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ABSTRACT

Noting that early intervention can be an effective method to help children who have special needs and their parents, this study explored the relationship between a mother's knowledge of development and the age at which she recognizes her child's special needs. The second portion of the Knowledge of Infant Development Inventory was used to quantify the mothers' knowledge of child development. Separate questionnaires were developed to address demographic information and the mothers' own personal experiences. Mothers whose children attended local early intervention and preschool programs were asked to volunteer to complete the questionnaires. Analysis of responses found no relationship between the mothers' knowledge of child development and the age at which they recognized their children's special needs. A high significant positive relationship was found between the age at which the mothers noticed their children's special needs and the age at which they sought help. (Contains the Knowledge of Infant Development Inventory, a questionnaire, and 24 references.) (HTH)

THE RELATIONSHIP BETWEEN MOTHERS' KNOWLEDGE OF CHILD DEVELOPMENT AND THE AGE AT WHICH THEY RECOGNIZE THE SPECIAL NEEDS OF THEIR CHILD

By:

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Thesis

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Abstract

The Relationship Between Mothers' Knowledge of Child Development and the Age At Which They Recognize the Special Needs of Their Children

The purpose of this study is to explore the relationship between a mother's knowledge of development and the age at which she recognizes the special needs of her child. The second portion of the Knowledge of Infant Development Inventory (KIDI) developed by MacPhee (1983) was used to quantify the mothers' knowledge of child development. Separate questionnaires were developed to address demographic information and the mothers' own personal experiences. Mothers whose children attended local early intervention and pre-school programs were asked to volunteer to complete the questionnaires. The analysis found no relationship between the mothers' knowledge of child development and the age at which that recognized their children's special needs. There was a highly significant positive relationship between the age at which the mothers noticed their children's special needs and the age at which they sought help.

Introduction

Early intervention can be an effective method to help children who have special needs and their parents. Children who are at-risk for developmental delays because of biological or environmental causes, can be referred for early intervention services by a parent or pediatrician and/or any other child development professional with the parent's consent. Early intervention services can include: assistive technology devices and services; audiology; family training, counseling, home visits and parent support groups; medical services only for diagnostic or evaluation purposes; nursing services; nutrition services; occupational therapy; social work services; special instruction; speech-language pathology; vision services; health services; transportation and related costs (New York State Department of Health, 1998). But would knowledge of child development prompt a mother to refer her infant or toddler earlier for these types of services? The purpose of this study is to explore the relationship between a mother's knowledge regarding child development and the age at which she recognizes that her child has special needs. The study also investigates the relationship between that age at which the mothers recognize their children's special needs and the age at which they seek early intervention services.

Review of Literature

MacPhee (1983) cited various sources supporting the idea that the knowledge a mother has of child development can affect her relationship with her children. For example, parents who abuse their children do not have realistic expectations for their behavior and have a tendency to expect too much too soon from them with regards to their children's physical, social and cognitive development. MacPhee (1983) also commented that the idea of the relationship between knowledge and parental behavior is

assumed when parent intervention and education programs are carried out.

What Parent's Know About Child Development

Dichtelmiller, Meisels, Plunkett, Boyzynski, Claflin and Mangelsdorf (1992) explained parental knowledge of child development as an area of adult social cognition that is made up of a person's understanding of child development processes, care giving and child rearing abilities, and developmental norms. There are different factors that contribute to what constitutes parental knowledge such as culture, education, books, experience, friends and family.

MacPhee (1983) noted that parental knowledge of development can be comprised of various information sources such as developmental timetables used to determine expected behaviors, parenting skills and/or theoretical beliefs about child development, for example the importance of a child's early experiences. Parental sources of information on child development include books, doctors, social networks in addition to culture (MacPhee, 1983).

Peet (1995) conducted an exploratory study comparing parental perceptions of the use of internal information sources such as parent's own intuitions about child development, religious beliefs and childhood experiences to the use of external sources of information such as books, magazines and professionals. She found that almost half of the parents reported using their own intuitions, religious beliefs and childhood experiences as sources of information concerning their child's development. Peet (1995) also discovered that the way the parents used information from internal sources depended on the area of child development of concern. For example, parents said they used internal sources more often for information about their child's social development than for

information about their child's cognitive and motor development and were more likely to seek information about these areas from a professional.

Recently, a survey was commissioned by Zero to Three, Civitas Initiative and the Brio Corporation to find out what adults know about child development. Lally, Lerner and Lurie-Hurvitz (2001) discuss the results of this survey conducted by the Daniel Yankelovich Group. The study found, that although adults are knowledgeable about many areas of child development, there are notable gaps in this knowledge. Lally et al. (2001) concluded from these results that people require information that is easily obtained, provides understanding regarding the depth of an infant's emotional life, and offers theories about spoiling, spanking, appropriate age expectations of young children and different types of activities that foster development. This survey found that college educated parents and those who have a higher socio-economic status demonstrated more confidence in their preparations for parenthood than did high school educated parents and those who had lower incomes. The survey also determined that the top three sources of information for parenting advice are spouses, the parent's own mother and the parent's pediatrician.

Culture and Child Developmental Milestones

The Encarta World English Encyclopedia defines the term culture as "shared beliefs, customs, practices and social behavior of a particular nation or shared attitudes that characterize a group of people" (Encarta World English Encyclopedia,1999, p.439). It is the collective unconscious that binds a particular group of people together. Kim and Choi (1994) cited Berry's (1976) explanation that culture provides a collective system in which to organize, explain and symbolize a society's physical and social world. Garcia

Coll and Magnuson (2000) refer to McCubbin's et al. (1993) observation that culture is passed down through the generations by the family. Children learn about their culture from their families through their parents' childrearing practices and beliefs. Culture affects how people choose to lead their lives and the manner in which they raise their children. It also plays a role concerning age expectations for developmental milestones and the specific milestones that may be valued or emphasized. People from different backgrounds have varying expectations from their children with regard to developmental milestones. For example, Harkness and Super (1992) examined childrearing expectations in two very different communities. One was a Kipsigis settlement located in Western Kenya and the other was a middle class area in Boston. The parents in the Kipsigis settlement had different expectations than the Boston parents. The Kipsigis parents' views are illustrated by their childrearing practices such as using older siblings to take care of younger ones and early training for household chores such as gardening, sweeping or cooking over an open fire. Their parent-child communication concentrates on using commands rather than questions to elicit speech from their young children. In this culture, children as young as five years old can take care of babies, a three year old boy can drive cows from the garden, and an eight year old girl can cook dinner for her family over an open fire. All of these children can accomplish these activities without adult supervision. The Boston families reported that play was an important part of their children's daily activities and also felt that play was crucial to their children's cognitive development and independence.

Harkness and Super (1992) cited their own research conducted in 1982 that found that the Kipsigis children did not do well in a cognitive task that required them to retell a

story they had heard from an adult tester. Harkness and Super (1992) also found that, although the Boston children were very verbal and had solid imaginary play skills, their parents were frustrated by their slow developmental progress with regard to doing household chores.

Another example of a cultural childrearing practice is described by Kim and Choi (1994) regarding Korean mothers. Korean mothers do not expect their children to eat independently until they are at least three years old. Kim and Choi (1994) mentioned research conducted by Lee and Lee (1987) who found that Korean children were not pressured to accomplish independent eating if they did not take the initiative to do so. The majority of Korean mothers wait until their children can eat independently without adult intervention. Lee and Lee (in Kim & Choi, 1994)) also found that Korean mothers were flexible regarding the time their children went to bed and when they learned to use the toilet. A Korean mother relies on non-verbal cues such as facial expressions or body language to determine when her child needs to use the toilet.

In the United States, even though the population may consist of individuals from various cultural and ethnic backgrounds, the dominant culture appears to be Anglo-European (Hanson, 1997). However, Iglesias and Quinn (1997) quote Bouvier and Gardner (1986) and Spencer (1984) as predicting that, by the year 2080, Anglo-European Americans will most likely become the largest minority in the nation. Developmental expectations for self-help and self-reliance are high for Anglo-European children (Hanson, 1997). Garcia Coll and Magnuson (2000) mention research by Garcia Coll and Meyer (1993) showing that historically, developmental researchers believed that the childrearing values, attitudes, practices and norms of the dominant white, Anglo-Saxon

middle class culture were most favorable for child development. These characteristics of parenting and developmental norms have been recommended to parents regardless of their background and parents have been criticized when their children's developmental patterns do not reflect those of the Anglo-European culture (Garcia Coll & Magnuson, 2000). "Language acquisition, attachment to primary caregivers and emergence of major emotional and cognitive systems are relevant processes in all populations. However, the particular language, the number of important attachment figures and the expression of emotions and cognitive skills in particular contexts might differ" (Garcia Coll & Magnuson, 2000, p.99). Where the Anglo European culture may place high expectations on children for reaching important milestones, individuals from other cultures may have different attitudes toward child development. Chan (1997) cited research by Church (1986) that found that the Filipino culture places an emphasis on indulgence, protectiveness, gradual training for responsibility with very little anxiety about early performance during the infancy and toddler stages. These characteristics are similarly shown in Latino cultures. "The attitude toward the young is to placate them, not push for the achievement or developmental milestones that are often valued in Anglo families" (Zuniga, 1997, p.164). Zuniga (1997) cited Roland (1988) as saying that this relaxed viewpoint about reaching developmental milestones may be related to the cultural value of sustaining a family member's interdependence with the family as opposed to emphasizing the family member's independence and individuation. Joe and Malach (1997) use language development in their case example about regarding early intervention for Native Americans. In traditional Native American culture, it is considered important that children begin to talk between the third and fourth birthdays.

The family would become concerned at that point if the child was not speaking as much as other children (Joe & Malach, 1997).

Iglesias and Quinn (1997) listed five belief continua concerning the nature of infants and the cultural meaning of these beliefs. The first belief continuum is the extent to which infants are bundles of potentialities or have a preordained character. Based on Piaget's sensory-motor stages, Western European philosophy believes that babies are active learners and that adults facilitate the child's development. Other cultures may reflect the belief that infants have a preordained character. As an example, Iglesias and Quinn (1997) cited a study conducted by Whiting and Edwards (1988) regarding a caste group in India. Parents have the role as the primary caregiver because babies are seen as helpless and not able to think about their environment. Therefore, a baby's appearance, health and cleanliness become crucial signs of a parent's ability to be the primary caregiver.

The second belief continuum concerns the degree of willfulness versus innocence of children (Iglesias and Quinn, 1997). For example, Iglesias and Quinn (1997) mentioned research conducted by Ward (1971) who found that some rural African-American families in Louisiana saw a young child as essentially bad and that the child's lack of maturity prevented him or her from behaving in a socially responsible way. These parents felt that, even though a child could be punished, he or she could not be changed or controlled by adult figures but will spontaneously grow out of his or her willfulness. In contrast, Iglesias and Quinn (1997) also cited a study by Briggs (1984) showing that Hispanics in New Mexico viewed a young child as being innocent. These parents demonstrated patience, since they believed that babies and young children were not able

to control their behavior.

Independence versus dependence is the third belief continuum mentioned by Iglesias and Quinn (1997). This means that babies are either viewed as dependent with independence as the optimal aspiration or viewed as independent with dependence as the eventual desired goal. Adults are supporting a baby's independence when they enjoy the fact that the baby expresses likes and dislikes or indicates what he or she wants (Iglesias & Quinn, 1997).

The fourth belief continuum is intentional versus non-intentional (Iglesias and Quinn, 1997). According to Iglesias and Quinn (1997), this means that adults vary in their beliefs about the degree to which babies are intentionally using vocalizations, body language or eye contact for communicative purposes. For example, Scheffner-Hammer and Weiss (2000) cited a study by Dixon, Tronick, Keefer and Brazelton (1981) that found that in Kenya, the Gusi adults do not view their babies as communicating anything intentional other than hunger or distress.

The fifth belief continuum proposed by Iglesias and Quinn (1997) was the extent to which children are a possession of parents versus possession of (extended) family. This belief range reflects the definition of family, nuclear versus extended and explains to whom the baby belongs. It also reflects the cultural values regarding independence or interdependence. Iglesias and Quinn (1997) used research by Shimizu (1984) as an example to demonstrate that Filipino children were exposed to many different parenting figures and they learned to respond to and interact with them. An example of the other side of the continuum would be the middle-class European-American families, where a relative would not pick up or reprimand a baby without asking the parent's permission.

Families from various cultures also differ regarding when they consider a certain set of behaviors or symptoms as representing. Valdivia (1999) cited research by Danesco (1997) who found that many parents from varying cultures viewed their child's condition as the result of a combination of biomedical and socio-cultural causes and addressed the child's disability with a blend of professional advice and folk remedies. They felt that their child's disability was temporary and that their child would eventually be cured.

Early Intervention

Thurman (1997) defined early intervention "as an array of services that is put in place through a partnership with families for the purpose of promoting their well-being and the well-being of their infants, toddlers and young children whose development may be at risk due to a combination of biological and environmental factors" (Thurman, 1997, p.3) Thurman (1997) cited the work of Bailey and Wolery (1992) who mentioned that the seven goals of early intervention included: support for families to achieve their own objectives; encourage child engagement, independence and mastery; support development in key domains; build and maintain children's social competence; provide and prepare for normalized life experience; and prevent future problems or disabilities from materializing. Early intervention models can be child oriented, child and family focused, center-based, home-based, hospital-based or a combination of the previous mentioned models (Smith, 1988). Smith (1988) believed that there were three main reasons for intervening early with a child with special needs. The first reason is to enhance the child's development, noting that human learning and development is most rapid in the preschool years. Therefore, if a child has difficulty learning a specific skill during this period, it may be harder for the child to learn that skill at a later time. The

second reason is that early intervention provides support and assistance to the family. Early intervention helps parents cope and develop ways to work with their child. Smith (1988) felt that this in turn helped to reduce the stress and isolation the family may feel with regard to their child's special needs. Early intervention can result in parents having improved attitudes about themselves and their child (Smith, 1988).

Robertson and Weismer (1999) investigated the effects of early language intervention on various linguistic and social skills on toddlers. They found that the intervention facilitated positive parental perceptions of their children's skills and behaviors which decreased parental stress. Rossetti (2001) also speaks about how families can benefit from early intervention programs. He mentions studies conducted by Innocenti, Huh and Boyce (1992); Mahoney, O'Sullivan and Robinson (1992); and Orr, Cameron, Dobson and Day (1993) showing that negative effects on family functioning can be lessened through family focused, community based support and services. Rossetti says that "for many families, the early intervention is the lifeline to the outside world and provides ongoing encouragement and support" (Rossetti, 2001, p. 269). Rossetti (2001) further cites research conducted by Guralnick (1989); Resnick, Armstrong and Carter (1988) showing that negative developmental results connected with prematurity are notably reduced through early intervention programs that focus on reinforcing the quality of parent-child interactions as well as parents' feelings of competence and confidence. Parent-child relationships are critical to a child's developmental progress (Rossetti, 2001).

Niccols and Mohamed (2000) found that parents of infants who were developmentally delayed benefited from an eight-week parent-child interaction skills

training group that they developed called the Skill Building Group. Ninety-percent of parents reported that they interacted better with their babies as well as their other children. They felt that they became more adept at problem-solving and were more confident about reading their babies' signals as a result of attending the Skill Building Group. Niccols and Mohamed (2000) also found that seventy-four to eighty-nine percent of the parents mentioned enjoying their babies more, felt less stress, and made new friends as a result of their participation in the group.

The third reason why Smith (1988) felt that early intervention is effective is to increase the child's and family's benefit to society. As the child's developmental and educational gains increase, his or her dependency on social institutions will decrease. Variables associated with early intervention effectiveness include parent involvement, age of the child at the time of entry and the degree of structure and duration/intensity of a program model (Smith, 1988). After analyzing over three hundred studies on early intervention efficacy, White (1986) concluded that early intervention had demonstrated positive benefits for most children. However, he pointed out that there was limited empirical evidence regarding the types of interventions that were most effective. White (1986) found that, although there were data to support the immediate benefits of intervention with handicapped children, there was not enough information about the long-term impact of early intervention on this type of population and concluded that there was also no proof for mediating variables such as parental involvement or age of entry to early intervention. On the other hand, the data did not show that these variables were not important. Casto and Mastropieri (1986) also found that early intervention for handicapped children produced immediate benefits. Although they also discovered that

longer and more intense programs were more effective, the age that children entered the program and the degree of parent involvement in the program were not crucial for the success of early intervention (Casto & Mastropieri, 1986).

Erickson and Kurz-Reimer (1999) summarized studies conducted by Barnett (1995), Dunst, et al. (1989) and Meisels, et al. (1993) and concluded that there were seven main ideas about early intervention effectiveness. First, most children who receive early intervention services make educational and developmental gains. The question still exists whether this progress is due to early intervention or to other factors. The second main idea is that there is more evidence proving the effectiveness of intervention with children who are environmentally at risk than those who are biologically at risk. Erickson and Kurz-Reimer (1999) stated that studies of biologically at risk children have concentrated on child outcomes, while studies with environmentally at risk children used both intervention approaches and outcome measures that were more broad based. Third, intervention leads to more improvement for children who are higher functioning at the time they enter a program (Erickson and Kurz-Reimer, 1999). With regard to children with disabilities, the more severe the impairment, the less progress is shown in response to intervention. Fourth, family support is a crucial factor of intervention. Support from interventionists and from alternative sources is critical for effective family functioning and also for child functioning. The fifth idea is that the effectiveness of the intervention depends on the duration and age of the child at the time of entry into a program. Erickson and Kurz-Reimer (1999) cited studies by Dunst, et al. (1989) and Heinicke et al. (1988) which found that the most effective early intervention programs were the ones that began close to the time of the child's birth, lasted for at least three months, and

included a minimum of eleven contacts between the early intervention staff and the parents. This gave time for the interventionists to establish a relationship with the families. Since families felt comfortable speaking about personal issues, they were able to modify their communication style and better deal with their concerns. Sixth, on the whole, more intensive interventions were more effective than less intensive. Erickson and Kurz-Reimer (1999) stated that experts suggested beginning with more intensive support and then adjusting the intensity as time passed to accommodate the family. Lastly, Erickson and Kurz-Reimer (1999) state that "even in cases where intervention is judged to be effective, its impact is modest (i.e., accounting for about ten percent of the variance in outcomes). Furthermore, because there is likely to be a publication bias, with studies demonstrating no effect being less likely to be published, it is reasonable to assume that what is in the published literature might over estimate the effectiveness of early intervention" (p. 36).

Rossetti (2001) feels that since we know that research has shown that early intervention is effective, the question about efficacy should be for whom does early intervention work and under what circumstances rather than does it work. He says that previous research had evaluated early intervention efficacy in the framework of child change. Rossetti (2001) defines child change as the amount of developmental progress the child achieves, which could result from the intervention the child received or to maturation. Rossetti (2001) cites studies by Casto and Mastropieri (1986); Farran (1990); Guralnick (1988, 1997); Guralnick and Bennett (1987); Ramey and Ramey (1992); and Shonkoff and Hauser-Cram (1987) showing that early intervention has positive benefits for children born biologically at risk, or are from families that are stressed because they

do not have the social support they require, or who may have personal problems or limited financial resources. Rossetti (2001) cites other studies by a number of investigators documenting that early intervention programs can be successful in lessening the overall decline in children's developmental status in the first few years of life for children who are biologically at risk and for those from disadvantaged families. Rossetti cites additional studies to show that there are positive effects of early intervention for children with communication disorders, visual impairments, hearing loss, motor deficits and general cognitive delays.

The above studies document the complex relationships between parents' awareness of child development, the effects of culture and belief systems on parenting practices, and the relationship of these variables with parents' attitudes toward early intervention. What is most clear is the wide variation of childrearing practices and their foundation in the culture of parents.

The above-cited studies also document the effectiveness of early intervention for children with a wide range of delays and disabilities, as well as the importance of early recognition, intensive involvement, and the need to address family issues and concerns. What remains to be explored are issues related to how families get their children to early intervention and the relationships between home and parenting variables that impinge upon parents' recognition of their children's need for these services. This study focuses on one of these issues, parents' knowledge of child development.

The first hypothesis of this study is that there will be a positive significant relationship between the parent's KIDI scores and age at which the parents first noticed a problem. The second hypothesis is that there will be a positive significant relationship

between the parents' KIDI scores and the age at which they sought help. The third hypothesis is that there will be a positive significant relationship between the age of the child when the parents first noticed the problem and the children's age when the parents sought help.

Method

Participants

The participants in his study were 55 mothers of special needs children who attended three urban center-based early intervention and preschool programs. The mothers' average age was 31 (R=19-46), with the educational level primarily (81%) equally distributed between high school completion and graduate school. Ethnicity was fairly equally distributed among Caucasian (37%), Latino (33%), and African American (24%), with an Asian minority (6%). Half of the mothers were employed outside their homes, and half were homemakers. Two thirds of the children of these mothers enrolled in the early intervention program were boys. Most of the families (91%) had one to four children, mostly one (26%) or two (33%). The rank of the special needs child was therefore either with the first or second, but disproportionately first (46%).

Materials

The participants were asked to complete two questionnaires.

Knowledge of Infant Development Inventory (KIDI; MacPhee, 1981)

The first questionnaire was taken from the second section of a test called the Knowledge of Infant Development Inventory (KIDI) developed by David MacPhee in 1981. The second section of the KIDI consists of nineteen questions that address familiarity with infant norms and milestones. The participants were asked to choose if they agree or not with the norms and milestones. If they did not agree, they had to decide whether a younger or older child would be able to demonstrate the behavior. The questionnaires yielded total scores of one to nineteen. To address content validity, items on the KIDI were sampled from a broad range of sources such as texts on child

development, pediatrics and nursing, as well as the research literature on infant development and child abuse (for deviant parental expectations on child development); infant care publications and feeding manuals; and developmental assessments (MacPhee, 1983). Both test-re-test (.91) and alpha (.82) reliabilities were high (MacPhee, 1983).

Demographic Questionnaire

The second questionnaire was constructed for this thesis, and asked the participants to provide demographic information and personal experiences with their special needs children who have received early intervention and/or pre-school services.

Procedure

Participants consisted of mothers who comprised a convenience sample that resulted from calling the program directors of local early intervention and pre-school programs. The program directors of three early intervention and pre-school programs asked the teachers to distribute the questionnaires in the children's school bags to ensure confidentiality. Each questionnaire was also identified by a number. An envelope was provided so that the mothers were able to return the completed questionnaires in their child's school bag to the attention of the program director. Because of the sensitivity level of what was being asked, it was not comfortable to send out reminders. This took place over a one months period of time.

Results

Fifty-five out of a total of 270 questionnaires were completed and returned, resulting in a return rate of 20 percent. Prior to completing the KIDI questionnaire, the mothers were asked about their personal experiences regarding identification of their child with special needs. Most of the mothers identified themselves as the first person to be concerned (76%), while their pediatrician was the next to notice a need (13%). Following these concerns, the mothers sought help from either an early intervention program (44%) or their pediatrician (30%). The children's average age at the time of their parents' first concern was 18 months (R=0-54 months), and their average age at the time their parents first sought help was 20 months (R=0-57 months). About 15% went to a specialist such as a neurologist, psychologist or speech pathologist. Most (60%) felt this help was positive, while 21% felt it was negative.

Most (60%) of the mothers first noticed their child's language delay, while few noticed delayed walking (18%) or lack of social awareness (12%); a very few (10%) had children with medical issues. The types of services received by the children, once identified, were primarily speech therapy (22%), occupational therapy (22%), and physical therapy (20%).

The first hypothesis of this study was that there would be a positive significant relationship between the parents' KIDI scores and the age at which the parents first noticed a problem. This was analyzed with a Pearson r correlation, and was found not to be significant.

The second hypothesis was that there would be a positive significant relationship between the parents' KIDI scores and the age at which they sought help. This was

analyzed with a Pearson r correlation, and there was no significant relationship.

The third hypothesis was that there would be a positive significant relationship between the age of the children when the parents first noticed the problem and the children's ages when the parents sought help. This yielded a correlation of .914, which is significant at the .01 level.

Discussion

This study primarily explored the relationship between a mother's knowledge of child development and the age at which she recognizes that her child may have a special need. The study also investigated the relationship between the mothers' knowledge of child development and the age at which early intervention services were sought. Finally, the study looked at the relationship between the age at which the problem was noticed and the age at which early intervention services were sought. Of the three relationships, the age of the child when the concern was first noticed and the age of the child when the mother sought help was found to have a strong correlation. This would mean that as soon as the concern about the child was first noticed, help was sought relatively right away.

One of the limitations of the study is that there was a low return rate. This could be due to the sensitivity of the subject matter for some mothers, as well as their literacy level since English was a second language for some.

It is of interest that, regardless of cultural background, it was language delay that tended to be noticed as an area of concern by these parents. This would suggest that this developmental area may cross cultural boundaries with regard to parental expectations. Recognition of language milestones may not require any special or well developed knowledge base of child development, since this recognition showed no relationship with the parents' knowledge of child development. It is encouraging that the parents sought help shortly after recognizing the problem. It is also of interest that it was primarily the parent (mother), rather than the pediatrician who was the first to notice the problem. We do not know, however, the response of the pediatrician to the mother's expressions of concern.

As school psychologists, who are often involved in developing and delivering parent education programs, we often assume that parents need more information about child development and that this knowledge will relate to their behaviors in relation to their children. However, these are assumptions that need to be explored. The research literature suggests that parents who abuse or neglect their children have unrealistic expectations regarding their development. But, what about parents who are not abusive or neglectful? Do they still need exposure to this content? Since staff time is sparse and expensive, it is necessary to gather this kind of information prior ro making assumptions about the educational needs of these parents.

APPENDIX I

Sample Introduction Letter to Mother

Elisheva Weiss
2110 Barnes Avenue, #5C
Bronx, New York 10462
(718) 824-7609

June 11, 2001

Dear Mother,

I am currently a graduate student in school psychology at Touro College Graduate School of Education and Psychology. For my master's thesis, I am conducting a study to investigate what mothers of children in early intervention know about child development. I am also a parent of a child with special needs who is currently attending a center-based early intervention program. This information will be helpful in developing education programs for parents. I am asking you to volunteer to complete two questionnaires. The first questionnaire is called the Knowledge of Infant Development Inventory, which addresses knowledge about child development. The second questionnaire provides information about you and your experiences with your child who has received early intervention. All the information that you provide is confidential. Each questionnaire has been assigned a number and Ms. has agreed to hand out and collect the questionnaires to ensure your privacy.

Once you have filled out the questionnaires, please return them to Ms. in the enclosed envelope no later than Monday, June 25, 2001. If you have any questions, please feel free to call me at (718) 824-7609. Thank you for your participation.

Sincerely,

Elisheva Weiss
Touro College
Graduate School of
Education and Psychology

APPENDIX II

Knowledge of Infant Development Inventory-Second Section

ID_____

KNOWLEDGE OF INFANT DEVELOPMENT INVENTORY
SECOND SECTION
David MacPhee

INSTRUCTIONS: Each of the following asks about the age at which infants can do something. If you AGREE with the statement, check the box marked AGREE. If you do not agree, then decide whether a YOUNGER or OLDER child would show the behavior.

	AGREE	YOUNGER	OLDER	NOT SURE
1. Most babies can sit on the floor without falling over by 7 months.				
2. A 6 month old will respond to someone differently if the person is happy or upset.				
3. Most two year olds know the difference between make-believe and true stories on TV.				
4. Infants are usually walking by about 12 months of age.				
5. An 8 month old acts differently with a familiar person than with someone not seen before.				
6. A baby is about 7 months old before he (she) can reach for and grab things.				
7. A two year old is able to reason logically, much like an adult would.				
8. A one year old knows right from wrong.				
9. A three month old often will smile when he (she) sees an adult's face.				
10. Most children are ready to be toilet trained by one year of age.				
11. A infant begins to respond to his (her) name at 10 months.				
12. Babies begin to laugh at things around 4 months.				
13. Six month olds know what "No" means.				
14. A 4 month old lying on his (her) stomach starts to lift his (her) head.				
15. Babbling ("a-bah-bah" or "bup-bup") begins around five months.				
16. Eighteen month olds often cooperate and share when they play together.				
17. An infant of 12 months can remember toys he (she) has watched being hidden.				
18. Babies usually say their first real word at 6 months.				
19. Infants will avoid high places, like stairs, by 6 months of age.				

APPENDIX III

Personal Experiences and Demographic Questionnaires

QUESTIONNAIRE

1. Gender of the child: _____ Male _____ Female

2. Number of children in the family: ____

3. Rank of your child in the family:
   _____ First _____ Second _____ Third
   _____ Fourth _____Fifth

4. Who was the first to notice the concern about your child?
   _____ Mother _____ Father _____ Grandparent
   _____ Pediatrician _____ Babysitter _____ Other (Specify) _____

5. How old was your child when you became aware of his or her special needs? (Specify in months)

6. How old was your child when you sought help? (Specify in months)

7. Where did you go for this help?

8. What was your experience with that?

9. If there was a gap between when you first noticed your child's special needs and when you sought help, please explain.

10. What was it about your child that you first noticed that made you think that he/she had a special need?

11. What is the nature of your child's special needs?

12. Additional Comments:

DEMOGRAPHIC INFORMATION

1. Age of mother:

2. Age of father:

3. Highest grade-level attained by the mother:
   _____ High-school/GED
   _____ College
   _____ Graduate

4. Highest grade-level attained by the father:
   _____ High-school/GED
   _____ College
   _____ Graduate

5. Mother's Occupation:

6. Father's Occupation:

7. Ethnic background of the mother:
   _____ Caucasian _____ Latino _____ African American
   _____ Asian _____ Other (Specify)_____

8. Ethnic background of the father:
   _____ Caucasian _____ Latino _____ African American
   _____ Asian _____ Other (Specify)_____

9. Mother's place of birth:

10. Father's place of birth:

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