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## A Comparative study on intellectual abilities of rural and urban preschoolers

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### Abstract

Intellectual ability refers to the skill required to think and reason. Memory, creativity, problem solving and vocabulary development also contribute to the level of an individual. With increase in age children acquire more social skills due to improvement in intellectual abilities. The present study was conducted with the aim to compare the intellectual abilities of rural and urban preschoolers. The study was conducted in Hisar city of Haryana state. A total of 200 preschoolers were selected from both rural (100) and urban (100) areas from the age groups of 2-4 years. The preschoolers comprised of 25 boys and 25 girls in each group viz 2-3 yrs and 3-4 yrs. Stanford Binet Intelligence scale was used to measure intelligence of preschool children. The study elucidates that mean performance of children for intelligence revealed no significant differences in I.Q over age groups and gender but significant difference for intelligence in the age group of 2-3 yrs ( $z=2.39^*$ ) and in the age group of 3-4 yrs ( $z=5.34^*$ ) over location was observed. The study concludes that children from urban areas surpassed children from rural areas in their intelligence.

**Keywords:** Intellectual abilities, rural, urban, preschoolers

### Introduction

Intellectual ability refers to the skills required to think critically. Memory, creative problem solving and vocabulary also contribute to the level of an individual's intellectual ability. Intellectual development in children is usually characterized by how various mental processes—attention span, understanding information, reasoning, learning, remembering, problem solving and thinking—develop from birth until adulthood. It's about how they organize their minds, ideas and thoughts to make sense of the world they live in. In the preschool period mental development is characterized by the rapid expansion of cognitive abilities. A number of cognitive capacities critical to child's overall intelligence begin to develop during this period (Sangwan S, 2013) <sup>[6]</sup>. Mental health is closely linked to socioemotional competence, but is also inseparable from health.

Stanford Binet defined intelligence as the ability of an individual to direct his behaviour towards a goal to make adaptation in his goal oriented behaviour when necessary to know when he has reached the goal.

A number of factors are found to be influencing cognitive development of the child. Enriched home environment helps in advancing the overall development of child. Poonam (2012) <sup>[4]</sup> also reported that home environment was significant as a variable for intellectual abilities of rural and urban children. Children from disadvantaged home are poorly equipped in cognitive abilities as compared to their relatively well of counterpart (Pinki Rani, 2017) <sup>[5]</sup>. Maternal attitudes that encourage child's independence and reciprocal parent-child interaction positively influence child's intellectual performance. Miller and Votruba-Drzal, (2013) <sup>[2]</sup> studied that less familiar stimulation at home affect cognitive development of children. Home environment provided by the parents, parental behaviour their interaction with child and related factors tend to influence cognitive development of children. Various environmental factors such as place of residence, physical exercise, family income, parent's occupation and education influence the IQ of a child to a great extent (Makharia A, 2016) <sup>[1]</sup>.

For the same level of SES, children in rural settings performed consistently worse than children in urban settings. (Hermida *et al.* 2019) <sup>[3]</sup>.

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### Methodology

A total of 200 children in age group of 2-4 years were selected from two locations viz., urban and rural. For urban sample 100 children of 2-4 years from preschool lab of department of Human Development and Family Studies CCSHAU, Hisar and for rural sample 100 preschoolers of 2-4 years from anganwadis of two villages namely Mangali and Singhran were purposively selected. Stanford Binet intelligence scale was used to assess intelligence of children.

### Results and discussion

Majority of rural respondents (74.00%) in rural areas were getting inappropriate home environment whereas 26 percent were getting appropriate home environment for their proper development. In the urban areas trend was opposite as majority (70.00%) of respondents were getting appropriate home environment for their proper development and 30 percent were getting inappropriate home environment. The trend was towards low to high home environment when we observed each aspect separately.

**Table 1:** Profile of respondents according to their Home Environment

S. No.	Sub Scale	Rural(n=100)	Urban(n=100)
1	Learning Stimulation		
	Low(0-5)	53	13
	High(>5)	47	87
2	Language Stimulation		
	Low(0-5)	62	30
	High(>5)	38	70
3	Physical Stimulation		
	Low(0-5)	72	30
	High(>5)	28	70
4	Warmth and Affection		
	Low(0-5)	72	21
	High(>5)	28	79
5	Academic Stimulation		
	Low(0-5)	73	60
	High(>5)	27	40
6	Modeling		
	Low(0-5)	63	28
	High(>5)	37	72
7	Variety in experience		
	Low(0-5)	59	29
	High(>5)	41	71
8	Acceptance		
	Low(0-5)	59	57
	High(>5)	41	43
9	Total Score		
	Inappropriate(0-5)	74	30
	Appropriate(>5)	26	70

**Mean performance for I.Q of children on Binet Scale during the age of 2-4 yrs** – Table 2 clearly indicates that Intelligence of boys was at par to that of girls in both urban and rural areas. There was no significant difference in overall mean and I.Q scores of boys and girls in both age group in rural and also in urban areas. The difference in I.Q

scores is significant over location in the age group 2-3 years  $z=2.39^{**}$ , for 3-4 years,  $z=5.34^{**}$  and also for overall mean  $z=5.32^{**}$ . Children of urban areas had better performance with overall mean(118.95) than rural areas with overall mean (108.35).

**Table 2:** Mean performance for I.Q during the age of 2-4 yrs

Gender	2-3 years	3-4 years	Overall mean
Rural			
Boys	111.76±17.53	106±14.6	109.1±14.6
Girls	108±11.50	107±11.2	107.6±11.24
Overall mean	110±14.8	107±10.9	108.35±13
z-test(boysvs girls)	0.89(NS)	0.32(NS)	0.57(NS)
Urban			
Boys	116.16±14.44	122.72±15.56	119.44±15.22
Girls	118.4±17.03	118.52±13.18	118.40±15.08
Overall mean	117.28±15.67	120.62±14.42	118.95±15.07
z-test(boys vs.girls)	0.50(NS)	1.03(NS)	0.34(NS)
z-test over location	2.39**	5.34**	5.32**

\*\*Significant at  $p=0.01$

\*Significant at  $p=0.05$

NS=Non significant

±Value indicate standard deviation

**Conclusion:** The result concluded that that children from urban areas surpassed children from rural areas in intelligence. (Hermida 2019) <sup>[3]</sup> also studied that poverty in rural setting affects child cognitive performance more than urban.

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