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ABSTRACT

Parents in the urban and rural disadvantaged areas in Korea are generally so low in educational attainment, schooling, and motivation that they lack the knowledge and skills to stimulate and teach their children. To address the lack of low-cost day care for children under 4 years of age, a home-based care alternative, involving both parent and child education components, was implemented. The parent education program included a wide variety of information about child stimulation and education, organized into a set of 60 eight-page booklets, 12 each for children ages 0-6 months, 7-12 months, 13-18 months, 19-24 months, and 25-36 months. The child education program focused on self-help, numbers, language and communication, social behavior, safety, and activities relevant to their ages. Trained home visitors made a total of 24 evenly spaced visits during a 7-month period, when they handed out the appropriate booklets, explained the contents, and demonstrated the knowledge and skills covered in the booklets. Mothers were pre- and post-tested. The project started with 162 pairs of mothers and children and concluded with 138 pairs. At the conclusion of the project, there were significant changes in mothers' attitudes toward early education, the physical environment, provision of play materials, variety in daily stimulation, and mothers' emotional and verbal responsiveness. (AC)

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Parents as Catalyst:

The Role of Parents in the Development of the Young Child in Asia

THE EFFECTS OF HOME-VISITING EDUCATION ON THE MOTHERS AND THEIR YOUNG CHILDREN

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INTRODUCTION

That the educational stimulation in the early childhood is critically important is widely recognized for the sound mental, physical, social, and emotional development of children. However, the parents in the urban and rural disadvantaged sectors in Korea are generally of so low in schooling, income, and motivation that they lack knowledge and skills as to how to raise — stimulate, teach, and rear — the children. Low-cost, government run day-care centers are available in some areas, but they are mainly for the children older than four years of age.

This situation called for other means for caring for needy children aged 0-3, thus emerged the home-based care as an alternative in the disadvantaged areas where need is most acute. The home-based early childhood education system can be found in many countries around the world: Thailand, U.S.A., Israel, Ireland, Peru, Mexico, and Jamaica. In Korea, this system was experimentally tried out in 1985-1986 and it was proven an effective and feasible approach of early childhood education in Korean context.

In this education system, the parent involvement in child care and education is considered most important. Since development during early childhood depends on the quality of interaction between the child and her environment, most important being mother, adequate stimulation should be the main focus in which stimulation is considered as the set of actions aimed by the parents at providing the child with the experiences she needs since her birth. It is, therefore, necessary that the parents and other adults surrounding the child know the effective procedures that contribute to the development of the child. The critical roles played by parents in the child development has always been recognized. There is an increasing emphasis of parent-mediated educational experiences and on the continuity of education that can be achieved through active parental involvement in educational programs(Palmer, 1971).

Parents participation and involvement does not simply mean that they feed, clean, and dress the child. It should mean that they must actively participate in learning how

to better able to care their children. To achieve lasting impact on young child's development, the parents themselves should undergo training and education. It is important that the parents must not only be aware of the value and importance of early childhood stimulation and education, but also be able to arrange the family environment in such a way that it is conductive to learning by the young child, in which dynamic processes between parents and children in the way of stressing motivation for achievement and independency are emphasized.

The project must also use health and education and nutrition as action variables, since it has been proved that the multi-factor interventions are much more effective than those that are unifocal. Important experimental studies carried out in different continents show that this type of intervention can effectively compensate for cultural deprivation and can significantly increase the rate of cognitive development during childhood, even under conditions of extreme poverty(Baker, 1973; Bronfenbrenner, 1968; Deutsch, 1967; Kennedy, et al., 1963). In fact, an exclusive focus on psychosocial stimulation can be counter-productive if the health and nutrition needs of the child are not met.

This is also a preventive program, since it significantly contributes to the prevention of development problems. When parents start working with their children, they will learn to observe their children and become aware of their progress, their individual differences, difficulties in learning, and their problems(Gagné, 1973). They can thus accept the child as she is, respect her, and respond to her needs adequately. At the same time, the participating parents undergo an attitudinal change when confronting their children and the environment — their capacity for the observation of the baby's behavior increases and they can establish a deeper affective relationship with the child. They will also become creative and start making simple toys and providing situations for stimulating their children, and at the same time develop a greater capacity for exchange, sociability, and integration within the family(Day & Parker, 1977).

In this project, the research team developed a package of educational programs which include a parent education program and a child education program. The parent education program includes a wide variety of information aiming at transmitting knowledge and skills about child stimulation and education thus to enhance not only the knowledge and skills but also self-efficacy regarding child rearing. These knowledges and skills were organized into a set of 60 eight-page booklets, 12 each for the child ages 0-6 months, 7-12 months, 13-18 months, 19-24 months, and 25-36 months, respectively. The child education program included such areas as self-help, number, language and communication, social behavior, safety, and other activities relevant to their ages.

The programs were delivered to the mothers and children by the trained home-visitors who were the female graduates majored in early childhood education at universities and were trained by the researcher before they were assigned to 5-6

families each in the villages and urban slums. The home-visitors made a total of 24 visits in evenly distributed year round. Upon visiting, they handed out to mothers the appropriate booklets, explained about the contents, and demonstrated as necessary how to use the knowledges and skills in the booklets. Each home-visitor recorded daily activities in the diary handed out to her.

In order to evaluate the effectiveness of the program, mothers were given pre-test in the beginning of the home visiting proper and during the last part of home visiting were they given the post-test.

In this report, only that part of the project which will demonstrate the effectiveness of the program in terms of quantifiable data collected is presented.

METHOD

Subjects

When the project started, there were 162 pairs of mothers and children who were divided into five age brackets. At the end of the project, there remained 138 pairs. The drop-out rate was 14.8%. The average ages of the mothers and fathers were 28 year, 10 months and 32 years of age, respectively. The educational levels of the parents, after drop-out, are shown in Table 1.

Table 1. Parents' Educational Levels

Educational level	Father	Mother	Total
Elementary school	6	14	20
Junior high school	38	48	86
High school	58	56	114
College	21	7	28
Graduate school	1	-	1
Total	124	125	249

* As can be seen, mother's educational level (10.4 years of schooling) is slightly lower than the father's (11.5 years of schooling), and 46% (or 114) of the parents are of high school or equivalent level of education.

Table 2. Number of Subjects by Age of Children

Age of children	0-6 mo.	7-12 mo.	13-18 mo.	19-24 mo.	25-36 mo.	Total
# of pairs at start	42	29	33	26	32	162
# of pairs at end	31	26	26	32	23	138

An attempt was made to collect objective data regarding family income but in vain. Since most of these families are free-laborers or unemployed, the recorded income data are hard to come by. Intuitively, however, the average income should be far below the national average. The distribution of the subjects by age of children is shown in Table 2.

Measures

In order to test the size of change, three questionnaires and a social maturity scale were administered to the mothers before and after the intervention.

1. Parent Attitudes Questionnaire : This questionnaire originally included 46 items covering 3 dimensions: attitudes towards child education, attitudes towards children, and belief about being parent. A preliminary field testing of the questionnaire and subsequent factor analysis yielded three factors, each factor comprising 10 items. The tool is a five-point Likert scale, ranging from "very much so" to "not at all."

2. Home Observation for Measurement of Environment : The questionnaire was developed by Lally(1974) and experimentally adapted to the Korean children by Lee(1980). Developed to be used with children under three years of age by observation and inquiry, the inter-rater consistency is reported to be 90% and internal consistency(KR-20) .44-.89(Elardo, Bradley, & Caldwell, 1975, 1977). The scale consists in 45 items, of which 18 items are to be checked by the interviewer upon observation of the baby on the spot. The rest, 27 items, is to be checked by the observer with the mother as informant. The scale includes 6 variables: emotional and verbal responsivity of mother, organization of physical and temporal environment, provision of appropriate play materials, opportunities for variety in daily stimulation, disciplinary attitudes of mother toward child behavior, and maternal attitudes of mother. Each variable or sub-scale is to give percentile score.

3. Teaching Observation Technique of Mother : Originally developed by Laosa (1978, 1980a, 1980b) and adapted in Korea by Moon(1982) and Kim(1984), this is basically a observation scheme in which mother's verbal behaviors while interacting with her child are observed. The four dimensions included in the scheme are explanation, questioning, authoritative teaching(order, threat, etc.), and democratic teaching

(acceptance, recommendation, reinforcement, etc.). The observers were to look on the mother and child while they were interacting with each other in play activities and in making playthings together.

4. Social Maturity Test: Developed by Lee et al.(1976), this test includes 7 sub-scales such as socialization, communication, occupation, locomotion, self-help general, self-help eating, and self-help dressing. Each question was addressed to the mother who in turn indicated whether or not her child is capable of performing the given act. In addition, a questionnaire was administered after the intervention to gather data pertaining to how the home-visitors and mothers each felt about the intervention program.

RESULTS

1. Change in Parent Attitudes

The pre- and post-test comparison of the scores revealed significant attitudinal changes across the three dimensions. As shown in Table 3, the change is most in attitudes towards child education and least in beliefs about being parent.

Table 3. Pre- and Post-test Comparison of Parent Attitudes (N=128)

Dimension	Pre-test M	Pre-test SD	Post-test M	Post-test SD	t
Att. toward child education	23.67	3.21	25.02	2.94	4.50**
Att. toward child	25.48	2.58	26.03	2.50	2.23*
Belief about being parent	24.26	2.65	24.82	2.26	2.16*
Total	73.46	6.24	75.90	5.24	4.80**

* $p<.05$ ** $p<.01$

2. Change in Family Environment

Data obtained through observation of mother and interview regarding family environment showed statistically significant changes between pre-test and post-test across all 6 dimensions. Table 4 shows the pre-post change in percentage.

According to Table 4, changes in physical environment, provision of play materials, variety in daily stimulation, and mother's emotional and verbal responsivity are significant at $p<.01$ level.

Table 4. Parent Change in Family Environment by Sub-scale (N=127)

Sub-scales#	Pre-test M	Pre-test SD	Post-test M	Post-test SD	t
I	51.18	21.43	57.61	20.11	3.27**
II	45.67	23.93	65.88	22.41	8.67**
III	66.30	23.87	78.90	18.57	5.56**
IV	57.48	21.69	63.25	22.16	2.26*
V	55.41	23.07	50.00	24.81	-2.55*
VI	66.57	22.85	76.74	22.72	4.25**
Total	57.10	13.51	65.40	14.45	6.79**

* p<.05 ** p<.01

I. Organization of physical and temporal environment
II. Provision of appropriate play materials
III. Opportunities for variety in daily stimulation
IV. Maternal attitudes of mother
V. Disciplinary attitudes toward child behavior
VI. Emotional and verbal responsivity of mother

3. Change in Mother's Verbal Instruction

Table 5. Frequency Change in Mother's Verbal Behavior (N=103)

Mother's Verbal Behavior	Pre-test M	Pre-test SD	Post-test M	Post-test SD	t
Explanation	12.10	12.69	17.58	12.65	3.34*
Questioning	11.33	10.32	10.24	9.68	-0.27
closed	7.48	9.65	5.91	8.08	-1.41
open	3.85	8.69	4.33	7.56	0.51
Authoritative	30.83	22.63	17.70	16.11	-5.69**
directive	14.72	13.87	7.90	9.55	-4.54**
threat, warning	4.19	7.86	3.96	7.45	-0.24
evaluation	3.15	6.54	1.55	3.81	-2.31*
negative feedback	4.91	8.19	2.69	5.17	-2.42*
scolding	3.86	7.30	1.59	4.55	-2.83**
Democratic	43.52	23.66	51.59	18.96	3.16**
accepting	2.09	4.99	4.60	6.59	3.84**
advice, recommend	8.30	12.01	11.96	13.67	2.64**
physical aid	7.53	10.72	7.50	8.16	-0.03
reinforcement	6.52	7.48	8.77	8.94	1.86
positive physical	5.52	8.11	4.79	6.97	-0.82
cueing	7.67	9.33	5.45	9.13	-2.31*
physical affection	5.88	9.53	8.49	11.32	2.26*

* p<.05 ** p<.01

Mother's verbal behavior was observed while she was interacting with her child in play activities and in making playthings. Observations in three 20-min. sessions at the beginning and end of the intervention yielded average frequencies over 4 dimensions (or 16 sub-dimensions). The pre- and post-observation comparisons are shown in Table 5. Amount of explanation increased and so did the frequency in 5 of 8 sub-dimensions pertaining to democratic verbalizations. The mothers were also observed that her authoritative verbalizations decreased significantly. However, change in her questioning behavior did not reach statistically significant level.

4. Effects of Mother's Change on Children

It was expected that positive changes in mother by means of demonstration and explanation by means of brochure and home-visiting will have positive impact on children. Since the children in our group were too young to receive psychological test appropriately for tapping their developmental levels, we resorted to an indirect method of measuring changes in children. The home visitors administered through interview the social maturity scale to the mothers who responded to each item. The pre- and post-test comparison is shown in Table 6. According to Table 6, the amount of social maturity age increase tends to be higher among the younger children than among the older. The children in the age bracket of 7-12 months showed the highest increase.

Table 6. Social Maturity Age Increase by Age Bracket

Age(mo.)	N	Chronological Age Increase M	SD	Social Maturity Age Increase M	SD	t
0 - 6	28	5.79	1.17	8.43	4.23	3.37**
7 - 12	25	6.44	0.92	10.00	4.21	4.22**
13 - 18	24	6.04	0.62	8.25	3.99	2.72*
19 - 24	27	6.00	0.92	8.78	5.44	2.54*
25 - 36	12	6.00	1.04	8.00	4.26	1.49
Total	116	6.03	0.94	8.77	4.47	6.53**

* $p<.05$ ** $p<.01$

DISCUSSION

This project primarily aimed to transmit to the mothers of young children aged 0-3 knowledge and skills and instil in them sense of self-efficacy concerning education of their children at home. The trained home-visitors made 24 home-visitings during 7-month period in which they taught the mother using the booklets containing a wide

variety of information concerning teaching, stimulation, and guiding children. The mothers were given demonstration as necessary, for example, for making playthings, changing diapers, talking and playing with children. Children were given selected toys prepared for use in specific educational activities. They were allowed to be present which mother education was in session.

The pre- and post-test comparisons by using 4 measures show that the home-visiting education had been effective in changing mother's attitudes toward early education, in arranging home environment for the better. More specifically, although changes in all three attitudes dimensions reached statistically significant level, the change was most in attitudes toward child education, probably because major emphasis was placed on this dimension. Secondly, the changes in physical and psychological environment of the home were also significant, indication that mothers had become conscious of what the sound environment should be in regard to child education as a result of home-visiting education. Thirdly, the changes in mother's verbal behaviors were also substantial in most aspects, except for cueing, reinforcing, and questioning where change was meager. This seems to be due to the fact that these behaviors are quite subtile in expression. Since the theoretical point of departure was that changes in mother will be reflected on the child, the social maturity level of the child must be higher than what may be expected under normal conditions. This was shown in the increment by 2 in the social maturity age of the children.

Cross-tabulations with such criterion variables as parents educational level, ages, and SES were attempted, but did not reveal any characteristic differences among subgroups, probably due to the fact that the beneficiaries were from similar backgrounds in the disadvantaged sectors.

Quantitative analyses thus show positive changes in mothers and children, but what should not escape our attention is that the quantitative data might be questionable in terms of several factors. One would be the rater reliability — all the data were collected by 30 home-visitors whose qualification as raters was beyond our control and thus liable to unreliability. Second factor might be the reliability of the informant, the mother, when she responded to the social maturity scale. In fact, those cases who scored exceedingly high and who scored lower in the post-test than in the pre-test were omitted from the analysis. Thirdly, The Hawthorne effect. It is almost inevitable that this effect creeps in, the state of affairs which is hard to avoid.

These quantitative results aside, more important perhaps of the program would be how the beneficiaries felt about the program, from the diffusion vantage point. A narrative report indicates that the program was received positively by the beneficiaries. This was shown by the opinion survey after the intervention. Subsequent to the

intervention, the home-visitors and the parents were inquired about how they felt about the program. The frequency tabulation of their responses are shown in Table 7, 8, 9.

Table 7. General Opinions about the Program %(N)

Questions	Responses	Home-visitor (N=26)	Mother (N=93)
1. How do you think about participating in this program in general?	Made right decision	100.0(26)	100.0(93)
	So and so	-	-
	Not good	-	-
2. How did you feel about general procedures of program?	Very good	73.1(19)	89.9(80)
	Good	26.9(7)	9.0(8)
	Not good	-	1.1(1)
3. Did you think this program helpful?	Yes, very much	100.0(26)	98.9(91)
	Don't know	-	-
	Not at all	-	1.1(1)
4. How did the father like the program?	Very helpful	80.8(21)	90.1(82)
	So and so	19.2(5)	11.1(10)
	Not interested	-	4.4(4)
5. How did the neighbor feel about the program?	Very interested	76.9(20)	84.4(76)
	Don't know	23.1(6)	11.1(10)
	Not interested	-	4.4(4)
6. How did the program help siblings?	Mother attitude change	26.9(7)	24.1(13)
	Siblings used material	42.3(11)	24.1(13)
	Liked to meet H-V	26.9(7)	50.0(27)
	Others	3.8(1)	1.9(1)
7. Did the program meet your expectation?	Better than expected	-	82.8(77)
	Just as I expected	-	14.0(13)
	Worse than expected	-	3.2(3)
8. Would you recommend this program to your neighbors?	Yes, definitely	-	98.9(91)
	Don't know	-	1.1(1)
	Would not	-	-
9. Any change in other siblings due to this program?	Yes, some changes	-	51.1(46)
	Don't know	-	14.4(13)
	None at all	-	34.4(31)

It is clearly shown in the Table 7 that the mothers and home-visitors alike definitely felt positive about the program. Those opinions which are directly relevant to the issue of diffusion are the contents of the educational programs, the frequency of visits, and the impact of the program on the fathers, siblings, and neighbors.

Table 8. General Opinions about the contents of the Program x(N)

Questions	Responses	Home-visitor (N=26)	Mother (N=93)
1. How about the length of session?	Too long	11.5(3)	-
	Adequate	80.8(21)	72.8(67)
	Too short	7.7(2)	27.2(25)
2. How about frequency of visit (24 times)?	Too many	11.5(3)	2.2(2)
	Adequate	65.4(17)	82.8(77)
	Too few	23.1(6)	15.1(14)
3. Were the program contents —	Easy	84.6(22)	83.7(77)
	Just right	11.5(3)	16.3(15)
	Hard	3.8(1)	-
4. Were the mother-child interactive play —	Good	69.2(18)	76.9(70)
	So and so	26.9(7)	20.0(19)
	Not good	3.8(1)	2.2(2)

Table 9. General Opinions about the Methods of the Program x(N)

Questions	Responses	Home-visitor (N=26)	Mother (N=93)
1. How about child presence while in session?	Interfering	30.8(8)	30.8(28)
	Not concerned	15.4(4)	17.6(16)
	Better being together	53.8(14)	51.6(47)
2. Did the child like the mother-made toys?	Very much	69.2(18)	89.1(82)
	So and so	23.1(6)	9.8(9)
	Did not like	7.7(2)	1.1(1)
3. Did the mother like to make toys themselves?	Very much	53.8(14)	-
	So and so	30.8(8)	-
	Did not like	15.4(4)	-
4. Did the child like the handed-out toys?	Very much	100.0(26)	96.8(90)
	So and so	-	3.2(3)
	Not much help	-	-
5. Did you like H-V's way of teaching?	Good and interesting	-	89.1(82)
	So and so	-	10.9(10)
	Boring	-	-
6. Was it hard to prepare materials to make toys?	Not at all	-	95.5(84)
	Don't know	-	3.4(3)
	Annoying/burdensome	-	1.1(1)

As for the contents, shown in the Table 8, the majority (83.7%) of the mothers felt that the contents were easy. Presumably, this might reflect that most of the mothers were high school graduates and, therefore, that they might have heard about the information provided. This does not indicate, however, that, therefore, the educational program was not effective. Rather, it should mean that the information supplied might in fact be in their repertoire and that they know these in principle. The implication of

this finding for the future programming would be to develop the educational programs so that to emphasize more specific skills (or put differently, to emphasize how to translate the general principles into actual skills). With regard to the frequency of visits again, majority (82.8%) of the mothers felt 24 times were adequate and 15% felt it was too few. The-more-the-better sentiment is understandable but the frequency of visits should be carefully taken into consideration in future programming.

Finally, the fact that the most fathers liked the program (90.1%), other siblings made use of materials (24.1%), and 98.9% would recommend the program to their neighbors, indicate that the program indeed was effective and successful.

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