

Cognitive Styles Among Children and Adults in Tribal and Urban Contexts

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This paper presents a study on cognitive styles among children and adults of urban and tribal contexts. Story pictorial embedded figure test (SPEFT) was employed to assess the cognitive styles. The sample consisted of 70 adults and 30 children in each group. The results showed that the urban sample were psychologically more differentiated compared to tribes; urban sample had taken more response scores and lesser time to complete the test than tribal sample. Tribal children found to be quicker than tribal adults in completing the test. Urban children were less differentiated psychologically compared to the adults in urban context. However, urban children were psychologically more differentiated compared to tribal children. Further, the applied aspects are also discussed.

Keywords: Cognitive Styles, Urban Context, Tribal Context,

An individual's psychological development proceeds from a less differentiated to a more differentiated pattern of functioning that is manifested in the segregation of psychological activities (Witkin, Dyk, Faterson, Goodenough, & Karp, 1962). There are five indicators of greater segregation; viz., articulated functioning, sense of separate identity, an articulated body concept, control over impulse expression and the use of specialized defenses, and neuropsychological differentiation (Witkin et. al., 1962; Witkin & Goodenough, 1981). These components were found to relate to each other (Oltman, 1976). This interrelationship led to the postulation of a higher-level construct called "differentiation" (Witkin, Goodenough, & Oltman, 1979). A less general construct in the theory is referred to as "cognitive style", which includes the first three components of differentiation, viz., articulated functioning, sense of separate identity, and articulated body concept (Mishra, Sinha, & Berry, 1996).

Cognitive style implies a separation of the self from the environment or field. It is designated as 'field independent' or 'field dependent' style. In the dependent style individual is strongly dominated in his/her perception by the overall organization of the surrounding field, and part of the field is experienced as fused with the whole. In the independent style, parts are experienced as discrete from the organized ground. Individuals who are field independent are more effective in disembedding and analytical tasks and also tend to be socially autonomous and distant in their interpersonal relations.

Many studies on cognitive style have found cross cultural differences (Mishra et. al., 1996; Berry, 1981; Sinha & Bharat, 1982; Sinha & Shrestha, 1992; Sinha, 1988; Bagley, 1984, 1988; Gruenfeld & Mac Eachron, 1975) The research so far conducted in psychological differentiation focuses on the ability of children for various reasons (Sinha, 1988; Mishra & Agarwal, 2001; Dash, 1988; Dash & Rath,

1985; Rath, 1990). Very few studies have focused on the psychological differentiation in adults (Mishra, et. al., 1996; Rangaiah & Singh, 2007).

An attempt has been made in the present study to compare the children and adults in two cross cultural contexts. It was intended to compare children and adults of urban context with children and adults from tribal context. It was also intended to analyze the psychological differentiation of the adults and children of the same cultural group. Firstly, there would be a generation gap. Secondly, the exposure could be different from the past and the present. It was intended to investigate these two groups in a developmental perspective. Individual is influenced by people, places and things that surround and also influenced by the type of community one lives in. All these things would influence individuals from different cultural contexts differently. It was hypothesized in the present study that

1. Adults would be psychologically more differentiated compare to the children.
2. Urban children would be psychologically more differentiated than the tribal children.

Method

Sample:

The sample consisted of 70 male and female adults and 30 male and female children. One group of adults and children were selected from the urban context. Another group of adults and children were drawn from tribes. Method of purposive sampling was used.

Tools:

Story Pictorial Embedded Figure Test (SPEFT) was employed to assess the psychological differentiation. It was developed by Sinha (1984). It is intended to study the disembedding ability in the visual domain. Performance on this test reflects an individual's level of psychological

differentiation. The test is like a game, where subjects are required to search for certain hidden figures in a complicated familiar picture of a garden, or a forest, etc. The test was incorporated with stories to make the task interesting and clear to the participant. Originally, the stories were in Hindi, they were translated into Kannada (the Local Language). To verify the clarity and validity, a pilot study was undertaken with the translated material.

The subject's task here is to disembed familiar and meaningful stimuli like birds, animals and human faces in a series of complex meaningful pictures. Thus, the task is interesting and challenging. The test consists of 11 sets of cards. Of those, three sets namely, P1, P2, P3 are for practice. The remaining eight sets make up the actual test. Each set consists of one simple card containing the stimuli and one complex card containing a familiar setting in which the stimuli are hidden. The basic task is to locate the stimuli in the complex card. Each set has a story related to the stimuli. The maximum time limit is 90 seconds for each card.

Scoring

There are two kinds of scoring in SPEFT while one is the total number of stimuli located by the participant in all the sets, the other is the total time taken to complete the test. Both are cumulative and depend on the performance of the subject. There are sixteen stimuli in three practice sets namely, P1, P2 and P3. There are forty-one stimuli in the remaining eight sets that make up the actual test. Each stimulus that is located carries one mark. More the number of stimuli identified, higher the scores. Higher scores indicate more psychological differentiation. Ninety seconds are given to each set for disembedding. If the participant locates all the stimuli in less than ninety seconds, the actual time taken by the participant was taken into account. Thus, the total time score is the sum of time taken by the individual to complete the eight sets, which make up the actual test.

Results

Table 1 Mean total response scores and time taken by male and female adult and children groups in tribal and urban areas

Groups	Tribes Gender	Groups		Total			
		Urban Mean	S.D	Mean	S.D	Mean	S.D
Adult	Male	33.05	4.24	38.30	2.17	35.67	4.26
	Female	34.93	4.05	39.17	1.62	37.05	3.73
	Total	33.86	4.23	38.67	1.99	36.26	4.09
Child	Male	34.94	3.07	36.56	3.36	35.52	3.20
	Female	35.43	3.37	36.52	3.50	36.09	3.44
	Total	35.17	3.16	36.53	3.40	35.85	3.33
Total	Male	33.59	4.00	37.98	2.49	35.64	4.02
	Female	35.09	3.81	38.08	2.86	36.69	3.64
	Total	34.25	3.97	38.03	2.67	36.14	3.87
Total time taken to complete the test (in seconds.)							
Adult	Male	557.73	102.97	349.50	110.48	453.61	149.12
	Female	542.80	96.86	319.57	94.66	431.18	147.26
	Total	551.33	99.96	336.67	104.34	444.00	148.21
Child	Male	513.69	110.79	458.00	96.65	493.64	107.38
	Female	502.50	163.05	461.62	125.05	477.97	140.63
	Total	508.47	135.28	460.53	115.60	484.50	127.07
Total	Male	545.14	106.15	369.43	115.22	463.14	140.87
	Female	529.98	121.35	378.06	128.21	448.42	145.87
	Total	538.47	112.76	373.83	121.48	456.15	143.10

Table 1 presents Mean total response scores and time taken by male and female adult and children groups in tribal and urban areas. Further, ANOVA was applied for mean total response scores and time taken by male and female adult and children groups in tribal and urban areas and significant F values have been given in the text itself. Urban sample had significantly higher scores (mean 38.03) than the tribal sample (mean 34.25) where F value of 33.87 was found to be highly significant ($P < .000$). No significant differences were observed between age groups (adults and children) and gender (male and female) in their mean response scores. Further, only one interaction effect was found to be significant between groups and age groups ($F = 10.436$; $P < .000$), where, in tribes, children had higher response scores and in urban adults had higher response scores. Rest of the interaction effects were found to be non-

significant.

Urban sample had taken significantly lesser time ($m = 378.06$) than the tribal sample ($m = 538.47$) where F value of 55.92 was found to be highly significant ($P < .000$). Age group wise comparison revealed that adults had taken significantly lesser time (444.00 seconds) than children ($m = 484.50$ seconds) ($F = 5.541$; $P < .020$). Further, the interaction between groups and age groups ($F = 22.494$; $P < .000$), where, in tribes, adults had taken higher time and in urban area children had taken higher time to complete the test. Rest of the interaction effects were found to be non-significant.

Discussion

Main findings of the present study are

1. Urban sample had taken more response scores and lesser time than tribal sample

2. On the whole, adults had taken lesser time to complete the test than children.

3. In tribal area, children had higher response scores and in urban area adults had higher response scores

4. In tribal area adults had taken more time and in urban area children had taken more time to complete the test.

It was expected in the third hypothesis that the tribal children would be less differentiated compared to urban children. Children from urban group and children from tribes were compared on cognitive style in the present study. It was intended to investigate these two groups in a developmental perspective. Individual is influenced by people, places and things that surround and also influenced by the type of community one lives in, one sees and hears, personal experiences and countless other things. Both groups would have equal but different stimulation in their respective contexts. It was found that urban children were psychologically more differentiated compared to tribal children. Urban children were found to be psychologically more differentiated. It could be because they are more exposed to the puzzles in the school curriculum. Sinha (1988) found that industrialization showed the strongest effect, particularly when it was coupled with exposure to urban environment and formal schooling. Urban children are exposed to the schooling and also to the television and other forms of media. Impact of formal schooling was found to be consistent with previous studies (Sinha & Shrestha, 1992). Formal schooling equips them in solving puzzles and solving many problems. Children in urban environment experience the competition early in their life and they are trained to do better than others in their class room and society.

Cognitive style was also compared between adults and children from urban literate group. Urban adults were found to be psychologically more differentiated compared to urban children. Both adults and children

were exposed to schooling. Degree of learning is more for adults compared to children. On the contrary, there was significant difference between adults and children from tribes but reversal. The tribal children had significantly more total response scores compared to tribal adults, which is quite surprising. There was also a significant difference in total time taken. Children from tribes without domestic livestock took lesser time to complete the test compared to adults of the same group. It was interesting to observe that tribal children were quicker than tribal adults and significantly have more total response scores. Mishra, et. al., (1996) found that compared to children adults took more time and therefore were slower in completing the SPEFT test. It could be because tribal children are now-a-days exposed to schooling, whereas their parents were not. Impact of schooling was found to be effective in disembedding ability (Sinha & Shrestha, 1992; Sinha, 1988). Past examination of the relationship between field independence and age has indicated a developmental trend of increased field independence up to 17 years, with a movement towards greater field dependence after this point. However, discrepancies between longitudinal and cross sectional findings suggest that this relationship may be confounded by socio-economic variables (Cionini et. al., 1979).

There are many implications from the present study. It reveals the strengths of each group. Such research helps in formulating educational programmes suitable for these relatively isolated tribal groups. Educational programme, curriculum, and instructions in the school can be formed based on the strengths of tribes. Many empirical studies have shown that cognitive styles can be a better predictor of people's performance in particular situations than general abilities or situational factors, and that differences in cognitive styles influence learning, problem solving, decision making, communication, interpersonal functioning, and creativity in multiple and

important ways (Cools, 2007; Kirton, 2003; Sadler-Smith, 1998).

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