 Evaluated was the effectiveness of the Early Intervention Project for Handicapped Infants and Young Children in assisting parents to improve their interactions with their handicapped child, and to help them develop more realistic attitudes about the effects of the child's handicap on the total family system. To assess parental attitudes, the Parent Attitude Survey was administered to parents at 6-month intervals. Preliminary data showed that there was a significant change in the parents' attitudes about the importance of their role in actively helping their handicapped child at home. During the weekly group sessions, each mother-child pair was observed to obtain information on mother-child interactions. Among the findings were that there was a lack of negative behaviors in the samples recorded and that the mothers of the more severely retarded children showed the most positive mothering. Findings suggested that there are ways of measuring change in parental attitudes and behaviors following involvement in an early intervention project. (SB)
MEASURING PARENTAL INVOLVEMENT IN AN EARLY INTERVENTION PROJECT

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The Early Intervention Project for Handicapped Infants and Young Children was funded by the Bureau of Education for the Handicapped (Grant # G007400463) in 1973 to demonstrate a service delivery pattern which would be replicable in Michigan public schools.* In September of 1973, schools were required to implement Michigan's Mandatory Special Education Act, Public Act 198, which mandated educational services for all handicapped persons from birth through age twenty-five. Although some districts had anticipated the legislation and had developed services for young children, few comprehensive programs for infants were in existence. During its three years of funding, the project has sought to provide exemplary services to handicapped children from birth through age four and their families.

The Project has been carried out at the University of Michigan's Institute for the Study of Mental Retardation and Related Disabilities in Ann Arbor, and has demonstrated: (1) that parents can and should remain the primary givers of treatment to their very young, handicapped children; (2) that persons in disciplines such as occupational therapy, physical therapy, and speech and language pathology have competencies which make them particularly qualified to work with this population with consultation from developmental psychology and special education; and (3) that an individualized, developmental, assessment-based educational program which includes parents in all aspects of its development and implementation provides the most appropriate delivery of services to the children and their families.

The children and families served by the Project have spanned a wide range of the population. Although children with all types of handi-

* The information reported herein was gathered pursuant to a Grant from the U.S. Office of Education, Department of Health, Education, and Welfare, # G007400463.
capping conditions were included, the majority of children had severe motoric and cognitive delays frequently complicated by additional sensory impairments. A significant number of families were receiving some form of public assistance, and children from two ethnic minorities participated in the Project. In order to parallel the special education mandate as closely as possible, admission criteria were minimal. To be accepted into the Project, the child had to have an identifiable handicap; the parents had to agree to participate; and the families had to reside within a designated three-county catchment area.

Services included child assessment, weekly group programs, and weekly home visits. Upon referral and at six-month intervals throughout the Project's duration, each child received evaluations in motor, speech, and cognitive areas; and parents participated in or observed each evaluation. Following the evaluations, findings were presented to the parents in a staffing conference and videotapes of the psychological evaluation were re-played to illustrate the child's strengths and weaknesses. In addition to the bi-yearly formal assessments, each child was assessed every twelve weeks using the Early Intervention Developmental Profile and three-month educational objectives were written for each child in the areas of language, fine and gross motor, self care, socialization, and cognitive skills. These assessments were done by the family's home visitor during a home visit allowing parents to be involved in this process.

The educational plan for each child, based upon his/her developmental profile, was carried out at the Institute and in the home. During the weekly, two-hour session at the Institute, mothers and/or fathers worked on their child's objectives while the staff "floated" to provide
support and encouragement, to teach new strategies, to model handling
techniques, and to suggest other activities. The focus of each home
visit depended upon both the long-term and situational needs of each
family. Frequently the home visitor provided specific treatment, ob-
served the mother's therapeutic handling of the child, or assisted the
family in adapting the home to meet the handicapped child's needs without
disrupting the entire family system. At other times the home visitor
acted as a counselor to the couple, to the mother or father separately,
or worked to include the siblings in the handicapped child's treatment
plan. Finally, evening parent meetings were conducted monthly. The
meetings were planned and carried out by parents and focused on topics
which they were concerned about including: information about handicap-
ing conditions, available services, and issues in child-rearing.

In order to evaluate the Project's effectiveness, the various
target populations and the goals for each had to be delineated. Measures
of child progress were devised and the results of these studies will be
reported elsewhere. The purpose of this paper is to report the prelimi-
nary results of the Project's effectiveness in assisting parents in im-
proving their interactions with their handicapped infant or young child,
and in helping them develop more realistic attitudes about the effects
of the child's handicap on the total family system.

As stated earlier, opportunities for working with parents oc-
curred in the weekly group sessions at the Institute where staff members
modeled appropriate handling techniques and suggested developmentally
appropriate activities to facilitate the child's skill attainment and
in the weekly home visits where staff provided treatment, counseling, and
support on an individual basis. Additionally, parents were present during
their child's evaluations and included as members of the treatment team. Monthly parent meetings held in the evening provided resource persons to discuss topics of interest to the parents and created a forum for parents to speak openly about their concerns to each other and to other parents. Evaluation Design

In order to assess changes in parent attitudes, the Parent Attitude Survey, a questionnaire developed by the Total Milieu Approach Infant Program of Long Island (Hoffman, 1974) was administered to parents at six-month intervals. Mothers and fathers each received a questionnaire and they were asked to complete them without collaboration to document change in attitudes and the direction of change. The first twenty-five questions on the questionnaire were used to analyze attitude change. The parents record their responses on a Likert-type, five point scale ranging from "strongly agree" to "strongly disagree." Items included questions about attitudes toward professionals, attitudes about neighbors' and relatives' feelings about the handicapped child, and attitudes about the child's effects on the family system.

Results

The preliminary data on parental attitudes included analysis of pre and post-test data on twenty parents collected between January and December of 1975. Using a one-way analysis of variance, two of the twenty-five items were significant - below the .05 level of confidence. Significant at the .01 level was the change in the parents' attitudes about the importance of their role in actively helping their handicapped child at home. They moved from the belief that home stimulation of a handicapped child by parents is of little value to believing that parents can
actively help their handicapped child by what they do with him/her at home. The second significant finding was a change in the mothers' ability to speak more realistically about her own handicapped child over the six-months period. Mothers who previously took responsibility for many of their children's difficult-to-manage behaviors began to acknowledge that the handicapped child had problems which they were not responsible for and could not necessarily correct. Neither of these findings was related to the child's level of functioning or the length of time that the child and family had been served by the Project.

Assisting parents in believing that what they do with their child at home does indeed matter may have been the most important contribution that the Project made. This finding suggests that professionals can help parents develop skills and confidence in their skills as parents. It is hoped that the parents' increased knowledge about "what to do" and their increased assurance that what they do is important will carry over into their daily interactions with their other children and into their interactions with schools and community agencies so that the parents become equal partners in planning for their child's future.

At face value, the finding that mothers spoke somewhat more negatively about their handicapped child over time appears to be negative. This, however, was not the case. One of the goals in working with parents was to assist them in looking at their handicapped child and his/her impact on the family more realistically. Instead of rationalizing or ignoring the impact of this child, mothers began to acknowledge and state the difficulties that this child presented without taking responsibility for or blaming themselves for all of the child's problem behaviors.
To describe mother-child interactions and the changes in their interactions over time a behavior sampling technique was used. During the weekly group sessions, each mother-child pair was observed for twenty ten-second intervals by two independent raters and scored on ten behavior categories: positive and negative physical contact, positive and negative verbal contact, positive and negative facial expression, positive and negative therapeutic handling techniques, redirecting attention, and absence of interaction with the child. Observations were made at six-month intervals and the number of positive behaviors and negative behaviors were massed and the "redirects" and "absence of behavior" were analyzed separately so that each mother had four scores. From the preliminary analysis, some interesting findings have emerged. First, there was a lack of negative behaviors in the samples recorded. The behavior samples were dominated by positive behaviors and lack of interaction suggesting that mothers use withdrawal more than overtly negative behaviors when working with their children. Since these samples were collected in group sessions, part of this style of non-interaction may be attributable to the embarrassment of being overtly negative with their children in public. Additionally, when the mothers first entered the program, all of the mothers tended to respond similarly to their child regardless of the child's chronological age or severity of retardation. Over time, however, patterns of differences emerged. Positive behaviors increased. Even though many of the mothers had started out quite positively, they increased their positive responses over the first six-month period by a mean of fifty-three points out of a possible one hundred eighty points on positive behaviors. This finding may reflect the mothers' increasing
ability to use more sensory modalities as they worked with their children. For example, instead of simply holding the child in a therapeutic way, they smiled and talked to the child at the same time thus increasing the number of positive behaviors observed.

A second finding of significance was the tendency for mothers entering the program with very high positive scores to decrease their scores at the second rating. In other words, mothers who were extremely attentive, nurturant, and responsive at the time of the first sampling were not quite so attentive, nurturant, and responsive to their child at the second rating. This finding may reflect a normalizing trend for over-zealous mothers who may have become more relaxed with their children over time in the group sessions. It may also reflect a reduction of the mothers' need to demonstrate "super-mothering" as they became acquainted with other mothers with similar problems and discovered that their competency as a parent was not being questioned.

A third interesting finding concerned mothers of mildly retarded or non-retarded children. Over time, these mothers showed less withdrawal from their children than the mothers of moderately and severely retarded children. The mothers of high functioning children seemed to be gaining more pleasure from watching their children grow and develop at near normal rates. Perhaps their exposure to much more severely retarded youngsters caused them to view their child from a broader, more positive perspective. It may also be that children developing at near-normal rates are more successful in adapting their behavior patterns to please those around them and were consequently more able to elicit positive interactions from their mothers than the more severely retarded children.
A fourth relationship which emerged involved the interactions of mothers of the more severely retarded children. Overall, they provided the most positive mothering. This relationship may be accounted for in several ways. Since their children were all functioning at the infant level, nurturance and total care were necessary and the mothers were responsive to these demands much as a mother of a newborn is responsive to her child's infantile needs. Or, the continued support and encouragement which the other mothers provided to the mothers of the severely retarded children may have facilitated their ability to be nurturant and responsive to their children.

Conclusion

The findings presented in this paper suggest that there are ways of measuring change in parental attitudes and behaviors following their involvement in an early intervention project. As parents are included in the planning and implementation of treatment programs for their very young, handicapped children, these measures will need to be refined and others developed. There is, however, a growing body of literature, supported by these results which suggests that parent progress is as important as child progress in evaluating the effectiveness of infant and preschool programs. Although the population used in this study was small, significant findings emerged and provided further evidence of the importance of early intervention with both handicapped children and their parents.
REFERENCES

