

## **EFFECTS OF EARLY PSYCHOSOCIAL INTERVENTION ON THE DEVELOPMENT OF CHILDREN IN A SELECTED COMMUNITY IN ADDIS ABABA**

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**ABSTRACT:** *Several intervention methods have been devised over the years that were found to be promising in helping child caregivers to adequately interact with children who are under their custody. One such method is the "More Intelligent Sensitive Child" ( MISC ) technique, which was tried out on an experimental group of mothers and children randomly selected from purposively identified community in Addis Ababa. A control group was randomly selected from another community which was similar to the one chosen for the experimental group.*

*The study was conducted using a comprehensive questionnaire. Videorecordings were also made both before and during the interaction period. The results of the study in the experimental group indicated that there were significant changes (several mediated activities) in the mother-child interactions. From the findings it was also noted that out of the five mediational learning experiences (MLE), the improvements made particularly with respect to mediation to transcendence and feeling of competence were generally low.*

*In the case of the control group, there was an erratic and negligible difference between the pre - and post - assessment outcomes.*

### **INTRODUCTION**

Recent trends of research seem to suggest that infants nowadays are not perceiving the world with a "blooming, buzzing confusion" but on the contrary with the capacity to process information for an earlier conceptualization of the world (Mandler, 1990). This new direction has called for the necessity of early psychosocial intervention with several

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programs designed to improve the quality of parent/child interaction for a more enriched cognitive development during early childhood (Stewart, 1990).

Consequently, assessment of children should not be limited to the description of their physical growth and mental development. Instead, care must be taken to include important aspects of the child's environment in addition to the child in focus. Today, there is an awareness of the necessity to describe the quality and quantity of social, emotional and cognitive support, as well as the inanimate aspects of children's environments that may stimulate or impede development. Assessing the child's socioecology may supply useful information which could be used for altering the conditions that may possibly hinder development and pave the way for making decision in the preparation of the types and procedure of the intervention program desired (Rye, 1985).

Several other investigators underscore the significance of early psychosocial interaction. The quality of interaction initiated through early attachment with the primary caregiver has been observed as a predictor of later socioemotional competence of children (Ainsworth, et al., 1978 cited in Carlson, 1989). Another research finding also indicates that children's ability of planning could be positively influenced by adults' guided participation (Radziszewska and Rogoff, 1991). It has also been experimentally demonstrated that children as young as 3 years of age could be helped to understand not only the visible and the concrete but also the invisible nature of concepts: the ability to understand the causal relations and ability to distinguish between appearance and reality of an object (Siegal & Share, 1990).

Since the 1960's researchers have concentrated on the importance of providing a child with enriched early experiences that are varied, and on the importance of enriching the homes of children through programs of parental education (Stewart, 1990). When launching such ambitious programs in the homes of children, however, the significance of several

confounding variables (such as socio-economic variables, parenting style, educational level of mother, and maternal competence) are not to be overlooked (Berry, 1988; Goodnow, 1990; Henderson, 1981; Mullis & Mullis, 1989; Ping-Kee Sive & Lamfat Lo, 1990; Paratt, *et al.*, 1988; Whiting, 1975).

The early psychosocial intervention program that was used in this study was the MISC (More Intelligent Sensitive Child). The program, among other things, indicates that children in their very young age could be helped to expand their horizon of knowledge, think, plan purposefully, and develop a sense of success as they sensitively interact with their environment. This could be possible through sensitization activities of the parents who, irrespective of their income level, level of education, religious differences show the natural potentiality to care, guide, and develop love for and interest in their children (Klein, 1988).

Taking note of the cultural peculiarity of a given community, the MISC program has been implemented and found to have a positive return in such developing countries as Sri Lanka (Hundeide, 1989) and Israel (Klein, 1988). Likewise, this study was launched with the contention that the program could as well be used in any community in Addis Ababa (Ethiopia) taking into consideration the peculiarities of the community selected for the purpose. In order to be familiar with the program, it was essential to conduct first a Pilot Study in selected communities.

## **Method**

The subjects considered for the Pilot Study were classified into experimental and control groups. A total of 15 mothers with 15 children from birth to 3 years of age were selected for the experimental group from Kebele 18 (a sub-district in North-Western part of Addis Ababa) out of the total of 893 families using a systematic random sampling method. Only 12 mothers and 12 children were used for the final

analysis. Data was not available for the remaining three mothers and their children.

A control group comprising of 15 mothers and 15 children was selected using the above mentioned procedure from Kebele 15 where a total of 1997 families dwelled. One of these mothers dropped out at the beginning of the home visits while another one was out of town at the time of the last session of questionnaire administration. Thus there were only 13 mothers who supplied the necessary data collected using the questionnaire.

Three conditions, namely, economic status of the families to be visited, the educational status of the mothers (caregivers) in the families to be visited, and the distance of the study site from the Department of Educational Psychology were used in deciding the site selection. Priority was given to these families assuming that they need to know the rudiments of the intervention technique more than families who were relatively better off.

### **Data Collection**

In order to collect the necessary data, five visits were made. Each visit lasted for about one hour per home for both the pre-assessment and the intervention (only for the experimental group) phases.

In the case of the experimental group, this was supplemented by five group meetings where experiences were shared by the caregivers among themselves and between the interviewers who gave intensive training of the MISC method using posters, pictures, video recording, and demonstrations.

Prior to the intervention activities, orientation sessions were conducted on the experimental group. In the orientation, the purpose and the content of the intervention technique was discussed in a general form.

In addition, a questionnaire dealing with several issues was used for collecting preliminary information (both from the experimental and the control groups) covering general background of the sample taken, parents' conception of normality and upbringing of children, parental attitude and knowledge of growth and development, parental hopes, and aspirations for the values of children, observational guideline for quality of interaction during playing, bathing and feeding times, key questions for assessing quality of mediation between mother and child, and home observation scale for assessing the physical and temporal arrangement of objects.

The questionnaire was translated from the original English version into Amharic language (the former official Ethiopian language). The Amharic version of the questionnaire was independently studied and revised by each of the five faculty members\*<sup>1</sup> of the Educational Psychology Department who are involved in the MISC project. The new version of the questionnaire was then discussed item by item by these instructors in a group meeting to make sure the content of the new version is identical to or at least approximately the same as that of the original. This latter questionnaire was then administered to the mothers selected for the study. Furthermore, information about the child's typical daily activities was also collected from the mothers.

Other essential materials used at the time of intervention and in the group meetings were a video camera, a television set, and an overhead projector.

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<sup>1</sup> They include the author of this article, Mr. Teka Zewdie, Dr. Tirusew Tefera, Mr. Zelalem Fekadu, and Mrs. Fantu Melese.

### **Intervention Procedure**

The intervention was conducted for three months in the homes of the selected mothers when the latter were bathing, feeding, and playing with their children. During each of these three occasions (bathing, feeding, and playing), the mothers were trained to focus on their children and say something related to the activity at hand like telling the children to look at the food, soap, water, playing object used and so on. At the same time, they were asked to follow the behavior of their children and encourage each activity accomplished by the latter. Furthermore, the mothers were trained to name the objects they used at the time of each of the three situations and try to explain more about the objects by referring to past incidents and happenings in the future. Moreover, they were also instructed to regulate the behavior of their children by organizing and planning the things they do together with their children at the time of bathing, feeding, and playing. Each time when the mothers were instructed to interact with their children, they were urged to mediate the behavior of their children thereby improving the "mediational learning experiences" (MLE) of the children. The capability of the mothers in utilizing the MLE criteria in their attempt to improve their ability to focus, name, expand, encourage, and organize and plan things for their children was used in the evaluation of the quality of mother/child interactions. The criteria were assessed by looking at the video recordings and counting the number of mother/child interactions that occurred during a five- minutes' play of the video recordings. Then there were group meetings of all the mothers every second week of each month where general information about the project was discussed and finally a general meeting took place to sum up the participants' experiences.

Using the information collected by administering the questionnaire and by going through and counting the number of mother/child interactions which took place at the time of the video recordings, baseline and post-

intervention evaluations were made in order to determine the quality of mother/child interactions.

All home (experimental and control groups) visits and group meetings (only experimental group) were recorded on a video. The video recordings of the mother/child interactions were (with the consent of the parents) shown and discussed in the group meetings, and the interviewers posed questions to the parents. The data collected (using both the questionnaire and the video) were then analyzed using simple counts.

### **Limitation**

The objective of this study was to try out the MISC technique in order to examine if it could be applied in an Ethiopian situation. Based on the suggestions of Professors Klein, Hundeide and Rye (who are the principal advocates of the technique), the site and the sample size of the subjects used for the preliminary investigation were selected. Accordingly, only 15 mothers with 15 children of ages 0 - 3 years were selected for the experimental group from a community which was identified for the purpose. Moreover, an equal number of subjects were also selected for the control group from another but similar community as pointed out earlier. While the study was in progress, some of the subjects dropped and the total sample size (the number of mothers and their children) used for the analysis was only 50 (i.e. 24 for the experimental and 26 for the control groups).

Since the intention of the investigation was only to find out if the sampled mothers in the experimental group could be sensitized (using the MISC technique) to interact with their children better than those in the control group, only simple counts of the number of the interactions that took place was desired. This was due to the justification that the more the mother/child interactions observed, using each of the criterion, the better the quality of the interaction (Klein, 1988; Rye, 1985). It is only

to arrive at this conclusion and to see the effects of the technique on the mother/child relationships that this study was launched.

## **Results and Discussion**

The average age of the children selected for the study was 2 years. The mothers of the children in the experimental group were on the average 30 years old while the average age of their fathers was 48 years. The corresponding ages of the mothers and fathers of the children in the control group were 29 and 39 years, respectively (See Table 1 in the appendix).

Thus the parents in the latter group were slightly younger than the former. There was quite a high number of pregnancy among the mothers included in the study. In the experimental group, the average number of pregnancy of the mothers was 8 while that of the control group was 5 (See Table 1 for additional information).

On the other hand, only 9 out of the total 24 mothers had experienced some kind of complication during pregnancy. Much of the problem of the mothers in the experimental group was abortion whereas in the control group the trouble was minor and had to do with loss of appetite, feeling of weakness, and discharging of some fluid prior to delivery. Moreover, practically all the sampled children (22 out of 24) were born on term. The health condition of these children was relatively the same as revealed by the outcome of the historical data gathered about and the physical examination carried out on each child independently by a medical team. The medical findings as well as the information secured by administering the questionnaire have indicated that the children selected from the two Kebeles came from families with poor socio-economic status (i.e. having income of less than 50 Birr per month which hardly enabled a small sized family to cover the food expense alone). The medical examination has shown that all the children were affected by upper respiratory tract infections, chronic malnutrition and intestinal



parasitosis. In addition some of the children in the experimental group had gastro-enteritis and pulmonary TB (tuberculosis), while some in the control group had congenital umbilical hernia.

Although the children sampled from both Kebeles were chronically malnourished as medically ascertained, the parents still continued to have more babies merely to satisfy their desire to have many children. However, these parents and many others like them seemed to be not aware of the serious consequences of malnutrition that have been well documented through a large number of studies (Lerner & Huetsch, 1983; Prescott, *et al.*, 1975; Falkner, 1980; Rye, 1985). Perhaps these parents were oblivious of the results secured through these studies due to their educational level, religion, living condition, and attitudes toward and values of having children.

Out of the total 50 fathers and mothers (24 in the experimental and 26 in the control groups) considered for the study, 47 had some sort of education which extended from bare ability to read and write (19 out of 50) to an elementary school level (ranging from grades 3 to 6). Some of the parents had high school education (12 out of 50). With the exception of 3 mothers, the educational level of the fathers was higher than the mothers. All the parents were Orthodox Christians and by profession many of the fathers were weavers (21 out of 25) and quite a large number of the mothers (20 out of 25) were housewives (See Table 2 in the appendix).

Because of their meager income, all the families included in the study have lived for many years in very crowded small rooms as detected from the interviews conducted as well as the actual observations made by the interviewers. The interview and observation results indicated that on the average 5 people were housed in one room in Kebele 15 while 4 dwelled in one room in Kebele 18. The result seemed to indicate that the housing condition apparently was more distressing in the control group than in the experimental one.

In spite of the fact that there are some differences in their attitudes regarding how to bring up a child and in what they hope for and expect will happen to their children in the future, still many of the mothers included in this study agree that children who are between the ages of 0 - 4 years could accomplish several tasks (See Table 3 in the appendix).

In the opinion of many of the mothers, children could identify their mothers at about 6 months of age, they began to think at about 3 years and would understand words spoken to them at about 1 to 3 years (See Table 3). Moreover, these mothers felt that providing good food and adequate clothes and maintaining good health were the most important things that one should be aware of in order to bring up a child (Tables 4 and 5 in the appendix further clarify these views). In addition, some of the interviewees felt that in order to achieve the same objective, it was important to limit the number of one's children, to provide good education, to give the necessary attention, and to maintain good discipline in the family. Parents who failed to fulfill these tasks were viewed by these mothers as parents who exercised a "bad way" of bringing up children. The mothers hoped that the children complete their education, attain good position, and be able to support their parents (See Table 6 in the appendix). In fact, the advantage of having children for most of the interviewees (33 out of 50) was that children support their parents especially when the latter became old and weak.

The outcome of the Pilot Study dealt with the assessment of the quality of interaction between a mother and a child - particularly during bathing, feeding, and playing. This was done using an observation scale included in the aforementioned questionnaire. At the time of the home visits, the interviewers noted that the physical contact between most of the mothers and their children was partial (i.e., the entire body of the children did not touch that of their mothers' bodies which probably was the common practice in handling children). On the other hand, it was observed that the mothers had attempted in a clearly visible manner, to

adjust mostly their voices to fit the needs of their children. The same intimate relationship between the mothers and their children was also detected from the good eye contact which prevailed in most of the cases as can be seen from the data summarized in Table 7 in the appendix.

During the interview, it was noted that practically all the mothers did not follow the initiatives of their children and there was no turn taking (whether vocal or verbal) but still there was expression and sharing of joy between each mother and her child. Moreover, all the mothers in the experimental group were able to focus the attention of their children on things or persons (See Table 7 in the appendix). However, most of the mothers in the control group (10 out of 13) were not able to focus the attention of their children on a thing or a person. Likewise, none of the mothers taken from Kebele 15 either named or explained things to their children at the time of the interview. In the case of the experimental group, although many of the mothers (7 out of 12) named things for their children, they too did not explain things to their children.

Table 7 further reveals that during the interview it was also noted that almost all of these mothers did not explain what for and why they complimented about something which their children did to their satisfaction. Furthermore, the mothers did neither plan situations which lead the children to succeed in what they were doing at the time of the interview nor were they able to regulate the behavior of their children.

As noted in the introductory section of this paper, many researchers (Berry, 1988; Goodnow, 1990; Henderson, 1981; Mullis & Mullis, 1989; Ping-Kee Sieve & Lamfat Lo, 1990; Pratt, *et al.*, 1988; Stewart, 1990; Whiting, 1975) have underscored the importance of each of the environmental factors raised above whenever an attempt is made to enrich the early experiences of children. These ideas are part and parcel of the MISC technique (Hundeide, 1989; Klein, 1988; Rye, 1985).

## **Pre-and Post-assessment of the Results of the Intervention**

Practically all the outcomes of the intervention were carefully recorded on video tapes. These recordings showed that there were very noticeable changes in the manner of the interactions which took place between the caregivers and the children when comparisons were made by taking the observations made before and after the application of the MISC technique. In other words, more mediated activities were observed after the mothers were trained with the intervention technique (See Table 8 in the appendix for more information).

The assessment of the video recordings for the three sessions (i.e. bathing, feeding, and playing) using the five criteria of mediated learning experiences (MLE) (i.e. focusing or intentionality and reciprocity, transcendence or expanding, mediated meaning or excitement, feeling of competence, and regulation of behavior), has revealed that, in general, there were distinct differences between the pre-and post-intervention in the experimental group with regard to the number and quality of mediated mother/child interactions. These changes are indicators of quite noticeable improvements (as revealed by the number of mediated activities counted) made in the manner in which the mothers and their children interacted after the MISC technique was applied (Hundeide, 1989; Klein, 1988; Rye, 1985).

Even though noticeable gains (See Table 8) were acquired by mothers in their endeavor to interact better with their children as a consequence of participating in the MISC program, the improvements made particularly with respect to mediation of transcendence was relatively low. This might have resulted from either a general lack of confidence on the parts of the mothers to give explanations of wider scope in the presence of the interviewers or it might be due to their (the mothers) low level of educational background to look at and explain things by referring to past and future events.

As a whole, in the present study, the more the mothers were enabled to apply the MISC technique, the greater were the opportunities available for their children to understand the causal relations of concepts and to be able to distinguish between appearance and reality of an object as Siegal & Share (1990) pointed out in their work. Moreover, by applying the technique, the mothers were able to regulate the behavior of their children which in turn would enable the latter to develop their ability to plan (Radziszewska and Rogoff, 1991).

### CONCLUSION

Data collected from selected homes in Kebele 15 and Kebele 18 in Addis Ababa (Ethiopia) using both questionnaire and video recordings have clearly indicated that the MISC technique could be easily applied to enhance the psycho-social development of children (in an Ethiopian setting) irrespective of the socioeconomic status of the child caregiver. The evidences suggest that the technique could be comfortably utilized in a wider scale by making very little adjustments in some of the items in the questionnaire and by involving trained interviewers.

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Appendix Tables

**Table 1**  
**List of the Age of Parents, Number of Persons and Rooms in Each Home and Number of Pregnancy of Mothers Both in the Experimental and the Control groups.**

Age Distribution	Frequency				No. of Persons & Rooms in Each Home				No. of Pregnancy of Mother		
	Mother		Father		Persons		Rooms		Frequency		
	E	C	E	C	E	C	E	C	NO.	E	C
15 - 19	1	1	-	-	6	4	3	1	1	1	1
20 - 24	1	2	-	-	7	4	4	1	3	-	3
25 - 29	1	3	-	-	7	5	2	1	4	1	3
30 - 34	4	2	2	4	-	6	-	3	5	-	1
35 - 39	2	3	1	2	8	6	2	1	6	3	1
40 - 44	2	2	3	2	8	6	6	1	7	-	1
45 - 49	1	-	1	1	-	6	-	2	8	1	-
50 - 54	-	-	1	3	9	6	2	1	9	1	1
55 - 59	-	-	1	1	9	8	2	1	10	2	-
60 - 64	-	-	-	-	10	8	2	1	11	3	1
65 - 69	-	-	1	-	10	9	2	1	14	-	1
70 - 74	-	-	1	-	11	9	3	1	-	-	-
75 - 79	-	-	-	-	11	10	2	3	-	-	-
80 - 84	-	-	1	-	12	13	3	3	-	-	-
<b>Total</b>	<b>12</b>	<b>13</b>	<b>12</b>	<b>13</b>	<b>108</b>	<b>100</b>	<b>33</b>	<b>21</b>	<b>78</b>	<b>12</b>	<b>13</b>

E = Experimental

C = Control

Note: In Table 1, The ages of the parents were arranged in a frequency distribution with an interval of 5 years. The Table also shows the number of persons in each home and the corresponding number of rooms for both the experimental and the control groups.

The mothers in the experimental group seemed to have more pregnancies than these in control group as depicted in the above table.



**Table 2**  
**List of School Grade Level and Occupation of Parents Both in the Experimental and the Control Groups.**

School Grade Level					Occupation				
Grade	Frequency				Type	Frequency			
	Mother		Father			Mother		Father	
	E	C	E	C		E	C	E	C
Illiteracy	2	-	1	-	Weaving	-	-	10	11
Literacy	5	7	3	4	Housewife	9	11	-	-
3	1	1	2	-	Ceramics	3	-	-	-
4	-	1	2	1	Driving Taxi	-	-	1	-
5	-	-	2	1	Military	-	-	1	-
6	2	1	-	2	Car Driver	-	-	-	1
					Assistant Car Driver	-	-	-	1
8	1	2	-	2	Day labourer		1		-
9	-	-	1	-	Baker		1		-
10	-	-	-	1					
	-	-	-	-					
12	-	1	-	2					
12+	1		1						
<b>Total</b>	<b>12</b>	<b>13</b>	<b>12</b>	<b>13</b>		<b>12</b>	<b>13</b>	<b>12</b>	<b>13</b>

E = Experimental

C = Control

Note: Table 2 demonstrated that the school grades attended by a large number of the parents of the children sampled for the Pilot Study were grade 6 and below. The occupation of the fathers of the children was redominantly weaving while about the same number of the mothers were housewives.

Table 3

**Attitudes of Mothers Towards and Their Knowledge about the Development and Growth of Children by Ages of Children Considered to be Appropriate for Accomplishing Certain Tasks.**

Tasks children could accomplish	Appropriate ages of children in year						DN	Total
	0 - 4		5 - 9		10 - 14			
	E	C	E	C	E	C		
Identifying mother	11	13	-	-	-	-	-	24
Beginning to understand words spoken	12	-	-	-	-	-	-	12
Worth starting to talk to	12	-	-	-	-	-	-	12
Beginning to think	10	12	3	1	2	-	-	28
Understanding stories	12	-	-	1	3	-	1	17
Reading the first book	12	-	-	10	-	-	-	22

DN = do not know

C = Control

E = Experimental

Note: The above Table reveals that according to the attitudes and knowledge of many mothers, children were expected to accomplish several tasks by the age of 4 years.

**Table 4**  
**Things Suggested by Mothers as Necessary for Children to Develop and Grow**

Things to do to help children develop and grow	Things Suggested by Mothers*		
	C	E	Total
give necessary care	-	3	3
give adequate food	6	8	14
give balanced diet	5	6	11
keep clean	5	10	15
maintain health	3	3	6
play with	2	5	7
protect	1	1	2
provide clothes	3	5	8

\*Multiple responses are tabulated

C = Control

E = Experimental

Note: Table 4 shows that providing food (adequate and balanced) and maintaining cleanliness and health were considered by mothers as essential for the development and growth of children.

**Table 5**  
**The Most Important Thing to be Aware of in Order to Bring Up a Child as Conceptualized by Mothers**

Important things to be aware to bring up a child	Frequency of Mothers' Response*		
	C	E	Total
give balanced diet	6	3	9
develop wholesome personality	3	-	3
take care of health	4	2	6
keep clean	3	2	5
fulfill basic needs	1	1	2
provide adequate clothes	1	2	3
teach to be humble (modest)	-	2	2
teach good conduct	2	3	5

\*Multiple responses are included

C = Control

E = Experimental

Note: The data given in Table 5 illustrates things which mothers consider important to be aware of while bringing up a child. The table also shows that there were different views among the mothers regarding the points raised

**Table 6**  
**Hopes, Expectations and Aspirations of Mothers for Their Children**

Hopes, expectations and aspirations sought to be realized	Frequency of Responses *		
	Mother		Total
	C	E	
attain highest educational level	10	7	17
attain good standard	-	3	3
get job	7	3	10
be obedient	-	1	1
become independent	-	1	1

\*Multiple responses were recorded

C = Control

E = Experimental

Note: Mothers in the experimental and control groups had more or less similar opinion regarding the educational level they hope, expect and aspire for their children. In most of their other desires for their children cited in Table 6 there were differences between the mothers of the two groups.

Table 7  
Quality of Interaction Observed from the Expressive Gesture Exchanged  
Between Mother and Child

	Type of mother/child interaction	Frequency		
		Experimental Group	Control Group	Total
A.	Physical contact	12	5	17
	1. Entire child body touches that of mother			
	2. Partial body contact visible	-	7	7
	3. Very little body contact visible	-	1	1
B.	Sign of adjustment of body position, voice, rhythm of speech of mother to fit child's needs			
	1. Clearly seen adjustments			
	1.1. Body	12	3	15
	1.2. Voice	5	7	12
	1.3. Rhythm	4	4	8
	2. Slight signs of adjustment			
	2.1. Body	11		11
	2.2. Voice	4	2	6
	2.3. Rhythm	4	1	5
	3. No sign of adjustment		3	3
C.	Eye contact in mother/child relationships			
	1. Good	10	6	16
	2. Only fleeting	2	2	4
	3. None		5	5
D.	Expression and sharing of joy			
	1. Clearly visible	12	5	17
	2. Fleeting	-	2	2
	3. Not noticed	-	6	6
E.	Reflecting good behavior			

	1. Clearly visible	12	6	18
	2. Fleeting	-	-	-
	3. Not noticed	-	7	7
F.	Following initiative of child			
	1. Clearly visible	11	2	13
	2. Fleeting	1	-	1
	3. Not noticed	-	11	11
G.	Turn taking (vocal & gestural)			
	1. Clearly found			
	1.1. Vocal	-	1	1
	1.2. Vocal and/or gestural	12	2	14
	2. Hardly noticeable			
	1.1. Vocal	-	2	2
	1.2. gestural	-	-	-
	3. Not noticed	-	8	8
H.	Child's level of response to mother's effort to communicate			
	1. Immediate, clear	12	7	19
	2. Immediate, but slight	-	1	1
	3. Delayed	-	-	-
	4. None	-	5	5
I.	Signs of apathy			
	1. Disinterest in objects shown (gazing, focussing, etc)		-	-
	2. No change in response to human stimuli		-	-
	3. Gaze evasion		-	-
	4. Signs of discomfort to touch		-	-
	5. Turning away (contact evasion)	-	-	-
	6. None	12	10	22
J.	Mother focussing attention of child to things/persons			
	1. Yes	12	3	15

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	2. No	-	10	10
K.	Mother naming things for child			
	1. Yes	7	-	7
	2. No	5	13	18
L.	Mother explaining things to child			
	1. Yes	-	-	-
	2. No	12	13	25
M.	Mother explains why she complimented the child for doing something			
	1. Yes	-	1	1
	2. No	12	12	24
N.	Mother plans situations leading to success			
	1. Yes	-	-	-
	2. No	-	-	-
O.	Mother regulates behavior of child			
	1. Yes	-	-	-
	2. No	12	13	25



**Table 8**  
**Pre-and Post-Intervention Assessment of Results of MLE Criteria**  
**Based on Points Counted from Video Recordings for Five Minutes**  
**During Mother-Child Interaction at the**  
**Time of Bathing, Feeding, and Playing**

MLE Criteria	Pre-assessment				Post-assessment			
	Mother to child points counted		Child to mother points counted		Mother to child points counted		Child to mother points counted	
	C	E	C	E	C	E	C	E
Intentionality and reciprocity (focussing)	465	315	114	138	600	888	221	301
Transcendence (expanding)	0	2	0	0	1	144	0	0
Mediated meaning (excitement)	343	171	15	0	372	1192	62	3
Feelings of competence (reward)	121	59	0	0	57	373	0	1
Regulation of behaviour	121	162	0	0	225	650	4	0

C = Control

E = Experimental<sup>4</sup>

Note: Table 8 illustrates that in the case where the mother was the source of interaction, there were substantial gains in the points counted after the intervention was conducted on the experimental group in all the MLE criteria compared to those points enumerated for the same criteria before making the intervention. Similarly, when the child was used as the source of the interaction, more reciprocity was detected after the intervention was conducted. In the case of the control group, however, the number of interactions counted in the pre-and the post-assessments has remained relatively the same.