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Socio economic status: least effective factor in cognitive performance of children

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Abstract

The present study was conducted in urban and rural area in Hisar city of Haryana with the aim to assess the cognitive competence of pre-schoolers in relation to socio-economic status. Experimental material comprised 120 respondents from both rural (60) and urban (60) during the age of 2-3 years. For rural areas two villages namely Singhran and Harita were taken and for urban areas preschools were selected from Hisar city. Regarding associations the cognitive competence of children was not influenced by the socio-economic status in both the locations. The cognitive performance is not affected by socio-economic status because intelligence is more biological in nature as compared to environment.

Key words: Socio-economic status, cognitive performance, children.

Introduction

Child develops in a complex system of relationship that affected by multiple level of surrounding environment (Bronfenbrenner, 1974). Cognitive development is a very crucial aspect of development and refers to very high mental processes and the function involved understanding and dealing with the surroundings. According to Piaget (1962) an individual as active biological organism, he learns consistently through interaction with their environment. Since the foundations for cognitive development are laid during the age of 3-6 years, it is necessary to provide sound base for intellectual growth through environment or culture which play a great role in the cognitive development of the child at a certain stage which includes parental behaviour, their interaction with child and social groups (Yeats *et al.*, 1983). Some other factors are also associated with the cognitive development of preschoolers such as parental educational and occupational level. Occupation and social class have maximum effect upon IQ of children. Also, the activities, interests and financial status of parents and of adults in the neighborhood environment may provide for the child poor, relatively meager or extremely raise series of experience. Keeping in view the above facts the present investigation was planned with the objective to find out the influence of socio-economic status on cognitive competence of children.

Methodology

The study was conducted at two locations selected purposefully, viz., urban and rural. Hisar city was selected as urban location in Haryana state, and for rural location, two villages namely Singhran and Harita were taken for collection of data under study. The criteria of selection were easy approach and rapport with villagers.

A total of 240 respondents were selected out of which 120 children of age group 2-3 years were selected from urban and rural areas and 120 were their mothers. The sample of preschoolers comprising 60 children from anganwadies of two villages and 60 children from preschools of Hisar city. Out of 120 children 60 were the boys and 60 were the girls. The major criteria for selection of respondents were age, locality and economic status of family.

Tools for data collection

Bayley scale of infant development by Bayley (1969) was used to test the cognitive level of children. Home inventory by Bradley and Caldwell (1984) was used to judge the environmental conditions of children's home for their cognitive abilities. The information necessary to score the inventory was obtained mainly on the trips out of the home and visits into the home, toys that are available to the child, the way the family arranges the daily routine and discipline. All items on the inventory received binary scores i.e. yes or no. One score was for yes and zero was allotted for no. These items were divided in 8 subscales: learning stimulation, language stimulation, modeling, variety in experience and acceptance. Score were calculated for each subscale and total score were also calculated. For each subscale three percentile ranges were given i.e. lowest fourth, middle half and upper fourth. Scores were categorized in these ranges. At the end, total scores were also categorized in percentile ranges.

Methods for data collection

Personal interviews, assessment and observation methods were used to assess the intellectual abilities of preschoolers and their mothers. The tests were administered individually to all the respondents.

Results and Discussion

Profile of respondents with regard to socio-personal and socio-economic variables

Information of children with regard to some important ecological variables viz., age, sex, birth order, education and occupation of their fathers and mothers, number of siblings, family size, family type and family income was observed and has been presented in Table 1.

Age : Table revealed that 48.33 per cent children belong to age of 2 years in urban area and 46.00 per cent in rural area followed by 51.67 per cent in rural and 54.00 per cent in urban belonged in the age group of 3 years.

Gender: Table 1 showed that half of the total sample (50.00%) were the boys and (50.00%) of the total sample were the girls in both rural and urban area.

Birth order: Majority of children 66.67 per cent were first born in both urban and rural area followed by second born (33.33%) in both locations.

No. of siblings: The data regarding number of sibling showed that 46.67 per cent in rural area had no sibling, whereas 53.33 per cent had siblings in rural area. Whereas in urban area 47.67 had no sibling and 52.33 per cent had one sibling in urban location.

Father's education: Majority of respondents (81.67%) had their father's educated up to senior secondary level, followed by graduate level (18.33%) in rural area. Majority of respondents in urban area 51.67 per cent had educated up to graduate level, followed by post-graduate level (41.67%0 and only (6.67%) father's were educated up to senior secondary level.

Table 1. Frequency distribution of rural and urban children

Variables		Rural children		Urban children	
		Frequency	%age	Frequency	%age
Age					
	2 years	29	48.33	28	46.00
	3 years	31	51.67	32	53.33
	Total	60	100.00	60	100.00
Gender					
	Boys	30	50.00	30	50.00
	Girls	30	50.00	30	50.00
	Total	60	100.00	60	100.00
Birth order					
	1st	40	66.67	40	66.67
	2nd	20	33.33	20	33.33
	Total	60	100.00	60	100.00
No. of siblings					
	1	28	46.67	29	47.67
	2	32	53.33	31	52.33
	Total	60	100.00	60	100.00
Father's occupation					
Agricultural labour or labour		37	61.67	3	5.00
Service		17	28.33	48	80.00
Business		6	10.00	9	15.00
Total		60	100.00	60	100.00
Mother's occupation					
Housewife		58	96.67	56	93.33
Job		-	-	3	5.00
Private work/labour		2	3.33	1	1.67
Total		60	100.00	60	100.00
Father's education					
Postgraduate		-	-	25	41.67
Graduate		11	18.33	31	51.67
+2 and below		49	81.67	4	6.67
Total		60	100.00	60	100.00
Mother's education					
Postgraduate		-	-	3	5.00
Graduate		5	8.33	36	60.00
+2 and below		55	91.66	21	35.00
Total		60	100.00	60	100.00
Family income/annum					
Rs.1,00,000 lakh and above		6	11.67	13	21.67
Rs. 50,000 to Rs. 1,00,000		16	26.67	32	53.34
Below Rs. 50,000		37	66.67	15	25.00
Total		60	100.00	60	100.00
Family type					
Nuclear		47	78.33	50	83.33
Joint		13	21.67	10	16.67
Total		60	100.00	60	100.00
Family size					
Small (4 members)		27	45.00	30	50.00
Medium (4-6 members)		31	51.67	29	48.33
Large (6 and above members)		2	3.33	1	1.67
Total		60	100.00	60	100.00

Mother's education: Majority of respondents (91.66%) had their mother's educated up to senior secondary level, followed by graduate level (8.33%) in rural area. Whereas in urban location most of the respondents (60.00%) had their mother's educated up to graduate level, followed by senior secondary level (35.00%) and postgraduate level of education (5.00%). Father's occupation: In rural area majority of respondents fathers (61.67%) were involved in farming, followed by (28.33%) of fathers were service/ and in business (10.00%).

Mother's occupation: With regard to the mothers occupation in rural areas most of the respondents (96.67%) had their mothers were involved in household activities. Very little number of respondents (3.33%) of mothers were involved in private work/labour and same trend was observed in urban area (93.33%) of respondent's mothers were housewives whereas (5.00%) were involved in job and only (1.67%) of respondents mothers were in private work/labour.

Family income: A high percentage of families (66.67%) earned below Rs. 50,000 to 1 lakh and only (11.67%) had earned 1 lakh per annum in rural area. Whereas in urban areas (53.34%) of families earned Rs. 50,000 to 1 lakh followed by (25.00%) who earned below Rs. 50,000/annum and only (21.67%) had earned 1 lakh and above per annum.

Family type: With reference to type of family in rural area majority of family (78.33%) belonged to nuclear type of family and (21.67%) of respondents belonged to joint family. In urban majority of respondents (83.33%) hailed from nuclear family and (16.67%) belonged to joint family.

Family size: Majority of families (51.67%) were medium in size followed by small size (45.00%) and only (3.33%) respondents belonged to large size family. In urban area it was observed that half (50.00%) of the respondents were belonged to small families followed by medium (48.33%) families and only (1.67%) in large size.

Association of cognitive competence with ecological factors

Birth order of child: Results showed that the MDI of children was not significantly related to birth order in rural areas (χ^2 = 0.029) and (χ^2 =0.064) in urban areas. The result was supported by Dhillion and Gill (1987) in a study of ordinal position as determinant of intellectual ability, personality and interests found that ordinal position did not significantly affect overall personality of children.

Gender: Table 2 depicts the relationship between cognitive competence and gender and found that cognitive abilities of children were independent of their gender. Archana (1998) explored the effect of gender on intelligence. It was also supported by Stevenson *et al.* (1991) they found that gender was not influential factor for children's performance on various cognitive and academic tasks.

Number of siblings: The number of siblings was not associated the cognitive abilities of the children. More the number of siblings lower will be the intelligence score of the children as it becomes difficult for parents to provide material goods as well as rich stimulating environment which affect the overall development of the children (Kuntala, 1996).

Mother education: It is evident from table that cognitive competence showed non-significant association with mother education. On contrary McGowan and Johnson (1984) found that number of years of mother's education and maternal attitudes that encouraged child independence and reciprocal parent-child interaction positively influenced child's intellectual performance at 3 years of age.

Table 2. Association of mental development index of rural and urban children with SES

Sr. No.	Variables	χ^2 value of rural children (n=60)	χ^2 value of urban children (n=60)
1.	Age	0.14688	0.03852
2.	Sex	0.12917	0.114
3.	Birth order	0.02989	0.064
4.	No. of siblings	0.079	0.091
5.	Father's occupation	0.272	0.125
6.	Mother's occupation	0.23	0.16
7.	Father's education	0.075	0.007
8.	Mother's education	0.107	0.204
9.	Family income	0.125	0.06
10.	Family type	0.127	0.15
11.	Family size	0.214	0.14

NS= Non significant

Father education: Table reveals that intelligence measured by the scale was non-significantly associated with father education. The result was supported by Kiran (1990) who conducted a study on 100 randomly selected 3rd grade boys for assessing their intelligence using Raven's coloured progressive matrices and no association of intelligence of children with parent's education. Kumari and Chitkara (1998) observed no association between intellectual abilities of children, and their father's education. It may be conclude that an educated father can help their children to develop their talent by giving more exposure of the world around them.

Mother occupation: It is evident from the table that intelligence measured by the scale was non-significantly associated with mother's occupation. Owen and Cox (1988) found that maternal occupation had no association with development of children.

Father occupation: The table reveals that intelligence was non-significantly associated with the father's occupation. The findings of the present study were in agreement with those of Kumari and Chitkara (1998) reported that father occupation was no longer associated with respondents test score on intelligence test.

Family income: Family income was not associated with the cognitive competence in rural area and in urban areas on Binet scale. The results was supported by Verma (1983) who found an insignificant relationship between intelligence and socio-economic status in a group of girls and thus it can be said that intelligence is not affected by socio-economic status. Elizabeth and Drazal (2003) concluded that household income was most responsible factor in learning of the children.

Family size: Family size was not influential factor of cognitive competence in rural and urban areas when measured by Binet scale. A non significant relationship was observed between family structure and intelligence of young children (Mehta, 1995).

Family type: Family type was not associated with the cognitive competence of children in rural and urban areas. The study was supported by Karrass *et al.* (2003) who also investigated that there was no relationship between type of family structure and intelligence of children in Jodhpur city. Bhogle (1991) also found a non-significant relationship between family structure and intelligence.

References

Archana 1998. Intelligence as a function of religion, gender and socio-economic status. Indian Psychol. Rev. **50** (3): 153-57.

Bayley N 1969. *Bayley scales of infant development* (2nd ed). Psychological Corporation, Berkeley.

Bhogle S 1991. Child rearing practices and behavior development of a girl child. Indian J. Social Work **52** (1): 61-69.

Bradley RH and Caldwell BM 1989. Home observations for the measurement of the environment: a revision of preschool scale America. J. Mental Deficiency, p 235-44.

Bronfenbrenner U 1974. Developmentla research, public policy and ecology of childhood. Child Dev. **45**:1-5.

Dhillon PK and Gill P 1987. Ordinal position as a determinant of intellectual ability, personality and interests: A comparative study. Manas **34** (1-2):9-18.

Elizabeth V and Drazal S 2003. Income changes and learning stimulation in young children's home learning environment. J. Marriage and Family **65** (2): 82.

Karrass J, VanDeventer MC and Braungart Rieker JM 2003. Predicting shared child book reading in infancy. J. Family Psychol. **17**: 134-46.

Kiran J 1990. The IQ Puzzle: What are we measuring? In: *Social Studies Strategies: Theory into Practice,* Peter H Martorella (ed), Harper & Row Publisher, New York.

Kumari L and Chitkara S 1998. Cognitive competence and socio-economic status - an overview. J.Psychometry **11** (1):1-7.

Kuntala 1996. Metacognition assessment of adolescent. M Sc Thesis, CCS Haryana Agricultural University, Hisar (unpublished).

McGowan and Johnson R 1984. Motivation and intelligence. J. Expl. Psychol.**38**: 89-101.

Mehta K 1994. Parent child relationship–An important environmental variable influencing intelligence of children. J. Psychol. Res. **38** (3): 10-13.

Mehta K 1995. Effect of family structure on intelligence of young children. Indian Psychol. Rev. **44** (7-8) : 24-28.

Verma V 1983. The relationship between school adjustment, anxiety and socio-economic status. M Sc Thesis, Govt. Home Science College, Chandigarh (unpublished).

Owen MT and Cox MJ 1988. Maternal employment and transition of parenthood. In: *Maternal employment and Children,* AE Gottfried and AW Gottfried (ed).

Piaget J 1962. *The Psychology of Intelligence*, Harcourt : New York.

Standford Binet 1960. Standford-Binet intelligence scale. Manual for the Third Revision Form L-M.The NFER-NELSON Publishing Company Ltd. pp-9-103.

Stevenson H, Chen C and Booth J 1990. Effects of schooling and urban rural residents on gender differences in cognitive ability and academic achievement. Sex Roles **23**:535-51.

Verma V 1983. The relationship between school adjustment, anxiety and socio-economic status. M Sc Thesis, Govt. Home Science College, Chandigarh (unpublished).

Yeats KO, Macphee D, Campbell FA and Ramey CT 1983. Maternal IQ and home environment as determinants of early childhood intellectual competence: A developmental analysis. Dev. Psychol. **19**: 731-39.