

Impact of Socio-economic Conditions of Preschoolers on Conceptual Skills

Priyanka Aeri and Vandana Singh

INTRODUCTION

Cognitive development refers to the 'knowledge acquiring' development which is a unique result of interaction between maturation and environment (Jaswal, 1988). It refers to the higher mental processes and functions involved in understanding and dealing with the world around such as intelligence, perception, learning, concept formation, abstraction, problem solving and creative thinking which develop concurrently. Cognitive development is the development of the capacity to think, to reason and to understand. It is concerned with describing and understanding the ways in which children's intellectual abilities and their knowledge of the world, including the social world, change throughout the course of development. Cognition is a slow systematic process that can't be speeded up significantly. There are various factors which affect the cognitive development of the child such as socio-economic status of family, urban-rural and environment (social and physical) of home, nutrition, cultural differences, play activities, sex-differences, physical environment and facilities in the school. The present study is an attempt to assess the conceptual skills of 5-year old preschoolers and to find socio-economic differences among children.

MATERIALS AND METHODS

The study was conducted on 80-preschoolers (5year old children i.e. boys and girls pooled). These children were studying in various preschools of Yamuna Nagar city in the state of Haryana. Out of 80 respondents, 40 respondents were from high socio-economic status and 40 were from low socio-economic status. Pandey's Cognitive Development Test for Preschoolers (1992) was employed. The respondents were classified into 3 categories as average, above average and below average with respect to the total score obtained by each respondent on PCDT for each conceptual skill. Percentage of children

falling into various developmental levels was calculated for each conceptual skill across two socio-economic strata. Z- test was applied to find statistical significance of socio-economic differences for various conceptual skills.

RESULTS AND DISCUSSION

The profile of the sampled preschoolers is given in table 1. In all, 80 respondents were assessed for analysis. Table1 reveals that the preschoolers from high socio-economic status perform better for concept of shape, colour, time, number, seriation, size and recognizing money. The differences were statistically significant when compared with the low socio-economic status. Vurpillot (1974) studied form perception of 4 year old children and found that they respond differentially to objective and projective shape's matching instruction. Their response to both types of instructions tended towards shape constancy. The results are in line with the findings of Breckendige (1972) that at the age of 4 year, child can comprehend that 'a few minutes' means less or more than 'a few hours'.

The child can also understand the concept 'in the evening moon appears' and 'in the day time sun appears' and other concepts like 'yesterday', 'tomorrow', 'next week', are understood by 4 year old preschoolers. Boden and Miller (1992) found that numerical competence emerges through the conceptual and procedural integration of various numerical activities. It is determined by the superior cultural and economic opportunities of urban life, superior educational facilities for children in urban centers with facilities like libraries, museums, art galleries, special educational equipment in the public schools. Trabasso (1975) has proposed that memory makes an important contribution to the solution of seriation problems. Children on hearing about the premises only once typically answered incorrectly but if the premises were repeated the children memorized them and three fourths of the children made the correct inference. Johana

Table 1: Development of conceptual skills among preschoolers across high and low socio-economic groups.

<i>S.E.S. Level</i>	<i>Level of Cognitive Development</i>			<i>Z Score</i>
	<i>Above Average</i>	<i>Average</i>	<i>Below Average</i>	
		Concept of Shape		
High	13(32.5)	14(35)	13(32.5)	3.768*
Low	10(25)	9(22.5)	21(52.5)	
		Concept of Colour		
High	12(30)	13(32.5)	15(37.5)	4.824*
Low	10(25)	13(32.5)	17(42.5)	
		Concept of Time		
High	12(30)	12(30)	16(40)	6.856*
Low	6(15)	9(22.5)	25(62.5)	
		Concept of Classification		
High	13(32.5)	14(35)	13(32.5)	1.027
Low	13(32.5)	13(32.5)	14(35)	
		Concept of Number		
High	13(32.5)	13(32.5)	14(35)	4.490*
Low	10(25)	10(25)	20(50)	
		Concept of Seriation		
High	12(30)	13(32.5)	15(37.5)	2.617*
Low	10(25)	10(25)	20(50)	
		Concept of Weight		
High	12(30)	12(30)	16(40)	1.0729
Low	11(27.5)	11(27.5)	18(45)	
		Concept of Size		
High	13(32.5)	13(32.5)	14(35)	3.4759*
Low	11(27.5)	11(27.5)	18(45)	
		Concept of Texture		
High	12(30)	12(30)	16(40)	1.924
Low	11(27.5)	10(25)	19(47.5)	
		Concept of Money		
High	13(32.5)	12(30)	15(37.5)	6.3733
Low	7(17.5)	9(22.5)	24(60)	

*Significant difference between high and low socio-economic status of preschoolers at 5 percent level.

(1984) showed that nursery school children were superior on sequence ability while children without preschool training were not richer in play development. Harris et al. (1987) found that comprehension of language and acquisition of three objectives 'big', 'tall' and 'long' improved with age.

Just as preschoolers have difficulty with classification, very young preoperational children also have trouble with seriation, the systematic arrangement of a set of objects according to some quantitative characteristic, such as length. The 2 and 3 year old cannot arrange sticks in order from shortest to longest. Later, preoperational children can arrange a set of concrete objects in series, but Piaget concluded that they cannot seriate mentally a logical operation called transitivity. This may be the reason that more children fall

under the category of 'below average' and less number in 'under average' and 'above average' categories. This result is in conformity with the findings of Crema et al. (1986) who conducted a study to examine socio economic differences in the cognitive development of black children. Five Piagetian tasks such as reasoning, seriation, classification, causation and conservation were administered individually to all children, and found that on all five variables the higher social class children and middle class children did perform significantly better than lower class children. Present result also shows that there is no much difference in the number of preschoolers from high and low socio economic status with regards to concept of colour and classification. Statistically significant socio-economic differences were evident in this respect.

No significant difference in the number of preschoolers from high and low socio economic status was observed with regards to the concept of weight. Proportion of preschoolers from high socio economic status was marginally higher for understanding of concept of texture than that from low socio economic status (difference was statistically not significant). Results are in line with the findings of Breckendrige (1972) who reported that perception of texture develops largely during the preschool period. Children of this age love to touch and feel hardness/smoothness, furriness/roughness of different objects they see.

CONCLUSION

It may be concluded from the results that a larger proportion of preschoolers from high socio-economic status have knowledge of various concepts namely shape, size, colour, number, time, money and seriation than their counterparts from low socio-economic status. A significant number of children from high socio-economic status displayed ability to discriminate, think, utilize past experiences, recall, associate and comprehend oral directions and actions of people in the environment and reasoning with abstraction. The results are in confirmity with the findings of Prieto and Scott (1986) who found no difference by sex but consistant and statistically significant differences by social class on aspects such as seriation, classification and concepts.

KEY WORDS Preschoolers. Cognitive Development. Socio-economic Status. North India.

ABSTRACT The present study assesses the conceptual skills of 5-year old preschoolers (boys and girls pooled) across two socio-economic strata i.e. high and low. Pandey's Cognitive Development Test for Preschoolers (PCDTP, 1992) was employed to assess conceptual skills of selected eighty preschoolers from Yamuna Nagar city

(Haryana). Significant differences were found for concept of size, shape, colour, time, numbers, seriation, and money denominations. Non-significant differences were found among socio-economic strata for classification tasks, concept of weight and texture.

REFERENCES

- Boden, C. and Miller, J.: Architecture for numerical cognition. *Cognition: International Journal of Cognitive Science*, **63** (1): 2 (1992).
- Breckendrige, P.: *Introduction to Child Development*. 1st Ed. Asia Publishing House Company, Bombay (1972).
- Crema, A.B, Black, K.N. and Feldhusen, J.: Performance of Piagetian tasks of black children of differing socio- economic levels. *Developmental Psychology*, **22**(6): 841-844 (1986).
- Harris, J. and Liebert, R.: *The Child*. 2nd Ed. 264-266. Prentice-Hall Inc., New Jersey (1987).
- Jaswal, S., Gulati, J., Grewal, H. and Deb, M.: Cognitive Development of Rural Children. *Indian Journal of Behavior*, **12**(3): 1-7 (1988).
- Johnna, K.: The effects of nursery education as measure in junior primary school children. *Dissertation Abstract International*, **45**(5): 1293 (1984).
- Miller, S.A., Davis, T.L., Wilde, C.A. and Brown, J.: Parent's knowledge of their children's preference. *International Journal of Behavioral Development*, **16**(1): 35-36 (1992).
- Pandey, H.: *Pandey's Cognitive Development Test For Preschoolers*. National Psychological Corporation, Agra (1992).
- Panda, S.: *Preschool Children*. Paragon Publishers, Bhubaneshwar (1992).
- Papalia, D. E. and Olds, S.: *Human Development*. 5th Ed. Tata McGraw Hill Inc., New Delhi (1992).
- Prieto, M. and Scott, R.: Preschool learning profiles of poor and middle class children. *Journal of Social Psychology*, **126**(3): 381-388 (1986).
- Sharma, V.P.: Effect of nutrition supplementation on cognitive development of preschool. *Psycho-Lingua*, **25** (1&2): 31-37 (1995).
- Singh, Dolly.: *Child Development. Issues Policies and Programmes*. (Vol.2.) Kanishka Publishers, Delhi (1995).
- Vyas, J.N.: *Child Psychology*. Medi World Press, Bikaner 112-123 (1994).
- Vurpillot, P.: Child Development. *Society for Research in Child Development*, **57** (1-3): 190-195 (1974).

Authors' Addresses: **Priyanka Aeri**, Department of Human Development, Punjab Agricultural University, Ludhiana 141 004, Panjab, India
Vandana Singh, Department of Human Development, Guru Nanak Girls College, Yamuna Nagar, Haryana, India