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ABSTRACT

This study was designed to assess the needs of parents in preparing home learning environments for their young children. Subjects included 30 families (10 Anglo, 10 black, and 10 Chicano) with children from birth to 3 years of age. Data on approximately half of the families has been analyzed and is discussed. Half of the subject population had children identified as developmentally delayed/high risk. These children were matched with normal (nondelayed) children in the same ethnic group. Data were collected through videotapes of the child's daily activities, of the parent and child handling new materials, and of sequenced activities based on Piagetian developmental tasks designed to evaluate the child's developmental level. After the completion of the videotape series, parents' knowledge of child development and of how home environments may be prepared for the optimal development of children was assessed by use of a parent questionnaire. An observation instrument was then used to determine the parents' performance in actually preparing appropriate learning environments for their children. Preliminary results indicated that parents of all three ethnic groups had significantly higher knowledge scores than performance scores in the preparation of their children's learning environments. (Author/JMB)

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Parent and Child - What's the Score?
Parental Preparation of Learning Environments
for Delayed and Non-delayed Infants

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ABSTRACT

The TADPOLE objective for 1974-75 was to assess the needs of parents in preparing home learning environments for children birth to three.

A population of thirty (30) families with children operating developmentally birth to three was selected and data on sixteen families has been completed. One-half the population has children identified developmentally delayed/high risk matched with normal children representing Anglo, Black, and Chicano ethnic groups. Home data were collected by means of videotape. Seven tapes were completed for each sample family -- three videotapes made at various hours of the day of eating, toileting, play, dressing, bathing, and other daily activities, three tapes in the home-like studio of parent/child handling new materials and situations, one tape in which the child's developmental level is evaluated by sequenced activities constructed by the investigators and based upon Piagetian developmental tasks.

After the completion of the videotape series, parents' knowledge of child development and of how home environments may be prepared for the optimal development of children was assessed by use of a parent questionnaire devised by the investigators. For comparison with the scores from the "Parent Questionnaire", the investigators prepared and scored an "Observation Instrument" to determine the parents' performance in preparing appropriate

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learning environments for their children. The scores from the "Parent Questionnaire" and "Observation Instrument" for the sixteen parents have been statistically analyzed. These preliminary results indicated that parents of all three ethnic groups have significantly higher knowledge scores than performance scores in the preparation of their children's learning environments.

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Infant development and learning have become a major focus of interest during the last decade as researchers and educators found themselves moving further back in the life span to find an optimum time to intervene in learning environments which restrict the capacity of the individual. The accumulated knowledge from this research has been field tested in several major intervention programs. Some public school systems and community agencies, having been convinced of the importance of early development, are now implementing on a local basis the ideas generated by the infancy research and the prototype programs. Perhaps this is the time to pause and ask a few questions about the utility of this mass of research before we rush into implementation.

Let's take a brief look at these studies and some of the assumptions that lay behind them. Most of the infant intervention programs quickly moved into the homes and began work with the infants through the mothers. Schaefer (1971), for instance, noted that the training of parents was less expensive, more effective, and beneficial to other children in the family and neighborhood. The role of the father in these programs,

¹ Enlarged version of a paper presented at the 26th Annual Conference of Southern Association on Children Under Six, April, 1975. This investigation was supported by the Institute for the Development of Family Resources and the Institute for University Research-Education, Texas Tech University, Lubbock, Texas.

however, was conspicuous by its absence. For example, in six major parent-focused programs the mother was the only parent designated for training.

A look at the basic research which underlay these programs reveals the same pattern. Studies which attempted to relate parental characteristics, attitudes, or childrearing techniques to the development of specific abilities in the infant concentrated almost exclusively on the mother. A recent move to balance this viewpoint was exemplified by Parke and O'Leary (1975) in their studies of father-mother-infant interaction. The great involvement of the fathers from both the middle class and lower class samples, as well as the second order effects on interaction patterns when both parents are with the infant created a note of caution in interpreting and relying heavily on results of research which excluded the father. If it is true that fathers are more involved with their infants than we have thought, how might this be reflected in parent-infant intervention programs of the seventies?

Another look at the prototype programs raises the question, "Will a family-oriented program developed in urban areas of the north and east using a Negro and Caucasian sample be effective and acceptable in a rural, southwestern region, such as ours, where a large percentage of the population is Mexican-American?" The very different effects of social class and ethnicity on learning are slowly being separated by research such as that by Marjoribanks (1972) and Lesser, et al (1972). As revealed in their findings it now seems likely that each ethnic group shapes the learning environment of its children in a different way creating in the children unique patterns of abilities. It is our belief

that a parent-infant program should be preceded by a study of the families that are to be served and designed to accommodate itself to regional and ethnic patterns and values. With this orientation in mind the TADPOLE* investigators began a study during 1974-1975 of parenting skills with infants, birth to three years of age, in the Lubbock, Texas, area.

Technique of Collecting Data

The first task appeared to be to discover what was actually happening in the homes in our area. Gordon (1969) has stressed the importance of studying a child in the actual condition in which he is living. We began by asking ourselves, "Are there not unique skills that parents already have, producing competent infants, that might be eventually shared with other parents?" Videotaping was selected as the means of collecting data because (1) the possibility exists for extensive analysis and (2) exemplary segments could be shared in videotape programs that could subsequently be developed. We determined to preserve the naturalness of the home environment and the family interaction even if it became necessary to sacrifice some technical sophistication in the videotaping process. Our basic equipment consisted of a small, portable videotape set and a minimum of additional lighting, a small photoflood reflector. As we made arrangements to videotape in homes, we gave the family enough time to adapt to the novelty of the equipment and our presence. This phase passed surprisingly fast. We attempted to establish an informal, relaxed atmosphere by interacting with the infant on the floor or wherever we located the child indoors or outside in the yard.

*TADPOLE Tech Assessment and Development for the Preparation of Optimal Learning Environments

In addition, we included in the team a student from the ethnic group to which the family belonged.

Sample

Three major ethnic groups comprise the Lubbock, Texas Community. Our sample is therefore divided equally into Anglo, Black, and Chicano subjects, or our ABC groups as we refer to them. Within each ethnic groups we are matching pairs of normal and delayed infants.

TADPOLE SAMPLE

	ANGLO	BLACK	CHICANO	
DELAYED	n = 5	n = 5	n = 5	n = 15
<u>NORMAL</u>	n = 5	n = 5	n = 5	n = 15
Total	n = 10	n = 10	n = 10	n = 30

At this time we have completed data collection in sixteen homes: 3 Anglo, 8 Black, and 5 Chicano. Securing the sample continues to be difficult until we establish some grassroots relationships. We gain entry into homes through neighborhood community leaders who introduce us to families and vouch for us by expressing confidence in the TADPOLE Project. (State and community agencies, although willing to assist, lacked this intimate association with families so vital to establishing the necessary trust level.) (Steele, Wagner, Kiniry, 1975)

The sample is limited to lower socioeconomic level families. However, we have observed that the income level of the family seems not to be the determinant of the parenting skills. Within the sample that TADPOLE is studying there is great variation in parenting styles and ability.

The Naturalness of the Home Environment

We are frequently asked, "How do you know that you are videotaping natural behavior?" We attempt to determine this question by visiting the homes, sometimes unannounced, without videotaping. In these brief casual visits we observe the interaction patterns of the family members. If they are performing for the camera or us, it becomes apparent. We attempt to reassure the mother by saying, "Don't clean the house for us, because dust won't show on videotape anyway." Usually, we note the same kinds of behavior and interaction patterns whether or not we are videotaping. The TADPOLE investigators conclude that videotaping is a reliable observational tool.

At least three videotaping sessions are scheduled with each family. During these sessions we attempt to record a variety of situations that cover the gamut of child care practices: feeding and bathing the infant, toilet training and disciplinary situations. To record these various episodes with each family member included, we visit at various times of the day, from 7:00 A.M. to 9:00 P.M. Before leaving the home we allow the family to review the just completed tape.

The Home Studio

Upon the completion of the observations in the home we review the videotapes to determine that the major facets of infant care have been recorded. If a major observational area, such as a feeding time, has not been recorded, plans are made to structure this event. For this purpose the primary caregiver and the infant are brought into a home studio. The primary caregiver may be either the mother or the father. In some

instances both parents come. In other instances the primary caregiver appears to be a grandmother or older sibling. In this event we bring the grandmother or sibling, also.

The home studio is a vacant bedroom with an adjoining bath in the home of one of the investigators. Appropriate adults' and childrens' furniture has been moved into the studio to create a comfortable, relaxed atmosphere. Videotaping in this home-like studio has several advantages over videotaping in the home of the family. Using a large camera and a portable roving camera connected by a switcher we can videotape the child and his family regardless of his position in the room. As in the home, we remain silent during the videotaping and the family members soon direct their attention to each other or toys or magazines in the room. With this more sophisticated equipment the activities of the child, especially, are more adequately recorded. As in the home, we retain as much of the natural family interaction in the situation as possible. The family appear to feel at ease in our studio.

Methods of parental behavior management are elicited in the studio if the investigators believe that more documentation of this aspect is needed. An attractive box purse is left on the floor, accessible to the infant. The caregiver's response to the child's discovery of the purse is recorded, then the parent is assured that the child may safely play with the purse. In addition a small plastic waste basket contains attractive, safe, disposable items such as a stationary box, a cardboard tube, and an egg carton. Predictably, many toddlers are tempted to explore the contents. In this instance, also, the parent becomes assured that the child might play with it.

Determining the Developmental Level of the Child

The final videotaping session is again conducted in the home studio. The purpose of the last session is to verify and document the child's position in the sample, normal or delayed. Activities that might best be described as Piagetian developmental tasks are presented to the infant or child and from his responses his developmental level is determined. Episodes from previous videotapes reveal much about the child's developmental level. Where additional information is needed about the child's level of cognition items from the Uzgiris-Hunt and the Albert Einstein Sensorimotor Scales and other tests are used with the child. Although it would be convenient for the study to have this information earlier, to avoid influencing the family behavior, since the Piagetian items make good learning activities which parents can use, we save this portion of the study for the conclusion.

The Parent Questionnaire

Previous studies of the child in the home have yielded results regarding aspects of the home environment and parental interaction which influence the development of the infant and young child. As we reviewed the literature, we identified factors of environment and parental interaction which had proved significant in other studies. These factors were then delineated and classified into nine major parental abilities as shown in Figure 1.

IDENTIFIED PARENTAL ABILITIES FOR
PARENT QUESTIONNAIRE AND VIDEOTAPE
OBSERVATION INSTRUMENTS

Figure 1

Parents promote the development of their infants and young children by -

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1. providing space for exploration.
2. providing and guiding the use of objects.
3. providing the model for and stimulating vocalization.
4. promoting understanding of object concepts through prereading activities.
5. participating in learning games.
6. providing appropriate tactile stimulation.
7. maintaining effective, appropriate behavior management.
8. establishing healthful care giving routines.
9. recognizing growth indicators of the child.

Utilizing these factors, we have phrased a parent questionnaire around real life situations. Questions are phrased regarding children operating in the various development levels between birth and three years of age. A sample question from the parent questionnaire is shown in Figure 2.

Figure 2

Sherie is just beginning to drink from a cup. She is also beginning to use a spoon herself but without much skill. Yesterday while Sherie was playing in her high chair, she threw her toy duck to the floor three times. Sherie's mother picked up the toy and returned it to her each time.

Why did Sherie throw the duck to the floor?

1. She is beginning to learn how objects fall.
2. She was trying to get attention from her mother.
3. She was learning how to let go of objects.
4. She was trying to irritate her mother.
5. She enjoyed the sound the toy made when it hit the floor.
6. She is trying to control her mother.

Since Spanish is the primary language for many of the parents in our study, one of our Spanish speaking students is present to read the questions to the parent, if this is desired. A committee, consisting of members of all three major ethnic groups in our area, evaluated our questionnaire for cultural relevance and content.

Observation Instrument

Using the nine factors around which the parent questionnaire was formulated, we have devised an observation instrument that could be statistically compared to the parent questionnaire. As the videotapes are viewed, each of the nine factors

is rated according to the appropriateness of the environment prepared by the caregiver. Ratings in each area are tested for reliability by comparisons of independent observations of the investigators and trained research assistants. At this time the ratings have been consistently reliable.

Preliminary Analysis of Data

A preliminary analysis of the completed sample (N=15) has been completed. By use of a "t" test, significant differences were found between knowledge and observation ratings in each of the nine areas and the overall score. Inspection of raw scores revealed a consistently higher level of knowledge than performance. Further analysis attempted to discover relationships between knowledge and performance in the overall rating and sub-areas of language and tactile stimulation. The results of analyses seemed to indicate that knowledge and performance will both be high or both be low, changing proportionately in the same direction, while maintaining a significantly higher knowledge level. We feel that caution must be exercised at this time in forming conclusions from the small sample of preliminary data. A final report will be presented when analysis of the total sample has been completed.

Videotape Programs

The parenting skills displayed in some of the families in our study are so adept that we believe they should be shared with other families. Excerpts of home episodes have been compiled into two videotape programs "A Child's View of the Object" and "Parent and Child: Learning Together." In a later phase of the study, these videotaped programs, as well as others to be

developed, will be incorporated into parenting programs and field tested. This phase of the study awaits the answer to the question asked in the initial phase of the study, "What are the unique needs of families in our area for establishing an optimal environment for their infants and young children?"

Maintaining Contact with the Families

A family night is arranged with each family for the showing of the videotapes to friends and other family members. We take the tapes to the home one evening at the convenience of the family. This session usually has a party atmosphere and is somewhat like an evening of watching home movies.

Aside from this viewing of the videotapes which is under the control of the family, we are very careful that unedited videotaped information remain confidential. The privacy of the family is safeguarded very carefully according to the recent H.E.W. guidelines as well as Texas Tech's "Use of Human Subjects Committee."

Selected infants from the TADPOLE sample will be studied longitudinally. Current plans have been made to videotape two infants in their homes every three months.

We hope to be able to record exemplary parenting abilities as we are able to identify these skills. TADPOLE might then be able to serve as a facilitator for parents teaching parents.

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