Maternal Knowledge, Involvement and Integrative Early Child Development Programs in Ethiopia

Teka Zewdie*

Abstract: *This is an exploratory study of maternal behaviors with particular reference to knowledge and levels of involvement in child development. Two groups of mothers representing the high and low class families of two communities in Addis Ababa were compared on PARI (Parental Role, Knowledge and Involvement) Scale in a quasi-experimental fashion. The analyses employed descriptive, correlational parametric and non-parametric procedures, and major maternal socio-demographic characteristics such as education, income and general life conditions were seen against perceived maternal knowledge, and level of involvement in child development. The study revealed significant differences as well as relationships, where perceived maternal knowledge and involvement levels in child development appeared to be primarily dependent on maternal educational and socioeconomic variables. The results appear to be telling more about the differential perception of parental knowledge and roles in child development, as a result of educational and socio-economic disparities. The tendency of especially the low-income group of mothers to show low level of knowledge and low involvement in their children's development, apparently as a result of the above material and nonmaterial constraints, suggests the use of an integrated approach if the purported programs of early childhood developmental intervention have to realistically meet their objectives.*

Introduction

Knowledge and involvement are the key concepts for the reality-oriented psychotherapists, not only in their treatments of clients, but also in their advice to parents to mediate a sense of relatedness and self worth to their children (Glasser, 1990). Similarly, several early childhood psychosocial intervention programs, for instance, the ORION method (Aarts, 1990), the various forms of MLE (Feuerstein, et al, 1991), and the MISC sensitization method (Klein, 1992, 1996) insist on

* Assistant Professor, Department of Educational Psychology, Faculty of Education, Addis Ababa University.

the promotion of parents'/caregivers' motivation for knowledge and involvement in their children's development. Consequently, reports of motivated, poor and little-educated parents showing higher knowledge and involvement in their children's development are particularly noted in the early psychosocial training programs of several developing countries (Klein, 1992; Hundeide, 1991).

In Ethiopia, despite the few isolated studies which often offered little theoretical background (Bizunesh, 1983; CYAO, 1996) and despite the efforts of some local NGO's to provide somewhat integrated programs (Tirussew, 1999), early childhood education program was actually witnessed with the introduction of a psychosocial intervention venture at the end of the 1980's. It first started on poor and semi-literate mothers and their children (from birth to three years old), and on some female adolescent girls and adult caregivers of an orphanage in Addis Ababa. Later, it was extended to train employees of early child development institutions drawn from the selected sites of Awasa, Nazareth and Dessie. Its broader objectives rested on the eventual exertion of its positive impact on the current educational practices of the Country (Rye, 2001).

Indeed, parental sensitization in knowledge and involvement levels is not only important but it is also very crucial especially for the child's cognitive development (Gotfried, 1986). Yet the basic question of whether parental sensitization through psychosocial means *per se* is adequate by itself is still not fully addressed, luring several efforts to follow a solo path of early intervention. Parental knowledge and involvement level in child development appears to be so dependent on such parental background factors as income and education among others. Consequently, parental background factors have been conceived as reflections of such micro-social variables as parental life standard conditioned mainly by educational and socio-economic variables, and further creating dichotomies of mother-child relational patterns between rich and poor nations (Levine, R., 1988; Levine, et al, 1994; Berry, et al, 1992; and Feuerstein, R., et al, 1991).

Micro-social variables have influenced parent-child relational patterns (Goldstein, *et al*, 1976; Singh, 1982; Singh, 1983; Scheper, 1985). For instance, characteristics of maternal control and hostility towards the infants at one year were associated with the lower occupational status of the father, lower IQ of the mother and greater age of the father (Goldstein, Taub, Caputo, and Silberstein, 1976). These findings, among others, indicated that the behavioral development of the infant was not only related to maternal demographic variables *per se*, but also to those variables of the father, depending of course, on the role played by the parent.

In Singh's (1982) study, for instance, the impact of parental modernity on the child's quality of career choice was particularly noted as it further differentiated the modern from the traditional student. Singh's (1983) further study also indicated that the progressive mothers were observed providing more verbalization, independence, etc, as opposed to the less progressive ones, who employed chiefly punitive and restrictive behaviors in their relationships with their children. Furthermore, the more progressive the mothers were the less inclined they were to beliefs of chance, fate, and luck than the less progressive mothers.

In some situations, socio-economic factors of extreme poverty have even disturbed the natural parent-child relationship, leading to a condition of total neglect of the child. For instance, Scheper (1985) provides a grim picture of high infant mortality rate, parasitic infections, and chronic under-nutrition that prevailed in a shanty town in Brazil and the pathetic behavior of the impoverished mothers. According to the report, the mothers were not only detached and indifferent towards their babies, but they often wished the silent death of their children if they judged them as too weak to survive. As Henderson's (1981) comprehensive review reveals parental education and socio-economic status are the summarizing factors to influence the degree of maternal knowledge, role and involvement levels in child development.

Of course, parental involvement could be enhanced; and several early intervention programs have reported such improvements as parenting skills, attitudes, self-image, knowledge and use of community resources. One could, for instance, note such activities as the Head Start Program which was implemented on disadvantaged families of the USA (Holmes, *et al*, 1973), and Ginsburg's (1980) report of training programs of Jewish parents. The report by Benas (1980) actually indicated how a pre-school program in the US involved parents in classroom observation, teaching and group discussions with other parents. With these activities, *parents were taught about development and behavior patterns and the importance of nutrition and success in early childhood. They were assisted and encouraged to make the home a learning environment*.

The experimental work by Zeskind and Ramey (1978), too, confirmed the positive effect of maternal involvement on the intellectual functioning of the retarded child in two family groups of low socio-economic status, where the cause for the retardation was linked to the deprivation of the socio-cultural environment. Still further, Brown and Bakeman's (1977) observation on the behavioral differences between premature and full term infants at 9 months underlined the significance of maternal involvement, noting the role of *maternal education as the best predictor* of a mother's action in this situation.

Parental differences in values have been attributed to the group's socio-economic status (Cashmore and Goodnow, 1986). Parental knowledge on the behavioral capabilities of young children in a sample of low-income Hispanic, Black, and Anglo-American communities were also compared (Zepeda and Espinoza, 1988), where the low-income Hispanic parents were observed perceiving the later development of their children's motor and language skills more so than the other groups. Useem (1990), too, examined the link between parental social class and children's academic choice, further exploring the degree *to which parents were involved* in the academic assignment of their children, and found a high correlation between the parent's educational level and the student's subject placement. This study indicated the

variation in parental knowledge about the school system, parental integration into school affairs, informal parental networks, parental intervention in children's education and parental influence over children's academic choice as a result of differences in parental education and social class.

Apart from these specific factors, another line of thinking considers the broad cultural differences in qualifying degrees of parental involvement in child development. In Klein's (1992) review, cultural factors were suggested as influencing parental *ideas about the timetable of development in infancy and childhood*. Klein pointed out the role of cultural factors on parenting, *where more westernized cultures, for instance, believed in an earlier timetable of infant development than the more traditional cultures*. Goodnow (1988), too, reviews research on variations regarding *parent's ideas about parenting and development, and research in social psychology on attitudes, schemas and social organization*. In one study, Goodnow (1989) examined the *place of children's work in family life, paying particular attention to the way in which expectations regarding work are based on underlying concepts of children, parenting, and obligations among the family members*.

Problem Statement

The study raised the following questions regarding maternal knowledge and involvement in child development.

- Are there differences in maternal knowledge and involvement levels in child development? Are these differences significant?
- Which mother-group appears to show more involvement in its childcare?

- Which variables are related to the perceived maternal knowledge in child development? Is it maternal education, socio-economic status, maternal working conditions or other variables?

- Which maternal variable is linked to the perceived maternal levels of involvement? Is it maternal age, education, maternal socio-economic status, maternal working conditions, or other variables?

- What do these imply for the early intervention programs in Ethiopia?

Methodology

Sampling Procedure

With a judgmental sampling technique, two groups of mothers were drawn from northwestern and southeastern areas of Addis Ababa. The groups were all of a childbearing age and were with children (aged from birth to three years). The first group (Group A) comprising 36 mothers was of a lower income and educational category while the second group (Group B) comprising 49 mothers was a group of higher income and educational category. Group A mothers were very poor mothers. They had little or no education, lived in the congested areas of northern and western Addis Ababa, and made their living chiefly as daily laborers with their meager income that fluctuated from day to day. On the other hand, Group B mothers were of high-class families with high income and educational level and lived in the southern and eastern Addis Ababa. Their education ranged from high school to college level. Most of the mothers lived in their own houses which were relatively modern. The mothers were either business people or civil servants in high-income brackets.

Instrumentation and Administration

The main instruments used in this study were:

- Parents' socio-demographic questionnaire, and

- Klein's Parental knowledge, Role and Involvement (PARI) Scale. The PARI scale is a 15-itemed scale used in several developing

countries. For instance, Klein and Hundeide (1989) studied Indonesian parents and found out that parents could *estimate* the normal period of their children's development in language, cognition, and psychosocial dimensions.

Items on these two instruments were revised and prepared in Amharic, with careful attention paid to the wording in order to fit the cultural context of communication. For instance, the item referring to *The child's first book* was communicated with wordings, which indicated the time when parental provision of the □□ to the child could be conceived as appropriate. Actually, the respondents didn't find this to be an alien experience as they directly or indirectly witnessed children working on the □□ in their early school preparation either in the traditional or the modern schools. The responses of the samples of both groups were collected through interviews held with the items of the instruments with repeated visits to the areas.

The Analysis

Three maternal characteristics were grouped and analyzed under maternal knowledge category. These were maternal perception of child's developmental timetable, task appropriation, intelligence, and maternal perception of the child's future school performance. The second maternal category was the perceived level of maternal involvement in the child's physical and cognitive development and in the child's behavioral regulation.

Maternal Knowledge of Child's Developmental Timetable

Table 1 shows the distribution of maternal responses on knowledge regarding the child's age to identify the mother and objects in the environment and the child's ability to understand spoken words.

Table 1: Maternal Knowledge of Child's Developmental Time

Variables	Group A No (%)	Group B No (%)	Total No (%)
Age of identifying mother			
1-3 months	6(16.7)	22(44.9)	28(32.9)
4-6 months	19(52.8)	23(46.9)	42(49.5)
7 months and above	11(30.6)	4(8.2)	15(17.6)
Total	36(100)	49(100)	85(100)
Age of identifying objects in the environment			
1-6 months	6(16.7)	22(44.9)	28(32.9)
7-12 months	12(33.3)	13(26.5)	25(29.4)
13 months and above	18(50.0)	14(28.6)	32(37.6)
Total	36(100)	49(100)	85(100)
Age of understanding spoken words			
1-12 months	9(25.0)	25(51.0)	34(40.0)
13-24 months	9(25.0)	20(40.8)	29(34.1)
25 months and above	18(50.0)	4(8.2)	22(25.9)
Total	36(100)	49(100)	85(100.0)

With regard to maternal knowledge about the child's *ability to identify the mother***,** only 16.7% of Group A mothers indicated the period between birth to three months as the expected time in contrast to the 44.9% of similar responses from the Group B sample. Furthermore, 52.8% of the Group A and 46.9% of the Group B sample estimated the period of 4 to 6 months. Even so, 91.8% of the response distribution in the Group B mother sample was within the 6-month limit, in contrast to 69.5% of the Group A mother sample. Maternal perception of the child's ability to *identify objects in the environment* was much earlier for the Group B than it was for the Group A mother sample. 44.9% of this sample indicated an earlier period of 1 to 6 months in contrast to 50% of Group A which perceived a relatively later period. Thus the total distribution for each group shows that nearly three-quarters of the Group B mother sample, i.e., 71.4% did not exceed the one-year age limit in its response. However, 50% of the Group A mother sample perceived this to happen at a much later date.

Table 1 also shows a wide gap that exists between the two samples in maternal views regarding the *child's age to understand spoken words.* More than half of the Group B mother sample, i.e. 51%, perceived the period between 1 and 12 months as the appropriate period a child begins to understand spoken words. This view was expressed by only 25% of the Group A mother sample. On the other hand, 40.8% of the Group B perceived the period between the child's first and second year as the appropriate time, showing variation of maternal opinion even within the sample. Another 25% of Group A perceived the period between the child's first and second year as the appropriate time, while the remaining 50% of this group indicated the period of 2 years and above as the period the child understands spoken words. This is in contrast to the only 8.2% responses of the Group B mother sample, where maternal knowledge, regarding this sub item, was put at an earlier stage in Group B than in Group A mother sample.

Maternal Knowledge of Task Appropriation for Child

Table 2 shows the earliest period for the appropriation of *conversational behavior with the child.* It was indicated to fall between birth and 3 months by 22.2% of the Group A and by 16.3% of the Group B mother sample. On the other hand, 38.9% of the Group A mother sample indicated the period between 4 to 18 months to be the appropriate one to start conversing with the child while only 14.3% of the Group B mother sample favored this time category. On the other hand, 69.4% of the Group B mothers perceived a later time value of 19 months and above in order to start conversing with the child. This was in sharp contrast to the response of the Group A mothers where only 38.9% indicated so. Similarities rather than differences could also be observed between the two samples. This was particularly noted where 77.8% of the Group A and 83.7% of the Group B mothers indicated the period ranging from 4 months to 19 months and above as an appropriate period in which to start conversing with the child.

Table 2: Maternal Knowledge of Task Appropriation Time for Child

Variables	Group A	Group B	Total
	No (%)	No (%)	No (%)
Appropriate age to start conversing with child			
0-3 months	8(22.2)	8(16.3)	16(18.8)
4-18 months	14(38.9)	7(14.3)	21(24.7)
19 months and above	14(38.9)	34(69.4)	48(56.5)
Total	36(100)	49(100)	85(100)
Appropriate age to start telling stories to child			
~24 months	4(11.1)	6(12.2)	10(11.8)
25-36 months	22(61.1)	43(87.8)	65(76.5)
After 36 months	10(27.8)	-(-)	10(11.8)
Total	36(100)	49(100)	85(100)
Appropriate age to buy child's first book[1]			
12-24 months	2(5.6)	10(20.4)	12(14.1)
25-36 months	26(72.2)	39(79.6)	65(76.5)
After 36 months	8(22.2)	-(-)	8(9.4)
Total	36(100)	49(100)	85(100)

Furthermore, the appropriate time to *start telling stories to the child* was felt to be between the child's second and third years. This was indicated by 87.8% of the Group B and by 61.1% of the Group A sample. The remaining 27.8% of the Group A sample was, however, seen extending the initiation period of story telling time to well over the child's third year, a view not shared by the Group B mother sample.

Similarly, an earlier time-value for *providing the child with its first book (providing the child with □□ in the Ethiopian context)*, was seen more with the Group B than with the Group A mother sample. In this response, only 5.6% from the Group A but 20.4% from the Group B mother sample indicated that the child's *first book* should be provided between the child's first and second year. However most informants from both samples, i.e., 72.2% from the Group A and 79.6% from the Group B mother sample, favored the period between the second and third year as the appropriate time for parents to think of the child's *first book*. It should be noted that 22.2% of the Group A mother sample

[1] This was communicated with wordings that referred to the child's □□ in the Ethiopian cultural sense

favored the period after the third year of the child's life, thus showing a tendency towards late maternal action in this respect.

Table 3: Maternal Knowledge of Child's Cognitive Potential

Variables	Group A No(%)	Group B No(%)	Total No(%)
Rating of child's level of intelligence			
About average	7(19.4)	36(73.5)	43(50.6)
Bright	2(5.6)	13(26.5)	15(17.6)
Very bright	27(75.0)	0(0)	27(31.8)
Total	36(100)	49(100)	85(100)
Rating of child's future school performance			
Junior high school	19(52.8)	2(4.3)	21(25.3)
Senior high school	1(2.8)	1(2.1)	2(2.4)
College/ University	16(44.4)	44(93.6)	60(72.3)
Total	36(100)	47(100)	83(100)

Maternal Knowledge Regarding the Child's Cognitive Potential

The first item of Table 3 shows *maternal rating of the child's level of intelligence*. Here, 73.5% of the Group B mother sample rated the child's intelligence as average, whereas only 19.4% of the Group A mother sample indicated a similar view. Conversely, 75% of the Group A mother sample rated the child as being very bright, whilst none of the Group B mother sample indicated so. Here, the tendency to characterize the child as very intelligent was seen more with the Group A than with the Group B mother sample. Yet, the tendency to *rate the child's future school performance* was seen to be more pronounced by the Group B than by the Group A mothers. As the table shows, more than half the Group A mothers, i.e., 52.8% of them, rated the child's future school performance as likely to complete junior secondary level, whereas only 4.3% of the Group B mother sample felt this to be the case. Furthermore, 93.6% of the Group B mother sample rated the child's future school performance as likely to proceed to a college or university level education. This was in sharp contrast to a corresponding response of 44.4% by the Group A mother sample.

Table 4: Perceived Maternal Levels of Involvement

Involvement	Group A No (%)	Group B No (%)	Total No (%)
Maternal involvement in child's physical growth			
Minimal	9(25.0)	8(16.3)	17(20.0)
Moderate	22(61.1)	16(32.7)	38(44.7)
Substantial	5(13.9)	25(51.0)	30(35.3)
Total	36(100)	49(100)	85(100)
Maternal involvement in child's cognitive growth			
Minimal	11(30.6)	8(17.0)	19(22.9)
Moderate	21(58.3)	10(21.3)	31(37.3)
Substantial	4(11.1)	29(61.7)	33(39.7)
Total	36(100)	47(100)	83(100)
Maternal involvement in child's behavioral regulation			
Minimal	1(2.8)	8(16.3)	9(10.6)
Moderate	33(91.7)	9(18.4)	42(49.4)
Substantial	2(5.6)	32(65.3)	34(40.0)
Total	36(100)	49(100)	85(100)

Maternal Level of Involvement in Childcare and Development

According to Table 4, maternal self-rating items dealt with the mother's perception of her involvement in the child's physical, and cognitive development, and in the development of the child's behavioral regulation.

Table 4 indicates that 25% of the Group A and 16.3% of the Group B mothers rated their *involvement in the child's physical development* as minimal. On the other hand, 61.1% of the Group A mothers rated their involvement levels as fairly moderate, as compared to the 32.7% of the Group B mother sample. Furthermore, 51.0% of the Group B mothers rated their roles as substantial in contrast to only 13.9% of Group A mothers. Similarly, 30.6% of the Group A and 17.0% of the Group B mother sample rated their roles in the child's *cognitive development* as minimal. Furthermore, 58.3% of the Group A but only 21.3% of the Group B mother sample rated their roles as fairly moderate. A more distinct difference was where 61.7% of the Group B mothers rated their

roles as substantial in contrast to the only 11.1% of responses from the Group A mothers.

With reference to parental roles in *the child's behavioral regulation,* Table 4 indicates that there were few mothers with the lowest self-rating scales in both samples, i.e., 2.8% in the Group A and 16.3% in the Group B mother sample. However, the Group A mother sample was primarily seen on the middle scale where 91.7% indicated its roles as fairly moderate. On the other hand, the highest parental self-rating category was seen more with the Group B mother sample where 65.3% rated their roles as substantial. Evidently this was in sharp contrast to the only 5.6% of response distribution from the Group A mother sample.

Maternal Differences in Knowledge about Child Development

Maternal knowledge difference regarding child development was analyzed with a t-test statistics. As shown in Table 5, differences in maternal knowledge regarding the child's developmental readiness for object-person discrimination, language mastery and maternal perception of appropriation time for these specific tasks were tested.

As summarized in Table 5, the average age for a child to first identify his/her mother was considered to be about 7 months by the Group A, but only 4.10 months by the Group B mother sample. This group difference was significant at the 1% level ($n=85$, $t=3.15$, $p<0.01$). A similarly significant group difference ($n=85$, $t=2.82$, $p< 0.01$) was also observed between the two groups, where the Group B mother sample indicated an average age of about one year for a child to identify objects in the environment. On the other hand, the Group A sample indicated an average age of about 20 months for this to happen.

Table 5: T-tests for the Differences in Maternal Knowledge

Knowledge (months)	Group A Mean (SD)	Group B Mean (SD)	T value	Sig.
Identify one's mother	7.22(5.73)	4.10(1.84)	3.15	**
Identify objects	19.61(12.86)	11.93(11.77)	2.82	**
Grasp spoken words	27.73(13.70)	15.61(8.67)	4.66	***
Over all	54.56(27.19)	31.64(17.17)	4.45	***
Speak to child	15.85(15.93)	18.27(9.13)	-.82	n.s.
Stories to child	42.31(19.43)	34.37(3.97)	2.42	*
Child's 1st book	37.70(7.67)	32.46(7.31)	3.18	**
Overall	95.86(29.88)	85.10(14.82)	1.99	n.s.

*p=.05; **p<0.01; ***p<.001; n.s=not significant.

With regard to a child's readiness to understand spoken words, the average age was about 28 months for the Group A mothers but only 16 months for the Group B mother sample, and again showing a highly significant difference between the two samples (n=85, t=4.66, p<0.001). A very high and significant difference was also observed between the two samples (n=85, t=4.45, p<0.001), where the overall maternal knowledge of child development was much earlier for Group B than for Group A mother sample.

On the other hand, maternal knowledge regarding the appropriate time to speak to the child indicated a non-significant difference, where the average age was 15.85 months for Group A, and 18.27 months for Group B mother sample.

Yet the groups differed significantly regarding the appropriate time to begin telling stories to the child (n= 85, t=2.42, p<0.05), where the child's average age was put at about 42 months by Group A but about 34 months for Group B mothers. A very high and significant difference was also observed in the responses to the appropriate time to buy the child's first book (n=85, t=3.18, p<0.01). Group A mothers mentioned an average age of 37.7 months, but Group B mothers indicated an average age of only 32.46 months.

Despite the significant differences in these two latter cases, the overall maternal view regarding parental perceived appropriation of tasks to the child's developmental levels does not show a significant difference between the groups. This may appear to suggest the tendency of the maternal behaviors to generally share commonality of values despite the micro-social differences in the specifics.

Table 6: Mean Rank Values of Maternal Ratings and Involvement Levels

Variable	(N) Mean Rank Group A	Group B	U	Z	P
Maternal ratings of child's intelligence	(36) 61.11	(49) 29.69	230	-6.35	***
Maternal ratings of child's future school performance	(36) 30.21	(47) 51.03	421.5	-5.01	***
Maternal roles in child's physical development	(36) 34.35	(49) 49.36	570.5	-2.99	*
Maternal roles in child's cognitive development	(36) 30.92	(47) 50.49	447.0	-3.92	**
Maternal roles in child's development of behavioral regulation	(36) 31.90	(49) 51.15	482.5	-3.94	**

*p<0.01; **p<0.001; ***p<0.0001.

Differences in maternal ratings of the child's cognition and maternal level of involvement were also seen between the mother groups using the Mann-Whitney Test for mean rank differences. Significant variations were observed regarding maternal rating of the child's cognitive potential. As shown in Table 6, the difference in the maternal rating of the child as intelligent was significant with Group A mother sample, showing a greater mean ranking score than its Group B counterpart (n=85, U=230, Z=-6.35, p<0.001). Conversely, maternal rating of the child's future school performance was significantly different with the greater mean ranking score of Group B than Group A mother sample (n=83, U=421.5, Z=-5.01, p<0.0001). The significant difference in the rating of the child's current cognitive potential indicates the more *relaxed* rating of the Group A mother samples. The interesting part of this response could be seen where this same group indicated a somewhat *constrained assessment* when issues of the child's future school performance were raised. It seems that Group B mother sample

was somewhat guarded in its rating of the child's current intelligence but more confident on child's future school performance.

Maternal perceived involvement in child's dimensions of development, that is, in the physical ($n=83$, $U=570.5$, $Z=-2.99$, $p<0.01$), the cognitive development ($n=83$, $U=447.0$, $Z=-3.92$, $p<0.001$) and in the child's development of behavioral regulation ($n=85$, $U=482.5$, $Z=-3.94$, $p<0.001$) also showed significantly greater mean ranking scores for Group B than for Group A mothers. Generally, Group B mothers indicated higher self-rating scores than Group A mothers in their perceived involvement in the physical, cognitive and the behavioral regulation of the child. It thus appears that these group differences in maternal involvement were linked to the varied maternal socio-demographic variables stated earlier.

The Link between Maternal Knowledge Involvement Behaviors and Maternal Socio-demographic Variables

The link between maternal knowledge involvement behaviors and the maternal characteristics was examined with the five maternal variables computed from the responses of the groups. These latter variables were maternal education, workload, time, socio-economic status and maternal working conditions. As shown in Table 7, three of the five maternal variables were significantly linked to the maternal knowledge scores of the child's developmental potential and maternal perceived involvement in child's physical, intellectual and behavioral dimensions of development.

Table 7 shows that the relationship between the mother's education and her rating of the child as intelligent was negatively and very highly significant ($n=83$, $p<0.001$). Conversely, maternal education was positively and significantly related to maternal rating of the child's future school performance ($n=84$, $p<0.001$). This implied that Group B, which had a high level of education, appeared to be more realistic than Group A mother sample to be involved in the longer and higher school career of the child. However, maternal education did not show any significant

relationship with maternal rated level of involvement in the child's physical development and behavioral regulation. Yet a significant relationship was noted (n=83, p<0.05), where maternal education was positively and significantly related to maternal involvement in the child's cognitive development (n=83, p<0.05).

Table 7: Maternal Socio-Demographic Variables and Maternal Knowledge-Involvement Behaviors

	Maternal Knowledge and Involvement				
	Maternal Knowledge		Maternal Involvement		
Mat.Soc.dem. Variables	Intellig.	Future Sch.	Phys	Intl	Behavr.
Maternal education	-. 48**	. 49**	. 21	.27+	.13
Maternal workload	. 41**	-. 35*	-. 12	-.25+	-.12
Maternal time	-. 06	-. 03	. 02	.01	.01
Maternal soc/ec.stat.	-. 41**	. 39**	. 24+	.35*	.27+
Maternal empl.place	. 18	-. 22	. 00	-.21	-.06

+eta p<0.05; *p<0.01; **p<0.001

Yet, Table 7 shows that the link between maternal workload and the mother's rating of the child as intelligent was negative and very highly significant (n=85, p<0.001). This suggests that those mothers with a heavy workload were more inclined to assume the child as intellectually more capable for an apparently early contribution and share than the child of a mother with light workload. Similarly, the link between maternal workload and the mother's rating of the future schooling of the child was negative and highly significant (n=85, p<0.01) suggesting that those mothers with light workload were more optimistic concerning the future school performance of their child. On the other hand, maternal workload did not show any significant relationship with perceived maternal involvement in the child's physical development and behavioral regulation. This was so despite the link between this variable and maternal role in the child's cognitive development which was negative and significant at the 5% level of statistical confidence (n=83, p<0.05).

It is also interesting to note that maternal time for the child did not show any link with either the knowledge or involvement dimensions of the mothers. In contrast to the maternal workload, the link between maternal socio-economic status and maternal knowledge of the child's intelligence was negative and very highly significant ($n=83$, $p<0.001$). This suggested that those mothers of lower socio-economic status were inclined to rate their children as more intelligent in contrast to those with higher socio-economic status. Conversely, maternal socio-economic status was positively and significantly related to maternal perceived involvement in the child's future school performance ($n=83$, $p<0.001$). Maternal socio-economic status was also positively and significantly related with the perceived maternal involvement in the child's cognitive development ($n=83$, $p<0.01$) and in the child's physical development ($n=83$, eta,.24, $p<0.05$) and behavioral regulation ($n=83$, eta .27, $p<0.05$).

Summary of the Findings

- With regard to maternal knowledge of child development, Group A, in contrast to Group B mother sample, indicated a late-time value for the child to identify mother and objects in the environment and to grasp spoken words. Group B mother sample, on the other hand, indicated an early-time value to begin telling stories to child and to buy the child's first book. Even so, the overall value of this latter case was not statistically significant.

- In maternal knowledge of the child's cognitive potential, Group A mother sample rated the child's current intelligence more highly, but put the child's future school performance on a less promising scale than did Group B mother sample.

- Group A rated perceived level of maternal involvement in the child's physical, cognitive and behavioral development, consistently lower than Group B mother sample.

- Maternal socio-economic level was negatively and significantly related to maternal rating of the child's current intelligence, but it was positively and significantly related to maternal rating of the child's future school performance. This variable was also positively and significantly related to the mother's perceived level of involvement in the child's physical, cognitive and behavioral development. This suggests that even though the socio-economically higher group of Group B mother sample rated the child's current intelligence as lower than Group A mother sample, it was nevertheless more involved in the child's future school performance and in its parental involvement in the child's development.

- Maternal education appeared to be in second place, and was also negatively and significantly related to maternal rating of the child's intelligence, but positively and significantly related to the child's future school performance. Maternal education was especially related significantly and positively to the mother's perceived level of involvement in the cognitive development of the child. This suggested that the more educated mother group of Group B mother sample was more involved, especially in the child's general intellectual development than the less educated of Group A mothers.

- Maternal workload was positively and significantly related to maternal rating of the child's current intelligence. This also suggested that the maternal group with a heavier workload (basically referring to Group A mother sample) was likely to rate the child's current level of intelligence on a more elevated plane than the Group B sample with a lighter workload. However, maternal workload was negatively and significantly related to maternal rating of the child's future school performance and to maternal involvement behaviors in the child’s cognitive development. This also appeared to suggest that the mother group with a lighter workload was more likely to be more optimistic about and be more

involved in the child's cognitive life than the mother group with a heavy workload.

Discussions

Despite the complexity of the issues influenced by other subtle factors, the results of this study appear to suggest that maternal knowledge and involvement in child development is the function of maternal socio-economic status, educational level, and maternal workload. Briefly stated maternal standard of life shows significant differences as well as relationships in maternal knowledge and involvement behaviors in childcare and development. As shown, these mother groups of differing life standards have differently and significantly responded to child's developmental timetables and to maternal norms of task appropriation and involvement levels in order to meet the developmental potentials of the children.

The tendency of maternal knowledge and involvement levels to change with changes in the mother's educational levels and socioeconomic status may appear to substantiate LeVine's view (1988, 1988 and 1989), which underscores the changing values of maternal roles as a result of changes in the socio-economic and socio-demographic structures. Furthermore, other studies, as highlighted in the introduction of this section, seem to indicate the differential perception of parental knowledge and involvement levels in child development mainly as a result of the educational and socio-economic disparities.

Maternal knowledge, as it is more directly related to maternal level of education and socioeconomic status, may, as some studies indicate (Hart 1989), even be a summarizing variable (Henderson, 1981) to show a stronger bearing on the child's development. MacPhee (1983) too confirms this point by indicating that the higher the positive rating of the more knowledgeable mothers about their infants, the higher their tendency to *structure interactions between the children and the social and the physical environment*. Evidently, the more knowledgeable are better positioned for *exposure to socio-cultural sources of information*

(such as the advice of experts, families, and friends), and for direct observation of infants and children than the less knowledgeable parents who are usually characterized by lower education and socio-economic status.

Even though child development could be viewed as a cultural construction with both the level of activity of the child and the parent, (Bronfenbrenner, 1979; Bruner, 1986, 1990; Hundeide, 1991; Rogoff, 1989, 1993; Super, and Harkeness, 1993; Valsiner, 1988) the tendency of the pairs to be subjected to a condition of general helplessness as a result of the material constraints should not be overlooked. As Nysamenang (1992) succinctly expresses:

> the human mind is as sharp an instrument, as it can be a stimulating as well as a blunt and inhibiting device. It is as sensitive as it can be insensitive. The genetic code underlies color blindness in an analogous manner, that worldview that undergirds human injustice and insensitivity to the deprivation of human condition.

These *parental characteristics* are strongly associated with the child's cognitive development. For instance *middle-class speech*, in contrast to lower class speech, was noted to provide more elaborate and abstract cues that were more easily transferable to the formal language of books and school related language requirements (Sewell and Price, 1991). In a similar manner, Lidz (1991) also cited instances where parents of varying socio-economic status have shown considerable and consistent differences in involvement that *require manipulation of the task* or *the taking of time for reflection and planning* by the child.

Parental deprivation primarily triggered by lower level of education and socioeconomic status can definitely lower knowledge and involvement behaviors tending to blunt and inhibit the sensitivity of the child’s mind (Nysamenang, 1992) unless an integrated approach is conceived. Even though the contribution of early psychosocial intervention programs is generally commendable, the issue of child development as it encompasses the physical, intellectual and the behavioral

dimensions could not be left to a psychological program alone. This is simply because of the fact that one cannot expect much of parental knowledge, role and involvement in a family of several life stressors unless other parallel programs as nutrition, health, etc are offered in an integrated form and in conjunction with the early psychosocial intervention ones (Beckwith, 1990).

Evidently, an *integrated developmental program* is not a new concept, as long as it follows the logic that mother-child interaction is the sum effect of multiple factors requiring multiple and interrelated actions. As practised in Nepal, for instance, integrative program may mean envisaging such activities as social and economic leveling, lower unemployment, improved status of women, literacy education and health services and the training of multipurpose social workers so that their delivery could be envisaged from a single administrative structure (Justice, 1986). Evidently, this logic needs to be extended to the Ethiopian situation, as the inclusion of parental and child factors in the social support system could only make an early psychosocial intervention program more meaningful, sustainable and comprehensive (Elster, 1990; Justice, 1986).

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