. Perhaps it is in such approaches that women and men differ. In the next two sections, we will review two different but related proposals relevant to this idea.

Objectives:

1. To study the systematic cognitive style in male and female adolescence.
2. To examine the intuitive cognitive style in male and female adolescence.
3. To examine the cognitive style in male and female adolescence.

Hypothesis:

1. There will be no significant difference between male and female adolescence on systematic dimension of cognitive style.
2. There will be no significant difference between male and female adolescence on systematic the intuitive dimension of cognitive style.
3. There will be no significant difference between male and female adolescence on systematic cognitive style.

Sample:

The sample of the study is male and female adolescents. The sample is consisting of total 100 respondents including two groups i.e. 50 Male and 50 Female from Jalna district of Maharashtra State. The age level and socio economic status of the respondents controlled to a certain extent i.e., age ranges between 16 to 19 years and educational status controlled by 10 to 12^{th} class adolescents are included.

Variables:

Various independent and dependent variables which is taken into consideration in the present investigation is described in Following Table;

NO	Name of Variable	No. Of level	Level
1	Gender (A)	2	Male & Female

Dependent variables

NO	Variables
1	Systematic dimension of cognitive style
2	Intuitive dimension of cognitive style
3	Cognitive style

Research Design:

The aim of present study simple descriptive research method is used. Total statistical sample includes in this study are 100 adolescence. For the comparison of male and female adolescence t test statistical method is used. All data is analyzed by using SPSS software.

Tool:

Cognitive style Inventory (CSI):

Cognitive style Inventory (CSI-J) developed by the Praveen Kumar Jha. It is conceptualized as a uni-dimensional psychological state of an individual. It is a self-report tool which gives an estimate of cognitive style. It is a bio-dimensional measure of systematic cognitive style and intuitive cognitive style consisting of twenty items each on a five point scale. It is for college going boys and girls/ adults.

Reliability of the test:

To obtain estimates of reliability and validity of the final Hindi version CSI, 100 male students of post-graduate class were asked to fill in the questionnaire systematically and the data obtained from them were taken into account. Reliability of test was determined by two methods. First is the split-half reliability method. This method used of the full length of CSI. Reliability coefficient is found 0.65. Second method of find out the reliability is test retest reliability method used. Reliability coefficient of this method is found 0.01.

Validity of the test:

The validity of the test is examined in different ways. Here the validity was examined by three ways; i.e. judge's validity, concurrent validity and internal validity.
Internal Validity: Internal Validity stands for care taken in test- construction itself. Here, the internal validity was determined by calculating discriminative power of each item in

terms of Phi-coefficient correlation and Chi-square. Split-half, test-retest reliabilities of judges validity, concurrent validity, internal validity indicated that the inventory; thus develop could be used to measure the cognitive style in college and university students and other areas to determine the nature and extent of cognitive style in Indian Population.

Statistical Analysis

In the first stage of statistical analysis data described from the descriptive statistic. The mean and standard deviation for Gender (Male and Female) on Cognitive style is analyzed. Second stage for the data analysis t test is used. Looking to the objectives of the present investigation analysis of collected data t test is done.

Table No. 1
Mean, SD and t Values on Cognitive style

Cognitive style	Gender	N	Mean	Std. Deviation	t test	p
Systematic	Male	50	56.64	11.74	2.78	0.01
	Female	50	62.84	10.51		
Intuitive	Male	50	57.08	10.24	0.89	N.S.
	Female	50	58.82	9.29		
Cognitive style	Male	50	113.72	13.76	2.91	0.01
	Female	50	121.66	13.53		

Table 1 shows that the mean, standard deviation and t test values on the dimensions of cognitive style and total cognitive style score. The table shows the differences between the group of male and female adolescence on the first dimension of cognitive style is systematic cognitive style. The first dimension of cognitive style is systematic cognitive style of male adolescence mean and SD score are respectively (Mean = 56.64 and SD = 11.74) and female adolescence mean and SD score are respectively (Mean = 62.84 and SD = 10.51). The first dimension of cognitive style is systematic cognitive style t value on the data for the independent variable gender is found 't' value = 2.78 for df 98, $p > 0.01$ which is significantly difference both the level of significant. According to statistical analysis first hypothesis in the study is, "There will be no significant difference between male and female adolescence on systematic dimension of cognitive style" is rejected and alternative hypothesis is, "There is significant difference between male and female adolescence on systematic dimension of cognitive style" accepted. Results concluded that the female adolescence having high in dimension of systematic cognitive style than the male adolescence.

Table 1 shows the differences between the group of male and female adolescence on the second dimension of cognitive style is intuitive cognitive style. The second dimension of cognitive style is intuitive cognitive style of male adolescence mean and SD score are respectively (Mean = 57.08 and SD = 10.24) and female adolescence mean and SD score are respectively (Mean = 58.82 and SD = 9.29). The first dimension of cognitive style is intuitive cognitive style t value on the data for the independent variable gender is found 't' value is = 0.89 for df 98, $p < 0.05$ which is not significantly difference both the level of significant. According to statistical analysis second hypothesis in the study is, "There will be no significant difference between male and female adolescence on intuitive dimension of cognitive style" is accepted. Results concluded that the there is no significant difference between male and female adolescence on intuitive dimension of cognitive style.

The differences between the group of male and female adolescence on the total cognitive style score. Male adolescence mean and SD score on cognitive style are respectively (Mean = 113.72 and SD = 13.76) and female adolescence mean and SD score on cognitive style are respectively (Mean = 121.66 and SD = 13.53). The cognitive style t value on the data for the independent variable gender is found 't' value = 2.91 for df 98, $p > 0.01$ which is significantly difference both the level of significant. According to statistical analysis third hypothesis in the study is, "There will be no significant difference between male and female adolescence on cognitive style" is rejected and alternative hypothesis is, "There is significant difference between male and female adolescence on cognitive style" is accepted. Results concluded that the female adolescence having high in cognitive style than the male adolescence. According to present study results supported by the previous studies are done by the Ravindran, Ramya & Malarkodi, A. (2014), Nath I (2017) and Sharma Prerana (2017). Some research suggests that female students might perform slightly better in tasks requiring a systematic approach, which involves analytical, logical, and sequential problem-solving. Due to the varying results across different studies, more research is needed to fully understand the relationship between gender and cognitive styles among adolescents with larger and more diverse samples.

Conclusion:

There is significant difference between male and female adolescence on systematic dimension of cognitive style. Female adolescence having higher level in the systematic cognitive style compare to the male adolescence. There is significant difference between male and female adolescence on cognitive style. There is significant difference between male and female adolescence on cognitive style.

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