CHAPTER VI
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In the present study an attempt was made to examine the effects of maternal employment, SES and age on the cognitive abilities and academic achievement of primary school children. For optimal cognitive development of the child stimulating home and community environments are prerequisites. A deprived environment lacks such stimulations which affect cognitive development and academic achievement of children negatively. Now-a-days, maternal employment outside the home has become a necessary part of modern life which significantly influence the cognitive development and academic achievement of children. A majority of contemporary psychologists believe that maternal employment & SES contribute positively to the cognitive development and academic achievement of children. In addition to that the role of mother has also a positive contribution for the alround development of children.

The sample of this study consisted of 200 primary school children of both the sexes belonging to two range, 6 to 8 years and 9 to 11 years divided into 8 subgroups on the basis of their maternal employment status, SES and
age. This sample was selected from a larger population of 600 primary school children of Grade II and IV. Information regarding their biodata, age, caste, parental income educational qualification of parents, occupational status of parents etc. were obtained through an initial survey. For the determination of high SES group, income above 75th percentile of the income distribution and for the low SES group the cut off point was chosen below 25th percentile of the income distribution. Out of the selected sample 25 low SES and 25 high SES subjects belonging to employed and unemployed mothers of two age levels were taken. A battery of tests measuring cognitive abilities (viz. Digitspan (Forward & Backward), Free Recall, Serial Recall, Raven's Coloured Progressive Matrices, Figure Copying, and Clustering) were administered to all the children. Four major hypotheses were formulated in the present study. The results of the study have been presented in the previous chapter. The main findings and their implications are discussed in the next sections.

**Major Findings:**

The salient research findings corresponding to each of the hypothesis stated previously are reported below:

1. With regard to Hypothesis 1, it was found that maternal employment status contributed to the
Maternal Employment Status, Cognitive Abilities and Academic Achievement

It was observed from the findings of present study that Maternal employment status contributed positively to the academic achievement scores of children but not to academic achievement of children whereas it did not contribute to the cognitive development of children.

2. With regard to Hypothesis 2, it was observed that SES of the children's families have significant effects on cognitive development and academic achievement.

3. With regard to Hypothesis 3, it was obtained that the cognitive development and academic achievement children developed according to their chronological age.

4. As regards the hypothesis 4 it was found that children of high SES employed mothers belonging to older age groups reflected a better integration of intercorrelations of cognitive abilities and academic achievements scores evidenced in more number of and greater magnitude of correlation coefficient.
their cognitive abilities scores. It means that when mothers are employed, their children do well academically. However, mothers' employment status did not seem to contribute to children's cognitive abilities as indicated by the findings of this study.

With regard to the first part of the findings, it is expected that maternal employment should contribute positively and significantly towards children's academic progress. This can be attributed to several direct and indirect influences of maternal employment. First, it improves the SES of the family, thereby, improving children's overall need satisfaction for optimal development as well as expenses, materials, models for educational achievement.

These findings support the earlier findings of a number of studies. Hoffman (1979) and Woods (1972) observed that maternal employment contributed positively to the various economic, social and psychological conditions of the family which led to qualitatively better child rearing practices. Gold and Andres (1978a; 1978b); Dizard (1978) and Hoffman (1975) also observed that the working mothers were more satisfied with their life than nonworking mothers. Similarly, Etaugh (1974), Nye and
Hoffman (1963) and Hoffman and Nye (1974) found that maternal employment correlated with income, maternal educational status, presence of husband, number of children, ordinal position of the child and parental attitude, all of which also relate to academic abilities.

Recent Indian studies have also corroborated these findings. Bala & Upadhyaya (1992) observed that employed mothers are very much protective, whereas unemployed mothers are more disciplinarian in case of child rearing practices. Similarly, Das & Mathur (1992) also found that working women have a significantly higher level of need achievement.

Secondly, maternal employment produces greater awareness and concern for children's education due to social exposure and interactions. Womark (1967) and Cassidy & Jude (1988) observed that full-time maternal employment was associated with better schooling and social adjustment. Studies of lower socio-economic status populations and one parent families observed that employed mothers are more likely to have structured rules for their children and consistency between theory and practice. Almquist and Angrist (1971) and Tangri (1969) observed that working mothers' families increased academic and
occupational competence of daughters and contributed to positive adjustment in general.

On the contrary, studies by Gold and Andres (1978a; 1978b; 1978c; 1979; Gold, Andres & Glorieux, 1979) indicated that employed mothers' children showed better social adjustment but they did not show significant differences on any academic variables. Banducei (1967) also obtained similar findings.

Thirdly, employed mothers tend to give more meaningful concretely to their children which fosters their academic achievement. The findings of the present study corroborated a few of the earlier findings. Piotrkowski, C.; Katz, M.H. (1982) observed that relatively specific relationships may exist between the employment conditions of parents and aspects of children's school behaviours. Similarly Kriesberg (1970) found that employed mothers' children obtained higher grades in school when no husband was present, but opposite result was obtained in case of general family condition with husband. Delgrade et al. (1993) observed that mothers' demands were positively related to their beliefs about their children's ability and to the children's level of achievement. Similarly, Ginzberg (1971) and Hoffman (1973) also observed that high achieving women often have a
background that includes a close relationship with a warm and encouraging father. But on the other hand, Gold and Andres (1978a) found that there was no difference between the performance of children of consecutively four years employed and unemployed mothers on any one of the academic indices.

Thus, it is not surprising that children of employed mothers fared academically better than the children of unemployed mothers.

Why maternal employment did not contribute to children's cognitive abilities needs some discussion.

Firstly, the cognitive tests used in the present study might not be measuring the types of cognitive abilities fostered at home in the Indian context. Not only children, parents are also ignorant about importance of such skills. Therefore, while employed mothers may be contributing positively to their children's cognitive developments in general or diffuse ways, they did not seem to be contributing to the specific cognitive skills assessed here. These findings of the present study have been supplemented by earlier studies by Jones, Lundsteen and Michael (1967), Polona (1972) and Rapoport and
Rapoport (1972). Findings of these studies indicated that middle class employed mothers compensated their absence by spending extra time in direct interaction with their children. Research findings of Hill and Stafford (1981) also indicated that mothers' educational qualifications played a vital role in the cognitive development of children. Jindal & Gupta (1991) studied the effect of family type (Joint/Nuclear) and parent's educational level on the interpersonal relations in the family as perceived by the grown up child and observed that parental aspirations. Sibling relations and parent child relations were found to be significantly affected by the type of family and educational level of parents. But Pederson et al. (1990) found that maternal sensitivity was unrelated to maternal age, income, or SES but correlated positively with maternal education. Secondly, the significant SES effect found in case of cognitive test scores indicated that the general impact of SES can be more easily dictated than the specific effects of SES variables like maternal employment status. Together with SES, maternal employment seems to have significant effects, but not individually alone in case of cognitive development of children.

**Socio-Economic Status, Cognitive Abilities and Academic Achievement:**

It was observed that the SES of children's families
was found to have significant effects in case of all cognitive test scores and school achievement scores. These findings suggest that SES, comprising of indices of parental education, occupation, family size, income, social caste, and material possessions of the home contributed positively to cognitive development and academic achievement of children.

These findings supported the earlier findings of a number of studies. Cogorno and Maioli (1972) observed that SES of the family is the most important factor to improve mental ability. Similarly, Spitz (1945), Goldberg (1955) and Dennis and Narjarian (1957) also observed that poverty affects negatively the physical and psychological development of children. The study of Frasher (1959, 1972) also corroborated this finding by suggesting that parental income and other home environmental variables of children correlated significantly with their I.Q. and achievement.

On the contrary, Tortman (1977) suggested that home environment characteristics were better predictors of children's academic achievement than SES.

A number of Indian studies have also corroborated these results. Pathak (1974) and Chatterjee (1971) found
that family background variables such as parental education, parental income, religion and caste were most important predictors of educational and cognitive perceptual functioning of children.

Similarly, Das (1973), Dash and Sinha (1974) observed that poverty alone or in association with socio-cultural deprivations have adverse influence on cognitive and academic abilities of children.

Above all, maternal employment is a part and parcel of SES of the family because it contributes to the economic requirements of the family which in turn, helps to meet children's educational as well as other related needs. Maternal employment involves mobility on the part of the mother. It creates a greater awareness and social competition among parents with regard to their children's education. A recent study by Nanda, P. (1991) found that 78.7 percent of Ss had a favourable opinion about their mother's employment. Only 36.25 percent expressed that they would have been happier if their mother stayed home. In addition, 66.20 percent of the Ss felt that more was expected of them since their mothers were working. Most Ss stated that their mothers worked to add to the family income and they noted an improvement in the standard of living due to this additional income. Moreover, Greg J. Duncan & et al. (1994) observed that family income and
poverty status are powerful correlates of cognitive development and behaviour of children.

Age, Cognitive Abilities and Academic Achievement:

It was clearly evident that the Age Factor was found to be significant in case of all cognitive test scores and academic achievement scores. These findings are similar to the findings for the SES Factor. It was very clear from the findings of present study and earlier studies that children's cognitive abilities and academic achievement develop according to their chronological ages. These findings are not surprising but expected because samples for the present study have been selected from younger and older age groups of children belonging to grade II & IV.

These findings have been corroborated by the findings of earlier studies.

Randhaw, deLacey and Hunt (1988) investigated under three experimental conditions, the interaction of communication messages of a total of 219, 7 and 9 years old children of Australia. Subjects' self concept and teacher's ratings of classroom behaviour were also examined. Significant differences were obtained on condition, socio-cultural group and age.
Similarly, Reyes, Morales and Velazquez (1979) compared the cognitive development of Mexican and American children examining the effects of age, urban-rural living, sex and SES. From their results, they concluded that (a) Social class and urban rural habitants produce significant differences intra-culturally favouring low middle over lower class children and lower class urban over lower class rural children in Mexico. (b) Most of the differences tend to widen with age. (c) Clear differences are found after 6-7 years of age in school children's rate of development intra culturally, due to both SES and sex of the child. According to Deutsch (1963), the impoverished language functioning of the lower class children is manifested increasingly with increasing age.

In the Indian context, Jaswal, Gulati, Grewal & Deb (1988) conducted a study taking rural male and female children aged 2.5 to 6.5 years. They were assessed through a specially constructed scale comprised of 9 Cognitive abilities. All Cognitive abilities showed age differences with positive advancement of the ability with increasing age.

Role of Maternal Employment on Child Development:

Implications of the Study

The present research work was designed to look into
the effects of maternal employment, socio-economic status (SES) and age on the cognitive abilities and academic achievements of primary school children using a Factorial Group Design. Each of the three Factors (Maternal Employment, SES, and Age) had two levels each, yielding eight cells with n=25 per cell. Thus, the selected sample consisted of 200 primary school boys and girls aged 6 to 8 years of Grade-II and 9 to 11 years of Grade-IV belonging to employed and unemployed mothers of high and low SES groups. The battery of cognitive abilities tests used in this study consisted of Digitspan (Forward and Backward), Free-Recall, Serial Recall, Raven's Coloured Progressive Matrices, Figure Copying and clustering; administered to all the children. It was hypothesized that the children belonging to employed and unemployed mothers, high SES and low SES families and younger and older age levels would differ significantly. Further, better integration of the cognitive structure would be indicated by more number and greater magnitude of correlation coefficients in case of cognitive test scores and academic achievement scores of children of older, high-SES and employed mothers.

The data were analysed statistically using ANOVA and correlations. Interaction effects were further analysed using the scheffe tests for non-orthogonal multiple group comparisons.
The mean scores revealed that the performances of children belonging to high SES employed mothers, of older age levels were not only significantly higher but also better integrated than that of children belonging to low SES unemployed mothers of younger age levels, particularly in case of academic achievement scores.

The results also showed that Maternal Employment status did not contribute to the cognitive test scores, whereas significant differences were observed in case of SES and Age.

But in case of cognitive test scores the performances of subjects belonging to older high SES group were better than younger low SES group, but a non-significant result was observed between children belonging to employed and unemployed mothers.

Thus, in general, the findings of the present study indicated that Maternal Employment status contributed positively and significantly towards children's academic progress, it seems in Indian context the maternal employment factor directly improves the SES of the family and satisfies the overall needs of children indirectly. In addition to that, employed mothers are more aware of and
concerned about their children's academic progress than unemployed mothers due to more social exposure and interactions. Apart from this, employed mothers are more likely to have structured rules for their children and consistency between theory and practice in case of one parent families.

A typical concern with maternal employment has been with the care that child of the working mother receives during the mother's absence. The nature of the substitute care is of paramount importance. This study suggested that it was also important that we examined the nature of the maternal care itself, interchanges that occur between working mothers and their young children and the child's social and cognitive development. It was not suggested that all children of working mothers are adversely affected. These questions dealt not only with the effect on the child's cognitive functioning and social responses, but also with a potential effect on the mothers' behaviour to the child. It was also suggested that the employed mother may be eliciting or receiving fewer responses from her child. Hoffman (1980) indicated that Maternal employment may involve less supervision or more independence training or autonomy for the child. This might result in lower cognitive performance of boys but
not girls because (a) Prevailing child rearing patterns may over control girls and inadequately train them for independence, but boys may receive the optimum balance or too much. Thus, if maternal employment lessens supervision and/or increases independence training for children, it may improve the conditions for the achievement of daughters but leave boys with too little supervision or too much or too early independence training (b) Maternal employment may lead to greater reduction in the supervision of boys than of girls. Hill and Stafford (1981) reported that less educated women reduced the amount of child-care as they increased their time in the labour force, but more educated women maintained closer to the same levels of child-care with increased labour force participation.

The findings of present study also revealed that maternal employment did not contribute to children's cognitive abilities assessed by the tests used in the present study and may be due to the fact that abilities fostered at home are different and parents of low SES groups may not be aware of these skills. But SES significantly influenced cognitive abilities and academic achievements. So it is evident that together with SES, maternal employment has significant effects, but not individually
alone. In this sense maternal employment may be a significant contributor to the SES of the family, but by itself did not seem to contribute much to children's cognitive development.

Expected findings were also obtained in case of age variable from the present study. Children's cognitive abilities and academic achievements were found to develop with age. Older children performed better than their younger group mates.

**Suggestions for Future Research**

The present study indicated that the effects of maternal employment depend on other aspects of Situational Factors like social class, SES, the sex and age of the child, family structure, the father's role, attitudes towards maternal employment, child care arrangements and various stress factors. In the present social condition maternal employment status is not a social problem. In Indian context while the population of working mothers are increasing day by day, the educational policies and school routines are not developing in such a way to adopt this new situation in a better way. School hours, lunch time policies, vacation schedules, after school programmes, the time of parent teacher meetings, special school
performances, alternatives for the absence of working mothers and career counselling are often out of harmony with a population of employed mothers.

With regard to all possible interpretations of Cognitive development of primary school children certain basic teaching learning processes may be formulated for making Cognitive development more effective and meaningful.

The teaching has to be completely child centred. The present form of early education practised in our Indian schools with a large number of very young children in one class with a single teacher is absolutely nonscientific and unproductive. The Cognitive needs of each child in early years being different from others, child centred teaching will arouse the natural curiosity as well as specific talent of each child. There must be face to face contact between the child and the teacher.

Further learning has to be an active process of understanding. Children may be allowed to do their own learning. Children should be placed in a situation where they should do their own experiments. Through active experimentation only he can manipulate the situation in
all possible ways and this process of manipulation stimulates his native Cognitive capacity in a very natural way. They become actively aware of their own capacity and this enables them to develop self confidence in acquiring more and more [Chittandan (1969); Duckworth (1964); and Opper (1969)].

Co-operation among children is as important as it is with teachers and other adults. Social interaction among children in schools should be made a permanent educational programme. This will lead to peer teaching learning situations at later years (Kami, 1973).

More emphasis should be given on actual experiences rather than literary and language Piaget (1970) stressed that the role of reflection on activity rather than mere activity. Attempts should be made to bridge the transition from natural activities to conscious reflections and theoeretical formulations. This process which is known as discovery method seems to be extremely important for proper Cognitive development. In addition to this skills whether literacy or numerical need not be mechanically drilled into children without their application, value and social utility.
Preschool training should be introduced for early compensatory education. If cognitively stimulating home and parental conditions are poor or non-existent in their surroundings, preschool enriched environment would be the proper substitute to make up this deficiency. Co-curricular compensatory educational programmes, activity based curriculum should be introduced for optimal cognitive development and academic achievements. Apart from this, required number of child care centres should be established to compensate needs of the children of employed mothers. These programmes have to be based on more intensive investigations with specific goals in view. Because systematic cognitive stimulation would certainly improve and strengthen the cognitive functions of the children whose abilities have been depressed or stagnated due to restricted environmental conditions.

Most of the parents from rural society are not familiar with the current teaching learning process. Parental involvement in teaching learning process and parental counselling system should be introduced at primary school level to enrich the cognitive development and to facilitate the process of academic achievement of children. Specific provisions should be incorporated in primary school curriculums regarding parental counselling through certain procedure by an expert counsellor with
parent teacher meeting. As a result, parents would be much aware of their ward's academic progress and they would also guide them at home in a proper direction by knowing children's loopwholes in concerned fields.

The questions raised by the present study merit systematic investigations and suggest that further study of maternal employment is necessary. It would be desirable to study maternal employment effects during childhood period in normal population as well as in groups considered at risk for biological and social factors.