

HOME INVENTORY (PRESCHOOL VERSION) AND ITS RELATION WITH VARIOUS DEMOGRAPHIC VARIABLES

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The present study determines the differences on the preschool version of HOME Inventory (Caldwell & Bradley, 1984) scores in relation to different demographic variables e.g., gender, age, parents' education and occupation, and number of siblings of the child. A sample of 20 boys and 20 girls between the ages of 42 to 52 months was taken from the upper-middle socio-economic class of Islamabad. The results indicate no statistically significant difference among all demographic subgroups.

Home environment plays a significant role in child development. In the early 1960s, several ideas emerged in the field of child development which gave impetus to the development of the HOME Inventory. First, due to the writings of Bloom (1964), and Hunt (1961), there was a greater recognition of the importance of the early environment in children's cognitive development (see also Jones, 1972). Second, as researchers began the process of designing studies of environment-development relationship, a consensus developed with respect to the inadequacy of the environmental measures then available. Even when an attempt was made, most often only interview or questionnaire techniques were used, rather than direct observation of the behaviour of child. The reliability and precision of these techniques were often questionable. For these and related reasons, Caldwell, Heider, and Kaplan (1966) developed the first version (infant version) of HOME Inventory. Later in 1979, the preschool version of the inventory was developed by Bradley and Caldwell. In 1984, they developed the latest three separate versions of the HOME Inventory. One version is for infants and toddlers, second for preschoolers, and the third one for the children of elementary school age.

The items of the Inventory were composed to represent these areas: Frequency and stability of adult contact, amount of developmental and vocal stimulation, need gratification, emotional climate, avoidance of restriction on motor and exploratory behaviour, available play materials, and home characteristics indicative of parental concern with achievement.

Home environment exerts a significant influence on the development of the personality of a child. Preschool age children spend most of their time

with their families within home environment. Therefore, it is envisaged that the home environment would influence the various aspects of child's personality. Relationship of home environment and cognitive development (Gottfried & Gottfried, 1984) has been a very well researched area. Many researches on the relationship of home environment and demographic factors, social and configurational variables, parental characteristics, and the children's cognitive development, intellectual performance and academic achievement have been carried out (e.g., Bakeman, & Brown, 1980; Bee et al. 1982; Bradley et al. 1989; Bradley & Caldwell, 1980; Carew, 1980; Wulbert, Inglis, Kriegsman, & Mills, 1975).

The present study was carried out to measure the internal consistency between the subscales of HOME Inventory; and to determine the differences on HOME Inventory scores in relation to demographic variables, i.e., gender, age, parents' education and occupation, and number of siblings of the child.

METHOD

Sample

The sample was consisted of 20 boys and 20 girls between the age range of 42 to 59 months ($M= 49.60$, $SD= 4.02$) from the upper-middle socio-economic class (SES) families of Islamabad. All the parents were educated (11 upto matric, 34 F.A/B.A, 23 M.A/M.Ed., and 12 Professionals). 68% of the children have upto three siblings. Only the children having both parents of Pakistani origin and living together were included in the sample.

Instrument

Home Observation for Measurement of the Environment (HOME) Inventory

The preschool version of HOME Inventory (Caldwell & Bradley, 1984) containing 55 items, was used for the present study. It is a measure of the quality of the environment available to a child in the home. It is a combination of observation-interview technique. The subject for the interview is the child's primary caregiver (usually the mother). The eight subscales of the preschool version are:

- i) Stimulation through Toys, Games, and Reading Material (e.g., toys to learn colours, sizes, shapes; games permitting free expression,

learning numbers etc.; readings materials like newspapers, children's books, magazines, etc.);

- ii) Language Stimulation (e.g., parents encourage their child to learn alphabets; to say simple manners such as, please, thank you; encourage child to relate experiences or take time to listen to him/her relate experiences; permit child to some choice in lunch or breakfast menu);
- iii) Physical Environment, Safe, Clean, and Conducive to Development (e.g., there is at least 100 square feet of clean living space per person in the house; child's outside play environment should be safe, and has trees, grass, etc.);
- iv) Pride, Affection, and Warmth (e.g., mother usually responds verbally to child's talking; praises child's qualities or behaviours and sets up situation that allows child to "show off"; mother caresses, kisses, or cuddles child);
- v) Stimulation of Academic Behaviour (e.g., child is encouraged to learn colours, pattern of speech, spatial relationship, numbers; and to read a few words);
- vi) Modelling and Encouragement of Social Maturity (e.g., mother introduces interviewer to child);
- vii) Variety of Stimulation (e.g., child has been taken by a family member to a scientific, historical, or art museum; parents let child chose certain favourite food products or brands at grocery store);
- viii) Physical Punishment (e.g., no more than one instance of physical punishment during a week; mother neither slaps or spansks child during the visit or observation).

These subscale contain specific items to be observed from the perspective of the child under the observation. Although the preschool version of the inventory is being used for the first time in Pakistan, it is a highly researched instrument (Bradley & Caldwell, 1976a, 1976b, 1979, 1981). Despite being a Western instrument the items seems to be culturally appropriate on their face value. It also covers a wide range of the areas of concern of Pakistani parents in the rearing of their children. Therefore, in the present study the inventory has been used without making any changes.

Procedure

The second author visits at the homes with prior appointments with the parents. It was made sure that the child should be present and awake in

the home at the time of the visit of the observer. The child was not encouraged to sit with the interviewer, rather, was asked by the parents to remain busy in her/his routine activities. Responses for some items, possibly, were not directly observable. Therefore, were asked with the parents. Whereas, the majority of the items could be answered through recording the observations and conversation with the family members (mostly the mothers).

RESULTS

First of all, the internal consistency of the Inventory for the present sample was computed through *KR-20*. It was found .85 which shows that HOME Inventory is quite a reliable measure.

Correlation between the total and subscales of HOME Inventory

The six subscales of HOME Inventory were correlated with the total score ($p < .001$). Only the subscale Physical Environment and Modelling, and Encouragement of Social Maturity do not correlate significantly (Table 1). Highest correlation of the total score is with Language Stimulation; then come Pride, Affection, and Warmth; and Stimulation through Toys and Games. The correlation matrix shows that only a few correlations are negative. Majority of these are in positive direction and quite a number of them are statistically significant.

Table 1

Correlation between the total and the subscales of HOME Inventory

Subscales	1	2	3	4	5	6	7	8
Toys & Games	1.00							
Language	.55	1.00						
Physical	.09	.17	1.00					
Pride	.34	.49**	.28	1.00				
Academic	.40*	.49**	-.12	.06	1.00			
Social	-.36	.05	.19	.30	-.26	1.00		
Variety	.54*	.38**	.09	.31	.38*	-.04	1.00	
Punishment	.23	.25	.24	.47**	.05	.11	-.03	1.00
Total	.72*	.78**	.26	.76**	.43*	.11	.63**	.63**

* $p < .01$ ** $p < .001$

Demographic Variables and Home Environment

One way analysis of variance (ANOVA) was performed to find out the differences in the home environment of the children of different demographic subgroups. Tables 2-8 show the scores of the HOME Inventory according to different demographic variables.

Table 2

Differences in Home Environment: Gender-wise

Gender	<i>N</i>	<i>M</i>	<i>SD</i>
Boys	20	31.90	7.33
Girls	20	35.70	7.39

$F(1, 38) = 2.6637$ $p < .1109$

Table 2 shows that difference between the home environment of boys and girls is not statistically significant. Although girls' mean is slightly higher than that of boys, but the results indicate that the parents provide same type of stimulation; warmth, and affection; as well as punishment to their children irrespective of their gender.

Table 3

Differences in Home Environment: Age-wise

Age (months)	<i>N</i>	<i>M</i>	<i>SD</i>
42-47	14	33.64	7.33
48-53	18	34.66	8.33
54-59	8	32.12	6.40

$F(2, 37) = .3098$ $p < .7355$

Table 3 shows that the age-wise differences in the scores of HOME inventory are not statistically significant. Thus the age of the child does not have any effect on the parental concern.

Tables 4 and 5 present the differences in the home environment of the children from different occupational groups. Table 4 shows that the lowest score is for the children whose fathers are self employed (average), and next come the children with father in regular jobs, and with outstanding self employment. Thus the parents with good financial conditions provide

slightly better environment, although these differences are not statistically significant.

Table 4

Differences in Home Environment: Fathers' Occupation-wise

Occupational Status	<i>N</i>	<i>M</i>	<i>SD</i>
Self Emp. Average	12	30.66	7.13
Self Emp.Out Standards	4	35.66	5.32
Regular Job	24	32.71	7.93

$F(2,37) = 1.5351, p < .2288$

Table 5

Differences in Home Environment: Mothers' Occupation-wise

Occupational Status	<i>N</i>	<i>M</i>	<i>SD</i>
Unemployed	33	34.03	7.53
Regular Job	7	32.71	7.93

$F(1,38) = .1732, p < .6796$

Employment of mothers has slightly negative effect on the home environment of the children (Table 5). Although these findings are also not statistically significant yet they show a slight trend and possibility that the occupational status of the parents may effect the scores of the HOME Inventory.

Table 6

Differences in Home Environment: Mothers' Education-wise

Educational Level	<i>N</i>	<i>M</i>	<i>SD</i>
Upto Matric	10	33.60	7.96
F.A/B.A	18	32.61	6.91
Masters	11	36.09	8.57
Professional	1	32.00	0.00

$F(3,36) = .4920, p < .6901$

Tables 6 and 7 present the differences in the home environment as an effect of parents' education. Table 6 shows that the children of mothers

with masters level of education have highest mean score, although it is not statistically significant. Similarly, Table 7 shows that the fathers who have masters level of education have the highest score. The HOME Inventory score of the families with fathers' education professional or F.A/B.A level is slightly on the lower side. These findings are also statistically not significant.

Table 7

Differences in Home Environment: Fathers' Education-wise

Educational Level	<i>N</i>	<i>M</i>	<i>SD</i>
Upto Matric	1	36.00	0.00
F.A/B.A	16	33.12	8.39
Masters	12	34.42	7.98
Professional	11	33.91	6.54

$F(3,36) = .0923, p < .9638$

Table 8 shows that the difference in the home environment because of the number of siblings is not statistically significant. The highest mean score was found for the families with only one child. Thus the only child gets better home environment.

Table 8

Differences in Home Environment: No. of Siblings-wise

Number of Siblings	<i>N</i>	<i>M</i>	<i>SD</i>
None	4	35.50	7.32
1-3	27	34.88	6.97
4-6	9	29.77	8.58

$F(2,37) = 1.7367, p < .1902$

DISCUSSION

The HOME inventory appears to be a reliable measure of the home environment in Pakistani society. The internal consistency seems to be acceptable at least for the sample of the present study. However, further

research is needed to examine reliability and validity by using additional samples from different socio-economic groups.

The subscales which have high positive correlation with total HOME Inventory score are: Stimulation through Toys, Games, and Reading Material; Language Stimulation; Pride, Affection, and Warmth; Variety of Stimulation; and Physical Punishment. It indicates that these are the areas which contribute more effectively in the home environment of Pakistani young children. Whereas, Physical Environment, Safe, Clean, and Conducive to Development; Stimulation of Academic Behaviour; and Modelling and Encouragement of Social Maturity, have low correlations. It can be inferred that these aspects do not contribute that much in the quality of home environment.

When the differences in home environment of the children of different demographic subgroups were obtained, no statistically significant difference was found among the subgroups. Although the results are not statistically significant, yet the scores show that the families with better educational and financial status have higher mean scores. Some studies in West have also found socio-economic status (*SES*) as most effectively contributing factor in home environment (see Gottfried & Gottfried, 1984). The demographic subgroups of this study were not very significantly different from each other. Sample was drawn from a same *SES* group, consequently the results obtained are also not significantly different.

Some Western researchers (e.g., Barnard, Bee, & Hammonds, 1984; Bradley & Caldwell, 1984; Gottfried & Gottfried, 1984; Johnson, Breckenridge & McGowan, 1984; Siegal, 1984) have found that parents provide same type of home environment to their male and female children. The results of the present study also found the same in the Pakistani context. Rather girls group has a slightly higher scores. Although it appears contrary to the general concept of Pakistani society in which a gender discriminated behaviour of the parents, positively tilted towards boys, is considered a norm. However, the results suggest that: a) parents in upper middle class, have become aware of gender equality. In an attempt to practice it, at times they over do it, which turns into more concerned treatment towards girls; and b) parents in this social class give more protection to girls. Girls are considered as fragile, spend more time inside home, so get extra care and attention. All these findings hold true at least for the present sample.

The study also found no statistically significant difference between the home environment of children of different age groups. It is in accordance with the research of Bradley and Caldwell (1980). Although Hunt (1979), and Wachs and Gruen (1982) indicate strong support for the effect of age.

Similarly, parental education and occupation does not significantly affect the home environment of Pakistani children while Bradley and Caldwell (1984) indicate that these had a significant effect in the home environment. The reason for statistically non-significant findings in this study may be that the sample of the study is quite small and homogeneous, because it has been drawn from the same socio-economic class. To verify the validity of these findings further research is needed with a larger heterogeneous sample.

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