

THE RELATIONSHIP OF MATERNAL EXPECTATIONS TO
MOTHER'S AGE, MOTHER'S PERCEPTION, TYPE
OF RELATIONSHIP, CHILD'S BIRTH
ORDER AND SEX, AND DEMO-
GRAPHIC INFORMATION

By

MARILYNN M. JONES

Bachelor of Science in Education
University of Oklahoma
Norman, Oklahoma
1970

Master of Education
University of Oklahoma
Norman, Oklahoma
1976


Submitted to the Faculty of the Graduate College
of the Oklahoma State University
in partial fulfillment of the requirements
for the Degree of
DOCTOR OF PHILOSOPHY
May, 1982

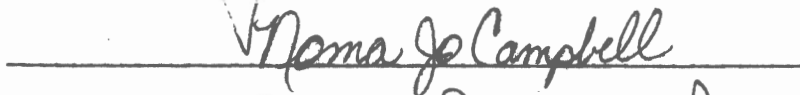
Thesis
1982D
J48r
cop. 2

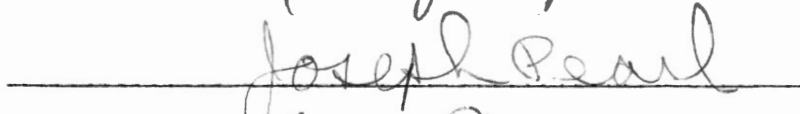


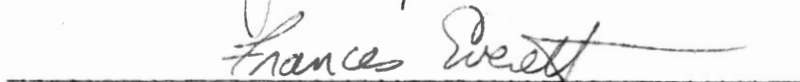
THE RELATIONSHIP OF MATERNAL EXPECTATIONS TO
MOTHER'S AGE, MOTHER'S PERCEPTION, TYPE
OF RELATIONSHIP, CHILD'S BIRTH
ORDER AND SEX, AND DEMO-
GRAPHIC INFORMATION

Thesis Approved:


Thesis Adviser








Dean of the Graduate College

ACKNOWLEDGMENTS

I would like to thank all of the parents and children who volunteered to participate in this study and the following agencies from which they were recruited. Without their generous cooperation, this study would not have been possible.

Kollins Kiddie Kollege, Stillwater, Oklahoma
Village Methodist Church, Oklahoma City, Oklahoma
Parents Anonymous, Tulsa, Oklahoma
Wheeling Preschool, Tulsa, Oklahoma
Community Schools of Tulsa, Tulsa, Oklahoma
Margaret Hudson Program, Tulsa, Oklahoma
Cinderella Day Schools, Tulsa, Oklahoma
Mother of the Red Earth Day Care, Tulsa, Oklahoma
Indian Health Care Center, Tulsa, Oklahoma
Domestic Violence Intervention Services, Tulsa, Oklahoma

I would also like to thank Linda Charney and Tom Huber for their help in recruitment of subjects, Dennis King for his help in editing the manuscript, and Steve Carver and Reed Mankin for their assistance in computer operation.

Special thanks go to John Hampton, Ph.D. Committee Chairman, for his guidance and other committee members Joe Pearl, Ph.D., Jo Campbell, Ed.D. and Frances Everett, Ph.D. for their input and support in the organization of this dissertation.

Finally, I would like to express my appreciation to David Olson for his support and my children Justin and Matthew for their understanding.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.	1
Problem Statement.	4
Purpose of the Study	4
Assumptions.	5
Limitations.	6
Definition of Terms.	7
II. REVIEW OF THE LITERATURE.	9
Introduction	9
Maternal Expectations.	9
Child Development.	10
Maternal Perception.	11
Birth Order and Sex of the Child	14
Relationship Development Between Mother and Child.	17
Positive Mother/Child Relationships.	19
Disturbed Mother/Child Relationships	21
Demographic Information.	24
Summary.	24
III. METHOD AND PROCEDURE.	26
Introduction	26
Population	26
Subjects	27
Instrumentation.	28
Data Collection.	32
Data Analysis.	34
Hypotheses	35
Summary.	36
IV. RESULTS	37
Introduction	37
V. SUMMARY	42
Recommendations.	45
SELECTED BIBLIOGRAPHY	46
APPENDIX A - DEMOGRAPHIC INFORMATION SHEET.	53

Chapter	Page
APPENDIX B - REVISED DENVER PRESCREENING DEVELOPMENTAL QUESTIONNAIRE FOR MOTHER'S PERCEPTIONS (CHILD'S AGE 14-23 MONTHS)	55
APPENDIX C - REVISED DENVER PRESCREENING DEVELOPMENTAL QUESTIONNAIRE FOR MOTHER'S PERCEPTIONS (CHILD'S AGE 24-30 MONTHS)	58
APPENDIX D - REVISED DENVER PRESCREENING DEVELOPMENTAL QUESTIONNAIRE FOR MOTHER'S PERCEPTIONS (CHILD'S AGE 31-44 MONTHS)	61
APPENDIX E - REVISED DENVER PRESCREENING DEVELOPMENTAL QUESTIONNAIRE FOR MOTHER'S EXPECTATIONS (CHILD'S AGE 14-23 MONTHS)	65
APPENDIX F - REVISED DENVER PRESCREENING DEVELOPMENTAL QUESTIONNAIRE FOR MOTHER'S EXPECTATIONS (CHILD'S AGE 24-30 MONTHS)	68
APPENDIX G - REVISED DENVER PRESCREENING DEVELOPMENTAL QUESTIONNAIRE FOR MOTHER'S EXPECTATIONS (CHILD'S AGE 31-44 MONTHS)	71
APPENDIX H - RAW DATA FOR SUBJECTS INCLUDED IN THE STUDY	74

LIST OF TABLES

Table	Page
I. Mean, Standard Deviation, and Range for Independent Variables	29
II. Summary of Numbers and Percentages for Categorical Independent Variables	30
III. Ranges and Mean Scores on Revised Questionnaires and Demographic Variables for Test-Retest Reliability . . .	33
IV. Analysis of Variance Summary Table.	38
V. R^2 for Each of the Independent Variables.	39
VI. Multiple Regression Analysis for all Variables $R^2 = .379$.	41

CHAPTER I

INTRODUCTION

Current literature suggests that a mother's expectations regarding normal development of children in general are an important factor in the relationship between a mother and her own child. It appears that a mother's expectations vary among identified groups and may be related to her child's level of development, as well as her own perception of that development. It becomes important then to examine these variables and others, such as mother's age, birth order and sex of the child, and demographic information and the type of relationship (abusive or non-abusive), in order to better understand their influence on the mother's expectations.

The mother and infant each bring their own experiences and biological makeup to the relationship. These include the mother's expectations of normal child development, the child's capabilities as well as the mother's perceptions of those abilities (Korner, 1979). The mother's knowledge of normal child development and accurate perceptions of her own child's needs is important to develop a synchronous interaction. Synchronous interaction thus results in clear communication between mother and child and allows her to design the environment to maximize her child's learning experiences (Ainsworth and Bell, 1973; White, 1979). The mother's unrealistic expectations can result in inappropriate responses to her child's behavior and can lead to abusive treatment.

This can occur when the mother's own unmet needs interfere with her accurately perceiving and meeting her child's needs (Kempe and Helfer, 1972).

The mother's ability to accurately perceive her child's development and respond appropriately to its needs is essential to a well-developing relationship (Kennell and Klaus, 1976). The mother is better able to meet her child's needs if its responses meet her expectations (Korner, 1979). When the child's response and the mother's action occur simultaneously, this results in a synchronous interaction. This increases the likelihood for the child's optimal development. Asynchronous interaction can have detrimental effects on the child's development (Brazelton, 1974). Therefore, the child's development can be viewed as a reflection of the quality of the mother/child relationship.

The interaction between mother and infant influences the child's competence in cognitive and social skills (Ainsworth and Bell, 1973). Well-developing children apparently experience an early positive social relationship and their competence in social skills, which is noticeable by twenty months of age, becomes the best predictor for future development in other areas (White, 1979). In the abusive interaction, the child's development often lags and social skills are severely affected (Martin, 1976). This often results in an unattractive appearance for the child which further reinforces negative responses from the mother (Parke and Collmer, 1975).

Both the child's birth order and sex have been found to influence maternal expectations. While first-time parents might have definite ideas about how children should behave, their expectations are usually high (Forer, 1969). These high expectations can promote higher levels

of achievement among first-born children (Rothbart, 1971). Parents rely on previous experience with their own parents for understanding relationships. It is then likely that they will identify with the child who is the same sex or has the same ordinal position in the family as they had (Toman, 1976). Likewise, parents will respond differently to children of different sexes (Rothblat, 1971). It is clearly supported through research that both birth order and sex have an impact upon the mother's expectations of her child and as a result influence the child's behavior.

The mother's own level of development creates the atmosphere for problems when her own unmet needs interfere with her interacting with her infant. For instance, teen-aged mothers (Osofsky, 1979) often appear to expect too little, too late from their infants (Epstein, 1979). Childbearing by adolescents places both the mother and the child at high risk for health problems which often result in developmental problems for the child and can further interfere with their interaction (Osofsky, 1978).

Social class has also been studied as it relates to maternal expectations and the child's development of cognitive and social skills. While the incidence of adolescent parenthood may be more prevalent in lower socio-economic levels (Russ Eft, Sprenger, and Beever, 1979), the occurrence does cross class lines, as do cases of abuse (Kempe and Helfer, 1972). What has been studied more recently is that developmental competence in children also crosses class lines (White, 1979). This points to the question of demographic variables as they affect not only maternal expectations, but the subsequent development of the child within the relationship.

Different groups of mothers have different expectations of their

children's development. These expectations play a role in the developing relationship between mother and child. Variables that relate to these expectations are: maternal perceptions of the child's development compared to the child's actual development, the type of relationship (abusive or nonabusive), the age of the mother, the birth order and sex of the child and demographic information. A better understanding of these variables would provide information for further research dealing with the enhancement of the child's development through support of positive mother/child interaction.

Problem Statement

Current literature indicates that maternal expectations vary among identified groups and have an impact upon the developing mother/child relationship and thus the development of the child. The literature suggests that the variables identified above may be related to the mother's expectations. The research question then becomes: What is the relationship between mother's expectations and the type of relationship (abusive or nonabusive), the age of the mother, the mother's perception of her child's development, the birth order and the sex of the child and demographic information. The null hypothesis stated for the purposes of this study is: there is no relationship between mother's expectations and type of relationship (abusive or nonabusive), age of the mother, accuracy of the mother's perception of her child's level of development, birth order and the sex of the child and demographic information.

Purpose of the Study

The literature covered in Chapter II points to the significant in-

fluence that a mother's expectations have on the interaction between her and her child. The literature further describes variables such as the mother's perception of the child's development, the type of relationship (abusive or nonabusive), the age of the mother, the birth order and the sex of the child and demographic variables that may be related to and influence maternal expectations. There is limited research to support differences in mother's expectations and the relationship of those identified variables to expectations. It is the purpose of this study to examine the relationship between a mother's expectations and those identified variables. The establishment of the relationships would serve as a basis for further research to support effective intervention planning and assessment of the mother/child interaction.

Assumptions

The ability to predict a mother's expectations from related variables is based on certain underlying assumptions.

The first assumption is that the mother and child each influences the others behavior. An example is seen in the accuracy of the mother's perceptions of the child's needs and the child's responses to those attempts to meet its needs.

Another basic assumption is that cognitive and social development are interrelated. For example, the mother's perceptions might be filtered through her expectations. Both perceptions and expectations are related to cognitive and social development and effect her capacity for interpersonal relationships.

Social class may also have an indirect effect on the child's development. Variables that may be related to social class and are

assumed to have an indirect impact upon the mother/child relationship include ethnicity, marital status, monthly income, family size and mother's educational level.

Another variable that has been related to eventual developmental outcome, is the child's neurophysiological status at birth. The health of the children included in the study was reported by the mother "normal" at birth and thereafter was not interfered with due to accident or severe illness.

Limitations

The availability of standardized instruments to measure the identified variables of interest is extremely limited. While care has been taken to operationally define those variables and to measure them with a combination of existing standardized instruments, caution must be exercised in the interpretation of the results.

Certain revisions of the existing instruments were necessary to accommodate the measurement of maternal expectations and perceptions of development. The validity of the instrument for use in this way is not established. The revisions include deleting the norm reference from the measurement instrument and extending the scale to include items above the age line for the child. The interpretation of the results obtained from these instruments is limited to the variables as defined for use in this study.

The subjects have been recruited from existing social service programs in Tulsa and Stillwater, Oklahoma. While they represent the population for those areas, generalizing the results is limited due to their volunteer participation rather than being randomly selected.

Definition of Terms

The following list of terms has been defined to clarify their use within the context of this study. Their meaning within this study is therefore limited to these definitions.

Competence - the ability of a child to effectively interact with its environment through socially acceptable ways in order to get its needs met, which results in cognitive growth and social adaptation (White, 1979).

Level of Developmental Functioning - the child's abilities to perform developmental tasks, as measured on the Denver Developmental Screening Instrument (Frankenburg, 1971).

Maternal Expectations - the mother's impression as to what behavior is culturally accepted as normal development for children at a given age (Spinetta, 1978), as measured by the revised Prescreening Developmental Questionnaire (Frankenburg, 1976).

Maternal Perceptions - the mother's awareness of her child's development, which results in her capacity to respond appropriately to its needs (Osofsky, 1979), as measured by the Prescreening Developmental Questionnaire (Frankenburg, 1976).

Normal Development at Birth - a birth weight of at least five pounds with no indication of neurophysiological dysfunction reported (Kempe, Silver, O'Brien, 1978).

Type of Relationship - the mother/child interaction as classified into abusive or nonabusive types.

Abusive - mothers who have been reported, investigated or adjudicated through the Oklahoma court system on charges of child abuse as defined by state law.

Nonabusive - mothers who have not been involved with the court system, or who have not been investigated for reason of child abuse as defined by state law.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The literature suggests that a mother's expectations influence the mother/child interaction and subsequently has an effect upon her child's development. These expectations apparently vary among certain groups of mothers and are effected by variables, such as the age of the mother, the type of relationship (abusive or nonabusive), the mother's perception of her child's development, the birth order and sex of the child, as well as variables related to socio-economic status including ethnicity, marital status, educational level, and income. It is important then to examine each of these variables and their relationship to maternal expectation in order to better understand their influence on the mother/child interaction.

Maternal Expectations

The way in which the infant is cared for by the mother is seen as the most important influence in their environment (Rheingold, 1973). Therefore, it becomes important to examine the mother's influences on the relationship between her and her child.

As she observes her infant's responses to her, her expectations concerning her infant's future behavior becomes more accurate. She becomes aware of how her behavior influences her infant's behavior.

She then modifies her behavior to expectations of her infant's behavior. The infant's response then becomes regulated to the mother's behavior. For example, as the mother changes her specific learned behavior in relation to the infant's expected response, the infant learns new responses. Substitution of or difference in the quality of mothers care can also result in different infant responses (Brazelton, 1974).

The mother's expectations for her child's performance has an effect on their interaction and consequently effects the child's behavior (Marcus and Corsini, 1978). Broussard and Hartner (Osofsky and Connors, 1979) found that a mother's perceptions of her infant at one month was related to the child's developmental outcome at 4½ years of age. It was concluded from this research that either the mother's perceptions of her infant's development are accurate in predicting eventual outcome, or the expectations of the child's development may become a "self fulfilling prophecy." The strength of their relationship is indicated by the mother's perception of her child's development in relation to maternal expectations. The validity of mother's reporting of her child's development has been established through the use of questionnaires which were based on corresponding developmental screening instruments (Frankenburg, van Doorninck, Liddell, and Dick, 1976; Knobloch, Stevens, Malone, Ellison, and Risember, 1979). These could provide information concerning the accuracy of a mother's perception of her child's development as well as her expectations of normal child development.

Child Development

The infant not only receives but actively participates in the

developing attachment process. The infant's behavior elicits responses from the environment that is necessary for the satisfaction of its needs. For example, the infant's crying is usually effective in bringing a mother's attention to its needs. The infant then can determine the amount of stimulation it receives (Korner, 1979).

The newborn's neurophysiological status is more important for eliciting a mother's action than at any other stage of development (Korner, 1974). It is important for infant characteristics to elicit appropriate responses from the mother. These characteristics include: the infant's appearance of helplessness and attractiveness of its features, as well as the infant's level of arousal, or ease with which it can be soothed (Korner, 1974); the infant's visual alertness (Korner and Thoman, 1973); and the temperament of the infant (Carey, 1973).

Initially, the infant's attention to the environment is limited by its motor behavior. These limits are gradually overcome as their physiological demands require attention to the environment (Escalona, 1973). This is seen in the infant's apparent capacity for attention to the perceptual features of the primary caretaker. This becomes important for attachment process (Beckwith, 1979). Differences in an infant's capacities can therefore effect how it copes with the environment (Murphy, 1973).

Differences in individual development include rates of change in both structural and functional processes. These processes must be considered when assessing environmental effect upon changes in individual development (Bayley, 1973). Differences then in developmental status result in different environmental stimulation (Escalona, 1973). In order for the process of development to proceed smoothly, as a new

stage emerges, these developmental differences become important in studying the type of environment that enhances an infant's cognitive development. It is essential that changes in the infant's behavior have different effects upon the mother in order for the process of development to proceed smoothly (Brazelton, 1979).

The infant's physiological regulation, differentiation of self and others, and its mastery of the inanimate world become major developmental tasks. From the beginning these tasks are shaped within a socio-emotional climate (Beckwith, 1979). As the infant learns to regulate its body rhythms, reciprocal interactions with the caretaker are sustained for longer periods of time. These mutually satisfying interactions are important for maintaining a positive relationship (Field, 1978). Reflexive behavior is modified as body coordination becomes self-reinforcing. This allows for the infants more controlled response to the environment and thus promotes further development in the infant's cognitive structure (Wadsworth, 1971). This interaction supports the infant's learning "generalized expectancy of control" over the environment. This expectancy leads to other stimulus-response experiences which are important to development (Lewis and Goldberg, 1973). Failure of this expectation reduces the infant's exploratory interest and practice of new skills (Lewis and Goldberg, 1973) which results in a "learned helplessness" (Seligman, 1975).

As the infant's body control becomes more coordinated, its behaviors become more directed to objects and events beyond the body. Intentional behavior develops as a result. Egocentrism remains however in the infant's belief that it is the cause of all activity. Differentiation and anticipation become important for the establishment of

object permanence and its relationship to objects and people in the infant's life (Wadsworth, 1971). The caretaker must understand the normal response to separation in order to support the infant's resolution of the anxiety. For example, the caretakers preparation for departure will reassure the child of their return and promote the establishment of a sense of trust. This relationship is important for later feelings of having control over one's life situations (Seligman, 1975).

Through increased receptive language abilities and locomotion, the infant is able to explore, experiment, and manipulate the environment thus promoting an increased sense of self. With the establishment of object permanence, the infant learns that external objects can be the source of actions. These skills are prerequisite for the development of mental representation. Representational thought, increased language system, and capacity for imagination enable the infant to further control the environment and gain independence through new means of problem solving (Wadsworth, 1971). This period coincides with the sense of trust vs. mistrust, leading to the development of autonomy (Erikson, 1963).

Maternal Perception

The mother's sensitivity to the infant's capacity for attention may be one of the critical factors in the developing relationship. It seems that mothers have a strong attraction to the infant's visual alert state. This results in an intense sense of pleasure for her whom it triggers a reaction from the infant. The attachment process thus becomes a complex interaction between the infant's reactions and the mothers cues (Korner, 1974). The mother's perceptions and appropriate responses to her

infant's cues are important to the "mutual modification of behavior." Thus if the infant meets the mother's expectations and the mother alters her behavior to appropriately meet the infant's needs, development is likely to progress smoothly (Osofsky, 1979).

The infant's response to the mother's behavior is important in relation to the mother's feelings and behavior towards her infant (Osofsky, 1979). The mother's success or failure in soothing her infant in the early weeks of life influences her feelings of competence as a mother (Korner, 1979). The mother's consistent response as well as the timing of those responses, are important to the infant's learning that its behavior can effect the environment. As these interactions become more complex, the mother provides new experiences appropriate to the infant's stage of development. Thus, the infant's behavior changes through development and so effects changes in the mother's behavior at subsequent stages (Osofsky, 1979).

The mother's behavior can be seen in terms of upper limit control, which tries to reduce infant behavior that exceeds her expectations, or as lower limit control, which occurs when infant behavior falls short of maternal expectations (Bell, 1968). It is not only the individual characteristics of mother and infant, but the appropriate match of those characteristics that promotes an adaptive relationship. The "goodness of fit" (Roberts, 1979) allows for the development of synchrony in the early relationship, but both mother and infant also can contribute to asynchronous interactions (Osofsky, 1979).

Birth Order and Sex of the Child

It becomes difficult to separate birth order and the sex of the

child in their influence on maternal expectations, but both make a significant contribution within the developing relationship. Mothers tend to draw on their own childhood experiences with their parents for gaining an understanding of relating to their own children (Toman, 1976). Their reference point from which to set expectations for their first born child is therefore limited. This often results in an overestimate of that child's abilities (Rothbart, 1971). These expectations become more realistic for later children due to the mother's learning about child behavior with the first child (Forer, 1976).

Forer (1969) describes the mother's behavior with the first born as anxious, fearful and restrictive. Mothers tend to exhibit more extreme expectations for the first born's behavior and achievement. Mothers tend to talk to their first born more, which makes it difficult to be clear as to whether she is overestimating her child's capacity for understanding of if she simply provides more intellectual stimulation (Rothblat, 1971). A mother's relieving of her infant's discomfort becomes important for her feelings of competence as a mother. The "good" or "easy" baby then can reward a mother's needs for emotional dependence, self-esteem, and sex role development by eating well, sleeping well, and vocalizing more than crying (Forer, 1976).

The child's sex is perhaps the parent's first concern at birth. The sex of the child is immediately confirmed and can result in a fulfillment or disappointment of the mother's expectations. This can have a major impact upon the mother's initial response (Kempe and Helfer, 1974). The mother's behavior tends to differ with the sex of the child as well as the birth order (Forer, 1976). This can be seen in the tendency of a parent to identify with the child who is of the same sex

and in a similar birth order as they themselves were (Toman, 1971). One study indicated that parents tended to respond more permissively toward the voice of an opposite-sexed child (Rothblat, 1971). While both mothers and fathers seem to desire the first born to be male, whatever the sex, this child has a better chance of being accepted by the parents than later born children (Forer, 1976).

The impact of a mother's expectations on her child's development is seen in the mother's responses to different-sexed children. Girls seem to be more cuddly, less active and more responsive to maternal care than boys, and girls apparently make fewer demands (Forer, 1971). This might be related to the mother's interacting with girls more verbally, and with boys more physically (Kennell and Klaus, 1976). Mothers were found to be more supportive and less directive in their first born boys activities, but they were more intrusive and demanding of their first born girls (Rothblat, 1971). The relationship between sex of the child, birth order and siblings sex has been found to have significant influence on certain traits of the child, such as achievement, anger, activity level, affection, and obedience (Koch, 1955).

First babies then can be seen as teaching parents what to expect from later-born children. With the addition of a new child the first born is displaced, and the mother pushes for a change in its behavior. This often results in the child being seen as more mature. Additional stress is placed on parents as more children arrive. The first born usually receives more corporal punishment than later-born children, which may be related to the parent's stress (Forer, 1976).

The correlation of the mother's capacity to assess her child's abilities has been lacking. But it is speculated that any overestimate

of the first-born's abilities would be more apparent in the mother's behavior with her infant or young child rather than with older ones (Rothblat, 1971). It is therefore important to examine these variables of birth order and sex of the child and their relationship to a mother's expectations with mothers of young children.

Relationship Development Between Mother and Child

The mother/infant relationship forms the basis from which all future relationships evolve with a sense of trust or mistrust (Erikson, 1963). The establishment of the relationship effects both mothering behavior and the infant's development (Schaeffer, 1977).

The attachment process between mother and infant, begins during pregnancy and intensifies at birth. It can be described as a mutually rewarding experience that results in a reciprocal pattern of behaviors (Seligman, 1975; Kennell and Klaus, 1976). A balance is established as each member learns the other's behavior patterns. Brazelton (1974) has indicated this balance enhances the infant's development. A disturbance in the interaction occurs if either of the members is unable to change their behavior patterns to accommodate the other's responses. The ease with which mother and infant reestablish synchrony of behavior patterns may reflect the strength of the relationship.

It is through this important social relationship that the infant learns to act upon the environment. This sets the conditions for cognitive growth and social adaptation (Beckwith, 1979). Examining the components contributed to the interaction by each member of the dyad will provide a better understanding of this process and the potential problems that can occur.

Sander (Osofsky, 1979) describes mother/infant negotiations during the developing relationship. The first two months are primarily spent in the mother's adaptation to her infant's cues. Mutually satisfying interchanges such as vocalizations relieve the mother's anxiety in the next 3 months. From five to nine months, the infant actively seeks to establish other areas of reciprocal interaction with the mother, often through play. Nine to fifteen months marks a centering on mother in which the infant behaves as if only the mother can meet its needs. Past this point, as the infant becomes more assertive, renegotiation is required to allow for this self-assertion but at the same time the limits of costs at which this can be done and maintained.

Ainsworth and Bell (1973) have established a relationship between mother/infant interaction and the development of competence. They have defined this competence in terms of the "infant's cognitive and motor skills, age or stage-relevant assessment, and its effectiveness in controlling or eliciting responses from the environment" (p. 101.) It requires effective interaction between an infant who can influence the behavior of a mother who responds to its needs. An infant who is incompetent in functioning may increase effectiveness if coupled with a mother who is highly responsive to its needs. Likewise, an infant who exhibits competent behavior may decrease effectiveness when coupled with a mother who is unresponsive to its cues. And as an infant is ineffective in controlling the environment, it is likely that development will be impaired. The least effective pair is the incompetent infant with an unresponsive mother.

Certain factors were found that were associated with effective mothers and responsive infants (Stern, Caldwell, Hersher, Lipton, and

Richmond, 1973). The most effective mothers were loving, were attentive to, and emotionally involved with their infants. The infants commonly displayed advanced development as a result. The other extreme was found in the ineffective mother whose quick handling and indifference to the infant's distress reflects her negative self-esteem, which is further reinforced by the infant's increased demands. It becomes important then to describe in further detail, the characteristics of competent mother/child relationships, as well as those that are disturbed, to better understand the impact and resulting effects on the child's development.

Positive Mother/Child Relationships

White (1979) has described the characteristics of well-developing children and studied the conditions that promote their development. He found social competence a strong developmental difference in well-developing children by age two. This difference was apparent by fifteen months in those children who later were measured high in competence on standardized instruments. This study showed that at age three, the most competent children had achieved significantly more than the least competent children in all areas of development. This suggests that lasting developmental differences can be seen to emerge in the second year of life. These findings were consistent when comparing development of three, four, five, and six year old children. From the data, it was concluded that an important factor to children developing well was the existence of close social relationships in the first two years of life.

White (1979) further described two types of behavior that competent children exhibited in relating to adults. First, they were able

to gain the attention of adults in socially acceptable ways, and second, they were able to use an adult as a resource after first determining that a task was too difficult to handle alone. These social skills emerged by fifteen months and were found to remain more advanced by age three in competent children. It seems then these social skills become the best predictors for future development of competency. If these are reliable, then further research could support the practical value of these findings.

White (1979) also described the characteristics of parents who raise competent children. He noted three major functions that competent child-rearers served. These include: arranging the child's environment, consulting with the child, and disciplining the child. These competent parents arranged their homes to allow easy access to living areas to provide the opportunity for exploration and interaction with people. The kitchen, for example, was designed for attraction and safety since much time seems to be spent there. The mothers had reserve materials on hand to keep the infants from becoming bored, and they used playpens very little. Other research has indicated two kinds of home circumstances that appear to be related to psychological development (Wachs, Uzigris, McV.Hunt, 1974). They found a negative correlation between psychological development and the intensity of stimulation and excessive change in circumstances to which the infant was exposed. A positive correlation was found between psychological development and the opportunity to hear vocal labels for specific objects, actions and relationships.

"Infant educator" behavior was observed in competent parents by four months after the child's birth and was later found to be highly

correlated with the child's competence in kindergarten (Schaefer, 1979). Mothers of well-developing children served as a consultant when the child needed comfort or wanted to share a new discovery. They taught at brief periods that were initiated by the child. They also maintained a sense of reality by suggesting that the child should wait a minute if she was busy when the child needed attention, rather than her immediately dropping everything (White, 1979). Setting firm and consistent limits while simultaneously showing love and respect for the child was also apparent in competent mothers. This type of parenting was associated with the development of competence in preschool children (Baumrind, 1967).

Disturbed Mother/Child Relationships

Some mothers cannot or will not respond to their infant's cues either due to their own emotional needs or to an adherence to beliefs of what constitutes "good child care". This mismatch of the pair can seriously interfere with the developing reciprocal interaction (Korner, 1974). This mismatch can lead to abusive patterns in which mothers expect and demand behavior from their children prematurely for their age. These parents will apply what is culturally accepted in child rearing in an extreme sense or at too early an age. They expect and demand performance from the child with little regard for the child's limited abilities or needs (Spinetta, 1972).

Early disturbances in the mother/infant relationship may be observed in a new mother's interactions with her infant. Behavior such as not looking at the infant, expressing disappointment in the child's sex, physical characteristics, or temperament, calling the baby "it",

and any other extreme inattentive behavior (Kennell and Klaus, 1979) may indicate such a disturbance. Infants who exhibited the "hyperexcitability syndrome" as a result of prenatal and/or postnatal complications provide another example of disturbances in a developing relationship (Korner, 1974). Even though these infants displayed obvious neurological dysfunction, mothers tended to blame themselves for mishandling them in some way. Another example of disturbance can be seen in a case study where the infant was late in developing eye to eye contact and smiling response, which elicited a violent response from the mother (Bell, 1974).

The stage can be set for abuse when the mothers upper or lower limits of control are reached (Bell, 1968). Lower limit control is the mothers behavior that stimulates the child whose behavior falls below her expected standard. Upper limit control is the mothers behavior which tries to reduce the child's behavior when it exceeds her expected standard. Upper limit control may be seen in response to the excessive and prolonged crying of an infant or to the impulsive and hyperactive behavior of the child. Lower limit control can be seen in response to the lethargic or unresponsive infant who fails to meet maternal expectations of normal development. Exceeding these limits can interfere with a positive mother/child relationship and can even result in abusive interactions. This occurs when the mother's expectations of the child's behavior are excessively high or her tolerance level is low and the child presents her with an aversive action. Successful socialization then occurs when the child's behavior is maintained within the upper and lower limits acceptable to the mother (Bell, 1968).

It can be seen how the infant may even contribute to abuse. This can happen either through genetically determined characteristics, or

when it develops behaviors that make it more likely to become abused (Parke and Collmer, 1975). Abused children commonly exhibit abnormal behavior characteristics and developmental lags (Martin, 1976). The child who is well taken care of invites positive responses, but the unattractive appearance of the abused or neglected child can invite more abuse (Parke and Collmer, 1975).

From the early weeks of life, the development of the mother/child relationship and interferences that may disturb their interactions are described (Murphy, 1973). An unpleasant birth experience can set the conditions leading to difficult mother/infant interaction. By eight weeks, over stimulation or understimulation can further create problems in the interaction. It becomes the mother's task to provide appropriate stimulation during this time. As the infant learns to differentiate by twelve to sixteen weeks, the mother reinforces the infant's sense of self. Development of language skills, locomotor skills, and the use of aggression in acceptable ways during the next sixteen to thirty-two weeks, lays the foundation for ego development. Interference at this point can lead to serious problems in overall development.

The infant's behavior is organized within the experience of reciprocal interaction. This is important so that it can attend to the environment. With inadequate mothering or none at all, a delay in learning about self-organization would be expected. This would effect not only the infant's social interactions, but their cognitive abilities as well. This would result in delayed development if an infant had to gain this organization simply through maturation (Brazelton, 1974).

Demographic Information

White's study (1979) gathered data from all socioeconomic levels and found children from modest homes developing as well as those from endowed homes. It does not appear then that social class alone can account for developmental differences. However, there may be differences in parental perceptions and expectations of children between income levels. Some studies suggest that parents from lower income backgrounds have lower achievement expectations and aspirations for their children (Marcus and Corsini, 1978; Rodman, 1969). Social class as well as ethnicity were found to account for significant differences in parent's behavioral expectations of children (Winetsky, 1978).

There is also some evidence to support the contention that lower socioeconomic level is related to higher incidence of adolescent parenting (Russ-Eft, Sprenger, and Beever, 1979). This supports the idea that teens seem to expect too little, too late from their newborn infants (Epstein, 1979). The mother's age can therefore influence the developing relationship.

The mother's educational level, marital status and the size of the family are other demographic factors that may have an effect on expectations. A relationship between these variables and the mother's expectations has not however been indicated in the literature review.

Summary

An understanding of variables that relate to maternal expectations could provide important information in determining their effects on the mother/child relationship and subsequently the child's development. The relationship between maternal expectations and the mother's age,

the mother's perception of her child's development, the birth order and the sex of the child, the type of relationship (abusive or nonabusive), and demographic data would provide the necessary information to predict maternal expectations. This information could further support research dealing with the mother/child relationship in order to allow for more effective intervention and support of that relationship development.

CHAPTER III

METHOD AND PROCEDURE

Introduction

This study examines the relationship between maternal expectations and the type of relationship (abusive or nonabusive), the age of the mother, and the mother's perception of her child's development, the birth order and sex of the child and demographic variables. The establishment of this relationship would establish the predictability of maternal expectations. In practice the information could be used in further research regarding the development of assessment techniques and defining intervention strategies to support the mother/child relationship.

Population

The population includes those mothers with children between 14 and 44 months of age who are receiving services from social agencies located within a greater metropolitan area. These services would include child-care services, family support services, and mental health services, all of which include parent education programs dealing with health care, nutrition, parenting skills, and child development. The population includes those mother/child relationships that are classified as abusive or nonabusive.

Subjects

The non-random sample included 68 mothers and their children who currently are living within a selected metropolitan city or in a selected small Oklahoma city. The approximate population of the areas (Bureau of the Census, 1982) is 360,919. The majority of ethnic groups represented are White, Black, Spanish-American, and American Indians. Sample size was determined using tables for a random model for regression analysis (Parke, Colin and Dudycha, 1974).

Both abusive and nonabusive mother's were included in this study. The subjects were recruited through existing programs and selected upon volunteering to participate in the study. This therefore limits the generalization of the results to a population having the characteristics represented in the sample.

Information regarding the health status of the child was reported by the mother in order to control for any confounding effects. Children with a birth weight of less than 5 lbs who had experienced any illness or accident that interfered with normal development were not included in this study. Other variables that may also have an effect on the results include ethnicity, marital status of the mother, educational level of the mother, age of the child and family size. These variables have been included to determine their relationship to maternal expectations in an effort to account for their effects.

Sixty-eight mothers and their children were included in the study. Sample size was determined using tables for the Random Regression Model (Parke, Collin, and Dudycha, 1974). Age range for the mothers was 16-40 years and for the children was 14-44 months. Ethnic groups represented were White, Black, American Indian, Spanish American, and Chinese

American. Educational level of the mother ranged from 9 to 18 years with monthly household income ranging from \$84 to \$5000. A summary of the demographic data is included in Table I and Table II.

Instrumentation

Standardized instruments to measure the variables of interest include the Denver Developmental Screening Test, and the Prescreening Developmental Questionnaire (Frankenburg, 1971a). The instruments were chosen due to their established reliability and validity. The ease of their administration and their widespread use within social services were also important considerations. Other pertinent data was supplied by the mother's responses on an information sheet that has been devised for use in this study. These data include the mother's age, marital status, and ethnic group, educational level as well as the child's birth order, sex, chronological age, and health status at birth.

The Denver Developmental Screening Test is widely used in the assessment of development in young children from birth to age six. The original norm group consisted of 1,036 children selected from the Denver population and reflected the distribution of ethnic and occupational characteristics for that area. Test-retest reliability was established with a 95.8 percent accuracy agreement over a one week interval of administration by the same examiner. A 90 percent average of agreement among different examiners was also reported. Validity was established by a high correlation (0.97) with the Revised Yale Developmental Schedule which assesses development using items selected from the Gesell, Merrill-Palmer, Stanford-Binet, and Hetzer-Wolf scales. The information is gathered by a trained examiner through observation and parent reports in each of four different areas of

TABLE I
MEAN, STANDARD DEVIATION, AND RANGE FOR INDEPENDENT VARIABLES

Variable	Mean	SD	Minimum	Maximum
Birth Order of Child	1.74	.87	1	5
Maternal Age	27.32	4.99	16	40
Monthly Income	1200	1011.86	84	5000
Family Size	3.8	1.12	2	8
Mother's Education	13.62	2.39	9	18
Child's Age	28.54	7.96	14	44
Mother's Perception Scores	-2.14	1.95	-8	3

TABLE II

SUMMARY OF NUMBERS AND PERCENTAGES FOR CATEGORICAL
INDEPENDENT VARIABLES

Variable	n	Percentage
Ethnicity		
White	45	67%
Black	7	10%
American Indian	14	21%
Spanish American	1	1%
Chinese American	1	1%
Sex of Child		
Male	37	54%
Female	31	46%
Relationship		
Abusive	14	21%
Nonabusive	54	79%
Marital Status		
Married	54	79%
Nonmarried	14	21%

development personal-social, language, fine motor, and gross motor.

The Pre-Screening Developmental Questionnaire is based on the Denver Developmental Screening Test¹ (Frankenburg, 1971b) and is used as a pre-screening for children under the age of six. It uses parent reporting to gain information regarding the child's development. Items were selected from the Denver Developmental Screening Test and modified for ease in parent reporting. The original norm group consisted of 549 parents selected from various health clinics, day care centers, and physicians offices representative of the Denver area. The revised questionnaire was administered to 1,155 parents representing a heterogeneous group but was comprised primarily of middle class families. The validity of this instrument was based on comparison with the Denver Developmental Screening Instrument with 80 percent accuracy in identification of abnormal development. The reliability likewise rests on the Denver Developmental Screening Test from which the items were taken.

In order to use the Prescreening Developmental Questionnaire for purposes of this study, it was necessary to make certain revisions. For measuring the mother's perceptions of her child's development, the norm references were deleted from the questionnaire in order not to bias her view. It was extended to twenty items to include developmental tasks beyond what would be expected for a child of a particular age. For measuring maternal expectations, the words "average child was substituted for "young baby". The mother recorded the age of her child in the blank. The validity of the revised instruments is supported from the original research in which twenty items were included. Since norm references are given for "average" age of items passed revisions for the

expectancy form could be made based upon established normative data. Scoring for the revised Prescreening Developmental Questionnaire for mother's expectations was the total number of accurate responses. Scores obtained for the mother's perception was the discrepancy between the mother's report and the actual measure of the child's development on the Denver test.

Test-retest reliability was established for both of the revised instruments. Thirty mothers were asked to complete the two revised Prescreening Developmental Questionnaires in order to establish reliability of the instruments. Revised questionnaires were given twice with a one week interval between administrations. Mothers were white, middle class with an average age of 23 and average educational level of 14 years. Ages of their children ranged from 16 to 36 months. Table III indicates the range and mean scores for each test and subject characteristic. Test-retest reliability was calculated using the Pearson r method resulting in a reliability coefficient of .79.

Data Collection

The information was gathered in a two-stage process. First, the mother was given a data sheet that included information regarding the mother's age, marital status, ethnic group, educational level as well as the child's age, birth order, sex, and health status at birth. This information sheet was completed along with the Revised Prescreening Developmental Questionnaire for Expectations at which time arrangements were made to administer the Denver Developmental Screening Test and the completion of the Revised Prescreening Developmental Questionnaire for

TABLE III

RANGES AND MEAN SCORES ON REVISED QUESTIONNAIRES AND DEMOGRAPHIC
VARIABLES FOR TEST-RETEST RELIABILITY

Variable	Range	Mean
Mother's Expectation		
First Administration	8-20	15
Second Administration	8-20	15
Mother's Perception		
First Administration	8-20	16
Second Administration	11-20	16
Child's Age	16-36 months	22 months
Mother's Age	20-34 years	23 years
Educational Level of Mother	12-18 years	14 years

Perceptions. The two forms of the Prescreening Developmental Questionnaire were alternately administered to subjects to account for any possible practice effects.

Examiners administering the tests were required to have a Master's Degree in a health-related field plus one year of experience in the assessment of young children. Examiners also were experienced in the use of these instruments and in general testing procedure.

The time period between the completion of each revised Prescreening Developmental Questionnaire was approximately one week. The mother completed both the Revised Prescreening Developmental Questionnaires prior to administration of the Denver Developmental Screening Test. The examiner did not have knowledge of the parent's response prior to the developmental test being administered.

All results of the testing were discussed with the mother and appropriate referrals made when necessary. Informed consent releases were provided and maintenance of confidentiality was ensured.

Data Analysis

Multiple regression and simple regression analyses were used for the collected data. The multiple regression analysis allowed for the inclusion of variables, such as mother's marital status, ethnic group, educational level and income in an attempt to statistically control for the effects of those variables on the maternal expectations in order to examine more closely the identified variables of interest. These variables of interest included the mother's age, the type of relationship (abusive or nonabusive), the accuracy of mother's perception of her child's development, the birth order and sex of the child.

Other variables such as health status and birth weight of the child were controlled in the selection process.

The use of multiple regression analysis provides for the establishment of the relationships between identified independent variables and the dependent variable maternal expectations. This further indicates those variables which are the best predictors of maternal expectations.

Multiple regression also allows for inclusion of variables which can only be classified into two or three categories, but which may be related to the mother's expectations, such as type of relationship, ethnicity, sex of child, and marital status. While the use of dummy coding limits the interpretation of the results, it can provide information that might be useful in further research relating to those variables.

Hypotheses

The purpose of the study was to examine the relationship between maternal expectations of child development and the mother's age, the type of relationship (abusive or nonabusive), the accuracy of the mother's perception of her own child's development, the birth order and the sex of the child, mother's educational level, marital status, monthly income, family size and ethnicity. The general null hypothesis as stated in the problem statement in Chapter I is specifically stated for each variable as follows:

1. There is no relationship between maternal expectations and the mother's age.
2. There is no relationship between maternal expectations and mother's perception of her own child's development.

3. There is no relationship between maternal expectations and the type of relationship (abusive or nonabusive).
4. There is no relationship between maternal expectation and the child's birth order.
5. There is no relationship between maternal expectation and the child's sex.
6. There is no relationship between maternal expectations and marital status.
7. There is no relationship between maternal expectation and ethnic groupings.
8. There is no relationship between maternal expectation and family size.
9. There is no relationship between maternal expectation and educational level.
10. There is no relationship between maternal expectation and income level.

Summary

The determination of the strength of the relationship between variables would establish the predictability of maternal expectations. This could provide information for further research needed for the development of assessment techniques and effective intervention planning to support the mother/child relationship.

CHAPTER IV

RESULTS

Introduction

Due to the exploratory nature of the study, several steps were taken in the data analysis. The General Linear Model procedure was utilized for the multiple regression analysis followed by R^2 and stepwise procedures (Helwig and Council, 1979).

A general linear model indicated that the best predictor was the maternal perception score. Table IV gives the analysis of variance table for the general linear model. The results of the data analysis indicate that the null hypothesis be rejected for hypothesis 2 and the null hypotheses for 1,3,4,5,6,7,8,9,10 should not be rejected.

R^2 was used to evaluate each of the combinations of independent variables with the dependent variable of maternal expectation. This provided this information to examine the increasing values of R^2 with all (mother's perception, type of relationship, mother's age, child's birth order and sex, mother's educational level, marital status, family size, ethnicity) variables in the model, $R^2 = .383$, which is the total variance accounted for by all the variables. Table V includes the multiple R^2 for each one of the variables added to the model.

Stepwise procedure was also used to evaluate the addition of variables into the model. It further served to find the "best" model from all possible combinations. Significant variables were found in the

TABLE IV

ANALYSIS OF VARIANCE SUMMARY TABLE

Source	DF	SS	MS	F
Model	10	281.225	28.122	3.55*
Error	57	451.657	7.923	
Corrected Total	67	732.882		
		R-Square		
		0.383		

* $P < .001$.

TABLE V
R² FOR EACH OF THE INDEPENDENT VARIABLES

Variables	R ²
Perception Score	.159
Marital Status	.108
Sex of the Child	.062
Family Size	.055
Maternal Age	.051
Education	.051
Ethnicity	.030
Child's Age	.017
Birth Order	.012
Relationship	.000

best two variable model. These included the mother's perception score $P < .0001$ and marital status $P < .0011$. No other variables met the required .05 level of significance for entry into the model. Presented in Table VI is the summary table for the best two variable model found. The squared multiple correlation obtained was .287 indicating that the two variables accounted for approximately 29 percent of the criterion variance. The maternal perception variable accounts for approximately 15 percent and was the first variable to be entered in the equation. Marital status was the next variable entered and contributed another 13 percent. The third variable to enter was birth order which contributed approximately 3 percent but the .10 significance level attained exceeded the set level of .05 and it was dropped from the model. Additional variables entered into the model increased the significance level beyond .05 for all variables except the maternal perception score. The best predictors identified utilizing the multiple regression analyses are clearly the maternal perception score followed by marital status.

TABLE VI
 MULTIPLE REGRESSION ANALYSIS FOR ALL VARIABLES
 $R^2 = .379$

Source	DF	SS	MS	F
Regression	2	210.816	105.408	113.12*
Error	65	522.066	8.031	
Total	67	732.882		
Intercept	18.366	B Value	Std. Error	F
Mother's Perception		0.714	0.17	16.36*
Marital Status		2.778	0.81	11.70*

* $P < .001$.

CHAPTER V

SUMMARY

The purpose of this study is to identify relationships between maternal expectations and a combination of other variables which have been previously reported singularly as important. The analysis of the data provided evidence to determine relationships between the criterion variable of maternal expectations and a combination independent variables of mother's age, mother's perception of her child's development, type of relationship (abusive or nonabusive), child's birth order and sex. Other demographic variables such as ethnicity, marital status, educational level, family size, and monthly income were included to determine possible effects upon expectations. Since no experimental manipulation occurred, causality can not be inferred from this data analysis.

From the multiple regression analysis of the data it is clear that the best predictor of maternal expectations is the mother's perception score which measures the accuracy of the mother's report of her child's development compared to an actual measure of the child's development. The evidence supports the literature (Osofsky, 1979) regarding the relationship of the mother's ability to perceive her child's development accurately and her expectations of age appropriate child developmental levels. The strong relationship may be affected by the use of two instruments that were revised from the same Pre-screening Developmental Questionnaire. The strong relationship supports the use of such parent

reporting in combination with an actual measure of the child's development to provide information regarding the level of expectations. The significance of the variable leads to the rejection of the null hypothesis as stated in the second hypothesis statement. The direction of the relationship further substantiates the literature. As the accuracy of the mother's perceptions increases, they tend to be more accurate in their generalized assessment of normal child development.

Non-significant results were reported for the relationship between birth order of the child and expectations. While the results of this study indicate that birth order may not be the best predictor for maternal expectations, further research would be necessary to support the relationship as reported in the literature (Forer, 1976). The results failed to reach the significance level of .05, therefore the null hypothesis as stated in the fourth hypothesis statement is not rejected.

The type of relationship was not found to be a significant predictor of maternal expectations which is inconsistent with the literature that was reviewed (Ainsworth and Bell, 1973). It is possible that the inclusion of the type of relationship as a categorical variable is too broad for purposes of establishing differences in expectation level. Another possibility is that abusive families are also targeted for more intensive parenting education programs. It is suggested that further research might compare measures of expectation between groups to more accurately assess what is reported in the literature. Another possible reason for nonsignificant results is that there are other contributing factors to an abusive relationship that better differentiate them from normal groups such as personality traits and situational variables. Expectation may not be as important as those other factors in differ-

entiating type of relationship. Due to the significance level exceeding the .05 level the null hypothesis as stated in the third hypothesis is not rejected.

Mother's age and sex of the child also were found to be non-significant predictors. The results in this particular study therefore do not support the commonly held assumptions about the relationship between maternal expectation and mother's age (Epstein, 1979) or sex of the child (Rothblat, 1966). The 1st and 5th hypotheses are therefore not rejected.

One of the demographic variables was found to be significant. Marital status was found to be the second best predictor of mother's expectations. Evidence to support the relationship between maternal expectation and marital status is not reported in the literature. The interpretation of the significance is therefore limited to a statement of the relationship. It is suggested that further research is necessary to investigate the nature of the relationship between maternal expectation and marital status.

No other demographic variables including ethnicity, educational level, family size, income level, or child's age were found to be significant.

The multiple regression analysis indicated that .38 of the total variance was accounted for by the independent variables (mother's age, mother's perception, type of relationship, child's birth order and sex) and demographic variables (educational level of the mother, age of the child, marital status, monthly income, and ethnic group). The remaining 62% of the variance is related to other factors that were not included in this study. Part of this variance can be attributed to error and possible imprecision of the instruments to adequately measure variables

of interest. The other possible variables might include personality traits and attitudes of the mothers. Future research is needed to determine what other variables may be related to the remaining variance.

Recommendations

Future research could establish other relationships that could account for additional variance in mother's expectations. It is suggested that personality variables and attitudes of the mothers could be additional areas of study. Additional studies could also examine more closely those relationships that were established in this study. Since marital status has not been indicated in the literature further exploration is needed. It is also suggested that a more precise measure of mother's expectations could be of practical value both in research and application. This study has taken a step in establishing what variables are related to mother's expectation. It is hoped that this information provides some basis for further investigation in this area.

SELECTED BIBLIOGRAPHY

- Ainsworth, M. D. and Bell, S. M., "Mother/Infant Interaction and the Development of Competence." The Growth of Competence. Eds. Kevin Connolly and Jerome Bruner. London: Academic Press, 1973, pp. 97-118.
- Baenen, Nancy R. "Perceptions of Parenthood and Infant Development: A Comparison of the Views of High School Students, College Students and Expectant Parents." (Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California, April 8-12, 1979).
- Baumrind, Diana and Black, A. E., "Socialization practices associated with dimensions of competence in preschool boys and girls." Child Development, 1967, 38, 291-327.
- Bayley, Nancy. "Individual Patterns of Development." The Competent Infant. Eds. Joseph Stone, Henrietta Smith and Lois Murphy. New York: Basic Books, Inc., 1973, pp. 45-50.
- Beckwith, Leila. "Prediction of Emotional and Social Behavior." Ed. Joy D. Osofsky. New York: John Wiley and Sons, Inc., 1979, pp. 671-706.
- Bell, Richard Q. "A Reinterpretation of the Direction of Effects in Studies of Socialization." Psychological Review, 1968, 75, pp. 81-95.
- Bell, R. Q. "Contributions of Human Infants to Caregiving and Social Interaction." The Effect of the Infant on Its Caregiver. Eds. Michael Lewis and Leonard A. Rosenblum. New York: 1974, pp. 1-19.
- Brazelton, T. Berry, Koslowski, Barbara, and Main, Mary. "The Origins of Reciprocity." The Effect of the Infant on the Caregiver. Eds. Michael Lewis and Leonard A. Rosenblum. New York: John Wiley and Sons, Inc., 1974, pp. 49-78.
- Burgess, Robert L. and Conger, Rand D., "Family Interaction in Abusive, Neglectful, and Normal Families." Child Development, 1978, 49, pp. 1163-1173.
- Carey, W. B. "Measurement of Infant Temperament in Pediatric Practice." Individual Differences in Children. Ed. J. C. Westman. New York: John Wiley and Sons, Inc., 1973.

- Doll, Edgar. The Measurement of Social Competence. Minneapolis: Educational Test Bureau, Educational Publisher, Inc., 1953.
- Edwards, Allen. Multiple Regression and the Analysis of Variance and Covariance. San Francisco: W. H. Freeman and Company, 1979.
- Epstein, Ann S. "Pregnant Teenager's Knowledge of Infant Development." (Paper presented at the Biennial Meeting of the Society for Research in Child Development, San Francisco, California, March 15-18, 1979).
- Erikson, Erik. Childhood and Society. New York: Norton, 1963.
- Escalona, Sybille K. "Overview of Hypotheses and Inferences." The Competent Infant. Eds. Joseph Stone, Henrietta Smith, and Lois Murphy. New York: Basic Books, Inc., 1973, pp. 51-63.
- Field, Tiffany. "The Three Rs of Infant-Adult Interactions: Rhythms, Repertoires and Responsitivity." Journal of Pediatric Psychology, 1978, 3, 131-136.
- Forer, Lucille H. Birth Order and Life Roles. Springfield: Charles C. Thomas, Publisher, 1969.
- Forer, Lucille H. The Birth Order Factor. New York: David McKay Company, Inc., 1976.
- Frankenburg, William K. M. D., Van Doorninck, William J. Ph.D., Liddell, Theresa N. B. A. Dick, Nathan P. M. S., "The Denver Prescreening Developmental Questionnaire." Pediatrics, 1976, 57, pp. 744-753.
- Frankenburg, William K. "The Validity of the Denver Developmental Screening Test." Child Development, 1971a, 42, 475-476.
- Frankenburg, William K. "The Reliability and stability of the Denver Developmental Screening Test." Child Development, 1971b, 42, pp. 1315.
- Gesell, Arnold, and Ames, Louise Bates. "Early Evidences of Individuality in the Human Infant." The Competent Infant. Eds. Joseph Stone, Henrietta Smite, and Lois Murphy. New York: Basic Books, Inc., 1973, pp. 71-73.
- Golden, Mark, and Birns, Beverly. "Social Class and Cognitive Development in Infancy." The Competent Infant. Eds. Joseph Stone, Henrietta Smith, and Lois Murphy. New York: Basic Books, Inc., 1973, pp. 937-942.
- Gay, L. R. Educational Research. Columbus, Ohio: Charles Merrill Publishing Co., 1976.
- Gray, Jane D., Cutler, Christy A., Dean, Janet G., Kempe, C. Henry. Journal of Social Issues, 1979, 35, pp. 127-139.

- Hardy, Janet B. MDCM, Welcher, Doris W., Ph.D., Stanley, Jay Ph.D. Dallas, Joseph R. B.A., "Long-Range Outcome of Adolescent Pregnancy. Clinical Obstetrics and Gynecology, 1978, 21, pp. 1215-1232.
- Helwig, Jane T. and Council, Kathryn A. SAS Users Guide, SAS Institute, Raleigh, North Carolina, 1979.
- Helfer, Ray E. and Kempe, Henry C. The Battered Child. Chicago: University of Chicago Press, 1974.
- Huntington, Dorothy S. "Programs for Infant Mothering to Develop a Sense of Self and Competence in Infancy." (Paper presented at the Biennial meeting of the Society for Research in Child Development, Minneapolis, Minnesota, April 3, 1971).
- Kagan, Jerome. The Growth of the Child. New York: W. W. Norton and Company, Inc., 1976.
- Kempe, C. Henry, and Helfer, Ray E. Helping the Battered Child and His Family. Philadelphia: J. B. Lippincott Company, 1972.
- Kempe, C. Henry, Silver, Henry K., O'Brien, Donough. Current Pediatric Diagnosis and Treatment. Los Altos, California: Lange Medical Publications, 1978.
- Kennell, John H. and Klaus, Marshall. Maternal-Infant Bonding. St. Louis: C. V. Mosby and Company, 1976.
- Klein, Luella M. D. "Antecedents of Teenage Pregnancy." Clinical Obstetrics and Gynecology, 1978, 21, pp. 1191-1197.
- Knobloch, Hilda and Pasamanick, Benjamin. Gesell and Amatruda's Developmental Diagnosis. Hagerstown, Maryland: Harper and Rowe, 1974.
- Knobloch, Hilda, M. D., Frances Stevens, M. S. Anthony Malone, M. D. Patricia Ellison, M. D. and Herman Risenberg, M. D. "The Validity of Parental Reporting of Infant Development." Pediatrics, 1979, 63, pp. 872-878.
- Koch, Helen. "Some Personality Correlates of Sex, Sibling Position, and Sex of Siblings Among 5-6 Year Olds." Genetic Psychology Monographs, 1955, 52, 3-50.
- Korner, Anneliese F. "Conceptual Issues in Infancy Research." Handbook of Infant Development. New York: John Wiley and Sons, Inc., 1979. pp. 769-785.
- Korner, Anneliese F. "Some Hypotheses Regarding the Significance of Individual Differences at Birth for Later Development." The Competent Infant. Eds. Joseph Stone, Henrietta Smith, Lois Murphy. New York: Basic Books, 1973, p. 77-82.

- Korner, Anneliese F. "The Effect of the Infant's State, Level of Arousal, Sex and Ontogenetic Stage on the Caregiver." The Effect of the Infant on the Caregiver. Eds. Michael Lewis and Leonard A. Rosenblum. New York: John Wiley and Sons, Inc., 1974, pp. 105-121.
- Korner, Anneliese F. and Thoman, Evelyn B. "Visual Alertness in Neonates as Evoked by Maternal Care." The Competent Infant. Eds. Joseph Stone, Henrietta Smith, and Lois Murphy. New York: Basic Books, 1973, pp. 1057-1065.
- Lewis, Michael and Goldberg, Susan. "Perceptual-Cognitive Development in Infancy: A Generalized Expectence Model as a Function of Mother/Infant Interaction." The Competent Infant. Eds. Joseph Stone, Henrietta Smith, Lois Murphy. New York: Basic Books, 1973, pp. 960-967.
- Marcus, Terri L. and Corsini, David A. "Parental Expectations of Pre-school Children as Related to Child Gender and Socioeconomic Status." Child Development, 1978, 49, pp. 243-246.
- Martin, Harold, P. M. D. The Abused Child: A Multidisciplinary Approach to Developmental Issues and Treatment. Cambridge, Mass: Ballinger Publishing Company, 1976.
- Moss, Howard. "Sex, Age and State as Determinants of Mother/Infant Interaction." The Competent Infant. Eds. Joseph Stone, Henrietta Smith, and Lois Murphy. New York: Basic Books, Inc., 1973, pp. 1237-1242.
- Murphy, Lois. "Development in the First Year of Life: Ego and Drive Development in Relation to the Mother-Infant Tie." The Competent Infant. Eds. Joseph Stone, Henrietta Smith, and Lois Murphy. New York: Basic Books, Inc., 1973, pp. 468-483.
- Murphy, Lois. "Basic Determinants of Coping Style." The Competent Infant. Eds. Joseph Stone, Henrietta Smith, and Lois Murphy. New York: Basic Books, Inc., 1973, pp. 76-77.
- Newman, Lawrence S. and Ramey, Craig T. "Maternal Attitudes and Child Development in High Risk Families." (Report to the National Institute of Child Health and Human Development, Bethesda, Md. 1979).
- Ollendick, Duane G., and La Berteaux, Paul J., and Horne, Arthur M. "Relationship Among Maternal Attitudes, Perceived Family Environment, Preschooler Behavior." Perceptual and Motor Skills, 1978, 46, pp. 1092-1094.
- Osofsky, Joy D. and Osofsky, Howard J. "Teenage Pregnancy: Psychosocial Considerations." Clinical Obstetrics and Gynecology, 1978, 21, pp. 1161-1173.
- Osofsky, Joy D. and Connors, Karen. "Mother-Infant Interaction: An Integrative View of a Complex System." Handbook of Infant Development. New York: John Wiley and Sons, Inc., 1979, pp. 519-548.

- Park, Colin and Dudycha, Arthur L. "A Cross-Validated Approach to Sample Size in Determination for Regression Models", Journal of the American Statistical Association, March 1974, 69, pp. 214-218.
- Parke, Ross D. and Collmer, Candace W. "Child Abuse: An Interdisciplinary Analysis." Review of Child Development Research, Ed. Mavis Hetherington. Chicago: University of Chicago Press, 1975, pp. 509-590.
- Rheingold, Harriet L. "The Effect of Environmental Stimulation Upon Social and Exploratory Behavior in the Human Infant." The Competent Infant. Eds. Joseph Stone, Henrietta Smith, and Lois Murphy. New York: Basic Books, Inc., 1973, pp. 789-794.
- Roberts, Maria. "Reciprocal Nature of Parent-Infant Interaction: Implications for Child Maltreatment." Child Welfare, 1979, 8, pp. 383-392.
- Rodman, Hyman, and Voydanoff, Patricia. "Social Class and Parent's Aspirations for Their Children." Detroit, Michigan: Merrill Palmer Institute, Nov. 1969.
- Rothblat, M. "Birth Order and Mother-Child Interaction in an Achievement Situation." Journal of Personality and Social Psychology, 1971, 17, pp. 113-20.
- Rothblat, M. K. and Maccoby, E. E. "Parents Differential Reactions to Sons and Daughters." Journal of Personality and Social Psychology, 1966, 12.
- Russ-Eft, Darlene, Sprengar, Marlene, Beever, Anne. "Antecedents of Adolescent Parenthood and Consequences at age 30." Family Coordinator, 1979.
- Rutter, Michael. "Maternal Deprivation, 1972-1978: New Findings, New Concepts, New Approaches." Child Development, 1979, 50, pp. 283-305.
- Ryan, George M. M. D. and Schneider, Jack M. M.D. "Teenage Obstetric Complications." Clinical Obstetrics and Gynecology, 1978, 21, pp. 1191-1197.
- Schaeffer, Earl S. "Perspectives on the Family." (Presentation at the Parenting Conference at the Virginia Commonwealth University, April 25, 1979).
- Schaeffer, H. R. "Early Interactive Development." Studies in Mother-Infant Interactions. Ed. H. R. Schaeffer. London: Academic Press, 1977, pp. 3-16.
- Seligman, Martin E. P. Helplessness, On Depression, Development and Death. San Francisco: W. H. Freeman and Company, 1975.

- Serafica, Felicissima C. "The Development of Attachment Behavior: An Organismic-Developmental Perspective." Human Development, 1978, 21, pp. 119-140.
- Spinetta, John J. "Parental Personality Factors in Child Abuse." Journal of Consulting and Clinical Psychology, 1978, 46, pp. 1409-1414.
- Spinetta, John J. and Rigler, David. "The Child Abusing Parent: A Psychological Review." Psychological Bulletin, 1972, 77, pp. 296-304.
- Sroufe, Alan L. "Socioemotional Development." Handbook of Infant Development. Ed. Joy D. Osofsky. New York: John Wiley and Sons, Inc., 1979, pp. 462-516.
- Stern, George G., Cladwell, Bettye M., Hersher, Leonard, Lipton, Earle, and Richmond, Julius. "A Factor Analytic Study of the Mother/Infant Dyad." The Competent Infant. Eds. Joseph Stone, Henrietta Smith, and Lois Murphy. New York: Basic Books, Inc., 1973., pp. 1097-1110.
- Thomas, A. Chess, S. and Birch H. Temperment and Behavior Disorders in Children. New York: University Press, 1968.
- Toman, Walter. Family Constellation. New York: Springer Publishing Company, 1976.
- Tulkin, Steven R. and Kagan, Jerome. "Mother-Child Interaction in the First Year of Life." The Competent Infant. Eds. Joseph Stone, Henrietta Smith, and Lois Murphy. New York: Basic Books, Inc., 1973, pp. 949-954.
- Wachs, Theodore D., Uzigiris, Ina C. and McV Hunt, J. "Cognitive Development in Infants of Different Age Levels and From Different Environmental Backgrounds." The Competent Infant. Eds. Joseph Stone, Henrietta Smith, and Lois Murphy. New York: Basic Books, Inc., 1973, p. 943-948.
- Wadsworth, Barry. Piaget's Theory of Cognitive Development. New York: Longman Inc., 1971.
- Whitbourne, Susan Krauss and Weinstock, Comilda S. Adult Development. New York: Holt, Rinehart and Winston, 1979.
- White, Burton L. Experience and Environment, Major Influences on the Development of the Young Child. Vol. II. Englewood Cliffs, N.J.: Prentice Hall, 1976.
- White, Burton L., Kaban, Barbara T., Attanucci, Jane S. The Origins of Human Competence. Lexington, Mass.: D. C. Heath and Company, 1979.
- Winetsky, Carol S. "Comparisons of Expectations of Parents and Teachers for Behavior of Preschool Children." Child Development, 1978, 49, pp. 1146-1154.

Wolf, Peter H. "Observations on New Born Infants." The Competent Infant. Eds. Joseph Stone, Henrietta Smith, and Lois Murphy, New York: Basic Books, Inc., 1973, pp. 257-268.

APPENDIX A

DEMOGRAPHIC INFORMATION SHEET

Dear Parent,

I am currently conducting research on what mothers expect of their children's development. Please fill out the information sheet and sign the permission form if you are interested in participating. You will then be given a parent questionnaire to fill out either at home or at the nursery. After your child is given a developmental test at the nursery, then you will be given the results and asked to respond to another parent questionnaire. This would require a total of approximately twenty minutes of time.

Your help in this study would be greatly appreciated and the confidential information will be compiled to provide a better understanding of children's development.

Sincerely,

Marilynn M. Jones, M.Ed.
Ph.D. Candidate, Oklahoma State University

CHILD'S NAME _____ BIRTHDATE _____ CHILD'S SEX: M F

BIRTH ORDER OF CHILD: 1 2 3 4 5 6 7 8

WEIGHT OF CHILD AT BIRTH _____ NUMBER OF CHILDREN IN FAMILY _____

Were there any complications with your child at birth that required their hospitalization after your release from the hospital? YES NO

Has your child experienced any severe illness or accident that has interfered with their development? YES NO

MOTHER'S AGE _____ ETHNIC GROUP: Black, White, American Indian, Spanish American, Other _____

Highest grade completed in school by mother:

1 2 3 4 5 6 7 8 9 10 11 12 College: 1 2 3 4 5 6

MARITAL STATUS: SINGLE, MARRIED, DIVORCED/SEPARATED

APPROXIMATE MONTHLY INCOME: \$400; \$500; \$600; \$700; \$800; \$900; over 900.

I volunteer to participate in a research project with the understanding that upon completion of the developmental testing I will receive information regarding the results. No names will appear on the data collected to ensure confidentiality.

SIGNED: _____ DATE: _____

APPENDIX B

REVISED DENVER PRESCREENING DEVELOPMENTAL
QUESTIONNAIRE FOR MOTHER'S PERCEPTIONS
(CHILD'S AGE 14-23 MONTHS)

Please read each question carefully before you answer. Circle the best answer for each question. Your child is not expected to be able to do everything the questions ask.

Yes-Child can do now or has done in the past.

No-Child cannot do now, has not done in the past or you are not sure that your child can do it.

Does your baby walk alone or holding on to furniture? Yes No

Without help, can your baby play "pat-a-cake" or wave "bye-bye"? Circle No if you need to help him by holding his hands. Yes No

Does your child say "da-da" when he wants or sees his father? Does your child say "ma-ma" when he wants or sees his mother? Circle Yes if your child says either. Yes No

Does your baby stand alone without having to hold on to something for about five seconds? Yes No

Does your baby stand alone without having to hold on to something for thirty seconds or more? Yes No

Without holding on to something or touching the floor, can your child bend over to pick up a toy or other object on the floor and stand up again? Yes No

Is your child able to indicate what he wants without crying or whining? He may do this by pointing, pulling or making pleasant sounds. Yes No

Is your child able to walk all the way across a large room without falling or wobbling from side to side? Yes No

When your baby picks up a small object such as a raisin, does he use only his thumb and index finger as in the picture below? Yes No



Answer no if your child only hands the ball to you, or if you have never tried this. If you roll a ball to your child will he roll or throw it back towards you? Yes No

Can your child hold a regular cup or glass by himself and drink from it without spilling. The cup should not have a spout. Yes No

When you are doing housework, does your child copy what you are doing? Yes No

Can your child put one block on top of another without the block falling? This applies to small blocks about 1 inch in size and not blocks more than 2 inches in size. Yes No

Can your child say at least three specific words, other than "da-da" and "ma-ma", which mean the same thing each time he uses them? Yes No

Can your child take five or more steps backwards without losing his balance? You may have seen him do this while pulling a toy. Yes No

Can your child take off clothes such as his pajamas (tops or bottoms) or his pants? Diapers, hats and socks do not count. Yes No

Can your child walk up steps by himself? Circle yes if he walks up in an upright position holding on to the wall or railing for support. Circle no if 1) he has to crawl up the stairs; 2) you do not let him climb stairs; 3) he has to hold on to a person or the next step. Yes No

Without your coaching, pointing- or helping, can your child point to at least one part of his body (hair, eyes, nose, mouth or any other) when asked? Answer yes if he knows this well enough that he will point when asked by a stranger. Yes No

Does your child feed himself with a spoon or fork without spilling much? Yes No

Does your child help pick up his toys or help carry the dishes when asked? Circle yes only if he completes either of these tasks. Yes No

APPENDIX C

REVISED DENVER PRESCREENING DEVELOPMENTAL
QUESTIONNAIRE FOR MOTHER'S PERCEPTIONS
(CHILD'S AGE 24-30 MONTHS)

Please read each question carefully before you answer. Circle the best answer for each question. Your child is not expected to be able to do everything the questions ask.

Yes-Child can do now or has done in the past.

No-Child cannot do now, has not done in the past or you are not sure that your child can do it.

Can your child hold a regular cup or glass by himself and drink from it without spilling. The cup should not have a spout. Yes No

When you are doing housework, does your child copy what you are doing? Yes No

Can your child put one block on top of another without the block falling? This applies to small blocks about 1 inch in size and not blocks more than 2 inches in size. Yes No

Can your child say at least three specific words, other than "da-da" and "ma-ma", which mean the same thing each time he uses them? Yes No

Can your child take five or more steps backwards without losing his balance? You may have seen him do this while pulling a toy. Yes No

Can your child take off clothes such as his pajamas (tops or bottoms) or his pants? Diapers, hats and socks do not count. Yes No

Can your child walk up steps by himself? Circle yes if he walks up in an upright position holding on to the wall or railing for support circle no if 1) he has to crawl up the stairs; 2) you do not let him climb stairs; 3) he has to hold on to a person or the next step. Yes No

Without your coaching, pointing or helping, can your child point to at least one part of his body (hair, eyes, nose, mouth or any other) when asked? Answer yes if he knows this well enough that he will point when asked by a stranger. Yes No

Does your child feed himself with a spoon or fork without spilling much? Yes No

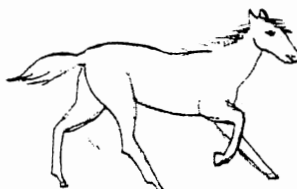
Does your child help pick up his toys or help carry the dishes when asked? Circle yes only if he completes either of these tasks. Yes No

Without moving his hand for him or showing him how to do it, give your child the pencil and see if he will scribble on a piece of paper. Circle no if the child bangs or mouths the pencil. Circle yes if he scribbles without help. Yes No

Can your child put four blocks on top of one another without the blocks falling? This applies to small blocks about 1 inch in size and not blocks more than 2 inches in size. Yes No

Can your child put two words together when he speaks, such as "want milk" and "play ball"? "Thank you" and "bye-bye" do not count. Yes No

Your child may know some of these pictures at home, but ask him to tell you what each of these is. Give no help.



Did he name two of them? Animal sounds do not count. Yes No

Can your child throw a ball overhand (not side arm or underhand) straight, towards your stomach or chest from a distance of 5 feet? Yes No

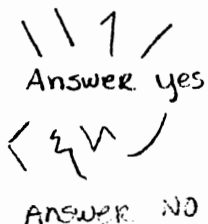
It is important that you follow directions carefully. Do not gesture (point or look) when giving your child the following directions. Give the questionnaire to your child and say:

"Put the paper on the floor." (Do not look or point down.)

"Put the paper on the chair." (Do not look at or touch the chair.)

"Give the paper to Mommy." (Do not put out your hand.) Did he follow all three directions? Yes No

Do not help or correct your child with this task. Draw a straight vertical line at least one inch long beside the one illustrated on the right. Say to your child, "Draw a line like I did." The child should not trace the line. Look at these examples when scoring your child's drawing.



Did your child draw a straight line beside yours? Yes No

Without letting your child take a running jump, ask him to jump over the questionnaire placed on the floor. Did he get both feet off the floor at once? Yes No

Can your child put on his own shoes? Yes No

APPENDIX D

REVISED DENVER PRESCREENING DEVELOPMENTAL
QUESTIONNAIRE FOR MOTHER'S PERCEPTIONS
(CHILD'S AGE 31-44 MONTHS)

Please read each question carefully before you answer. Circle the best answer for each question. Your child is not expected to be able to do everything the questions ask.

Yes-Child can do now or has done in the past.

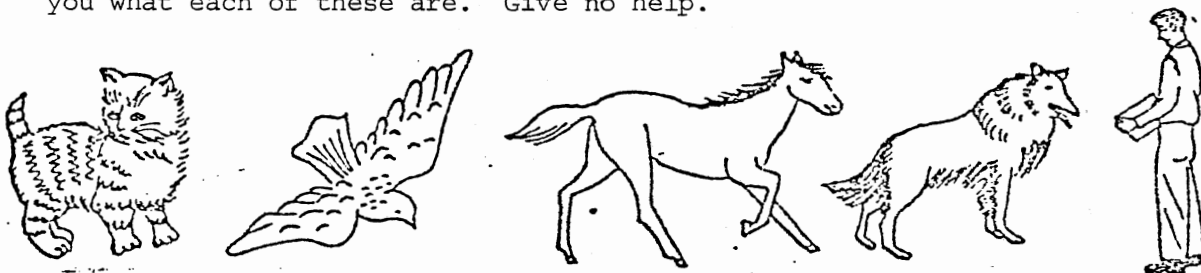
No-Child cannot do now, has not done in the past or you are not sure that your child can do it.

Without moving his hand for him or showing him how to do it, give your child the pencil and see if he will scribble on a piece of paper. Circle no if the child bangs or mouths the pencil. Circle yes if he scribbles without help. Yes No

Can your child put four blocks on top of one another without the blocks falling? This applies to small blocks about 1 inch in size and not blocks more than 2 inches in size. Yes No

Can your child put two words together when he speaks, such as "want milk" and "play ball"? "Thank you" and "bye-bye" do not count. Yes No

Your child may know some of these pictures at home, but ask him to tell you what each of these are. Give no help.



Did he name two of them? Animal sounds do not count. Yes No

Can your child throw a ball overhand (not side arm or underhand) straight, towards your stomach or chest from a distance of 5 feet? Yes No

It is important that you follow directions carefully. Do not gesture (point or look) when giving your child the following directions. Give the questionnaire to your child and say:

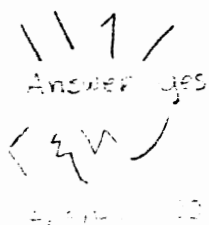
"Put the paper on the floor" (Do not look or point down).

"Put the paper on the chair" (Do not look at or touch the chair).

"Give the paper to mommy" (Do not put out your hand).

Did he follow all three directions? Yes No

Do not help or correct your child with this task. Draw a straight vertical line at least one inch long beside the one illustrated on the right. Say to your child, "Draw a line like I did." The child should not trace the line. Look at these examples when scoring your child's drawing.



 Answer Yes

Did your child draw a straight line beside yours? Yes No

Without letting your child take a running jump, ask him to jump over the questionnaire placed on the floor. Did he get both feet off the floor at once? Yes No

Can your child put on his own shoes? Yes No

Can your child pedal a tricycle at least ten feet? If your child has never had a chance to ride a tricycle his size, circle No-opp. Yes No

After eating, does your child wash and dry his hands well enough so you don't have to do them over? Circle No-Opp if you do not allow him to wash and dry his hands by himself. Yes No

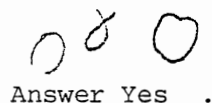
Does your child put an "s" at the end of his words when he is talking about more than one thing such as blocks, shoes or toys? Yes No

Without letting your child hold onto anything, have him balance on one foot for as long as he can. If necessary, encourage him by showing him how. GIVE HIM THREE CHANCES. Estimate seconds by counting slowly. Did your child balance 2 seconds or more? Yes No

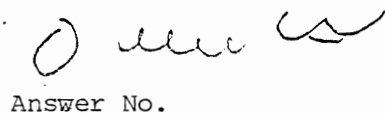
Without letting your child take a running jump, ask him to jump length-wise over this paper. Did he do this without landing on the paper? Yes No

Have your child draw this figure in the space below. DO NOT SAY "CIRCLE". Do not help or correct your child. Say to your child, "Draw a picture just like this one", and point to the picture on the right.

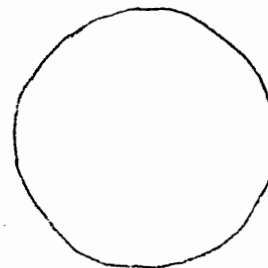
Look at these examples when scoring your child's drawing.



 Answer Yes .



 Answer No.



Did your child draw a circle? Yes No

Can your child put eight blocks on top of one another without the blocks falling? This applies to small blocks about 1 inch in size and not blocks more than 2 inches in size. Yes No

Does your child play hide-and-seek, cops-and-robbers or other games where he takes turns and follows rules? Yes No

Can your child put jeans, shirt, dress, or socks on without help except snapping, buttoning and belts. Yes No

Without your coaching or saying his name so he can repeat it, does your child say both his first and last name? Nicknames may be used in place of first name. Circle No if he only gives his first name or is not easily understood. Yes No

APPENDIX E

REVISED DENVER PRESCREENING DEVELOPMENTAL
QUESTIONNAIRE FOR MOTHER'S EXPECTATIONS
(CHILD'S AGE 14-23 MONTHS)

Please read each question carefully before you answer. Circle the best answer for each question. The questions are regarding what you think the average child that is your child's age would be able to do. The average child is not expected to be able to do everything the questions ask.

Does the average _____ baby walk alone or holding on to furniture?
Yes No

Without help, can the average _____ baby play "pat-a-cake" or wave "bye-bye"?
Yes No

Does the average _____ bay say "ma-ma" when he wants or sees his mother?
Yes No

Does the average _____ baby stand alone without having to hold on to something for about five seconds?
Yes No

Does the average _____ baby stand alone without having to hold on to something for about thirty seconds or more?
Yes No

Without holding on to something or touching the floor, can the average _____ child bend over to pick up a toy or other object on the floor and stand up again?
Yes No

Is the average _____ child able to indicate what he wants without crying or whining? He may do this by pointing, pulling or making pleasant sounds.
Yes No

Is the average _____ child able to walk all the way across a large room without falling or wobbling from side to side?
Yes No

When the average _____ baby picks up a small object such as a raisin, does he use only his thumb and index finger as in the picture below?
Yes No



Answer no if the average _____ child only hands the ball to you. If you roll a ball to the average _____ child will he roll or throw it back towards you?
Yes No

Can the average _____ child hold a regular cup or glass by himself and drink from it without spilling? The cup should not have a spout.
Yes No

When you are doing housework, would the average _____ copy what you are doing?
Yes No

Can the average _____ child put one block on top of another without the block falling? This applies to small blocks about 1 inch in size and not blocks more than 2 inches in size.
Yes No

Can the average _____ child say at least three specific words, other than "da-da" and "ma-ma", which mean the same thing each time he uses them? Yes No

Can the average _____ child take five or more steps backwards without losing balance? You may have seen him do this while pulling a toy. Yes No

Can the average _____ child take off clothes such as his pajamas (tops or bottoms) or his pants? Diapers, hats and socks do not count. Yes No

Can the average _____ child walk up steps by himself? Circle yes if he walks up in an upright position holding on to the wall or railing for support. Circle no if 1) he has to crawl up the stairs; 2) you do not let him climb stairs; 3) he has to hold on to a person or the next step. Yes No

Without coaching, pointing or helping, can the average _____ child point to at least one part of his body (hair, eyes, nose, mouth or any other) when asked? Answer yes if he knows this well enough that he will point when asked by a stranger. Yes No

Does the average _____ child feed himself with a spoon or fork without spilling much? Yes No

Does the average _____ child help pick up his toys or help carry the dishes when asked? Circle yes only if he completes either of these tasks. Yes No

APPENDIX F

REVISED DENVER PRESCREENING DEVELOPMENTAL
QUESTIONNAIRE FOR MOTHER'S EXPECTATIONS
(CHILD'S AGE 24-30 MONTHS)

Please read each question carefully before you answer. Circle the best answer for each question. The questions are regarding what you think the average child that is your child's age would be able to do. The average child is not expected to be able to do everything the questions ask.

Can the average _____ child hold a regular cup or glass by himself and drink from it without spilling? The cup should not have a spout.
Yes No

When you are doing housework, would the average _____ child copy what you are doing?
Yes No

Can the average _____ child put one block on top of another without the block falling? This applies to small blocks about 1 inch in size and not blocks more than 2 inches in size.
Yes No

Can the average _____ child say at least three specific words, other than "da-da" and "ma-ma", which mean the same thing each time he uses them?
Yes No

Can the average _____ child take five or more steps backwards without losing his balance? You may have seen him do this while pulling a toy.
Yes No

Can the average _____ child take off clothes such as his pajamas (tops or bottoms) or his pants? Diapers, hats and socks do not count.
Yes No

Can the average _____ child walk up steps by himself? Circle yes if he walks up in an upright position holding on to the wall or railing for support. Circle no if: 1) he has to crawl up the stairs; 2) you do not let him climb stairs; 3) he has to hold on to a person or the next step.
Yes No

Without your coaching, pointing or helping, can the average _____ child point to at least one part of his body (hair, eyes, nose, mouth or any other part) when asked? Answer yes if he knows this well enough that he will point when asked by a stranger.
Yes No

Does the average _____ child feed himself with a spoon or fork without spilling much?
Yes No

Does the average _____ child help pick up his toys or help carry the dishes when asked? Circle yes only if he completes either of these tasks.
Yes No

Without holding onto anything, can the average _____ child kick a small ball (like a tennis ball) in a forward direction? Pushing doesn't count.
Yes No

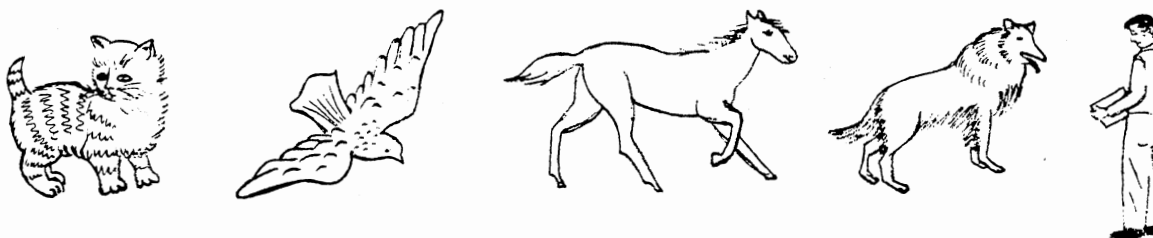
Without moving his hand for him or showing him how to do it, can the average _____ child scribble on a piece of paper with a pencil?
Yes No

Can the average _____ child put four blocks on top of one another without the blocks falling? This applies to small blocks about 1 inch in size and not blocks more than 2 inches in size. Yes No

Can the average _____ child put four blocks on top of one another? Yes No

Can the average _____ child put two words together when he speaks, such as, "want milk" and "play ball"? "Thank you" and "bye-bye" do not count. Yes No

Can the average _____ child name two of these pictures without help? Animal sounds do not count. Yes No



Can the average _____ child throw a ball overhand (not side arm or underhand) straight, towards your stomach or chest from a distance of 5 feet? Yes No

Can the average _____ child follow these directions without you pointing or looking?

"put the paper on the floor." (Do not look or point down.) Yes No

"put the paper on the chair." (Do not look at or touch the chair.)

"give the paper to Mommy." (Do not put out your hand.)

Can the average _____ child draw a straight line beside the one illustrated on the right? Yes No



Without letting the child take a running jump, can the average _____ child jump over the questionnaire placed on the floor with both feet off the floor at once? Yes No

Can the average _____ child put on his own shoes? Yes No

APPENDIX G

REVISED DENVER PRESCREENING DEVELOPMENTAL
QUESTIONNAIRE FOR MOTHER'S EXPECTATIONS
(CHILD'S AGE 31-44 MONTHS)

Please read each question carefully before you answer. Circle the best answer for each question. The questions are regarding what you think the average child that is your child's age would be able to do. The average child is not expected to be able to do everything the questions ask. Write the age of your child in months in the blank space.

Without moving his hand for him or showing him how to do it, can the average _____ child scribble on a piece of paper with a pencil?

Yes No

Can the average _____ child put four blocks on top of one another without the blocks falling? This applies to small blocks about one inch in size and not blocks more than two inches in size.

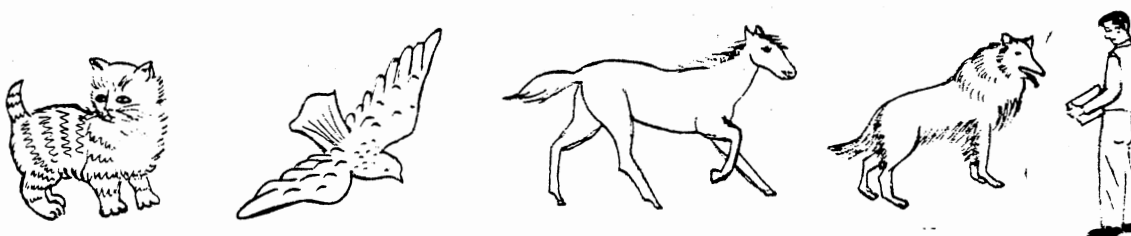
Yes No

Can the average _____ child put two words together when speaking such as "want milk" and "play ball"? (Thank you" and "Bye-bye" do not count.)

Yes No

Can the average _____ child name two of these pictures without help? Animal sounds do not count.

Yes No



Can the average _____ child throw a ball overhand (not side arm or underhand) straight, towards your stomach or chest from a distance of 5 feet?

Yes No

Can the average _____ child follow these directions without you pointing or looking?

Yes No

"Put the paper on the floor." (Do not point or look down.)

"Put the paper on the chair." (Do not look at or touch the chair.)

"Give the paper to Mommy." (Do not put out your hand.)

Can the average _____ child draw a straight line beside the one illustrated on the right?

Yes No



Without letting the child take a running jump, can the average _____ child jump over the questionnaire placed on the floor with both feet off the floor at once?

Yes No

Can the average _____ child put on his own shoes?

Yes No

Can the average _____ child pedal a tricycle at least ten feet?

Yes No

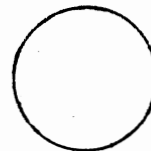
After eating, does the average _____ child wash and dry his hands well enough so that you don't have to do them over? Yes No

Can the average _____ child put an "s" at the end of his words when he is talking about more than one thing such as "blocks", "shoes", or toys"? Yes No

Does the average _____ child balance on one foot for 2 seconds or more without holding onto anything? Yes No

Without letting the child take a running jump, can the average _____ child jump lengthwise over this paper without landing on the paper? Yes No

Can the average _____ child draw a circle like the one illustrated at the right? Yes No



Can the average _____ child put eight blocks on top of one another without the blocks falling? (This applies to small blocks about 1 inch in size and not blocks more than 2 inches in size.) Yes No

Does the average _____ child play hide-and-seek, cops-and-robbers or other games where he takes turns and follows rules? Yes No

Can the average _____ child put jeans, shirt, dress, or socks on without help except snapping, buttoning, and belts? Yes No

Without your coaching or saying his name so he can repeat it, does the average _____ child say both his first and last name? Nicknames may be used in place of first name. (Circle no if he only gives his first name or is not easily understood.) Yes No

APPENDIX H

RAW DATA FOR SUBJECTS INCLUDED IN THE STUDY

RAW DATA FOR SUBJECTS INCLUDED IN THE STUDY

Subject	Mother's Expectation	Birth Order	Mother's Age	Ethnicity	Monthly Income	Family Size	Mother's Educational Level	Marital Status	Sex of Child	Type of Relationship	Child's Age	Mother's Perception
1	16	3	33	White	----	5	15	M	M	Nonabusive	40	2
2	15	1	32	Other	3000	4	16	F	F	Nonabusive	29	0
3	14	4	--	Black	----	8	14	M	F	Abusive	26	0
4	14	4	--	Black	----	8	14	M	F	Abusive	26	-1
5	13	1	31	White	----	4	16	M	M	Nonabusive	30	-2
6	15	1	22	White	600	4	12	M	M	Nonabusive	36	-2
7	15	2	22	White	600	4	12	M	M	Nonabusive	16	-4
8	18	2	26	White	800	4	12	M	F	Nonabusive	20	-2
9	18	2	30	White	1800	5	16	M	F	Nonabusive	42	-1
10	13	1	24	White	----	4	12	M	F	Nonabusive	31	-1
11	14	1	32	White	5000	4	16	M	M	Nonabusive	29	-1
12	18	1	18	White	750	3	9	M	M	Nonabusive	18	-3
13	16	2	23	Black	900	4	12	M	F	Nonabusive	36	-3
14	15	2	21	Black	----	3	12	S	F	Abusive	18	-1
15	18	1	16	White	84	2	9	S	M	Nonabusive	20	-4
16	15	1	36	White	2500	3	18	M	M	Nonabusive	25	-3
17	19	1	32	White	1300	3	16	M	M	Nonabusive	33	-5
18	7	2	33	White	2200	4	18	M	M	Nonabusive	32	-6
19	16	2	26	White	400	4	15	D	M	Abusive	36	0
20	16	1	24	White	900	3	13	M	F	Nonabusive	17	-3
21	17	2	31	White	500	3	12	D	F	Abusive	21	-2
22	17	3	32	White	500	5	12	M	F	Nonabusive	16	3
23	8	1	25	White	500	3	12	M	F	Nonabusive	30	-6
24	9	2	34	Indian	----	4	14	M	M	Nonabusive	34	-1
25	11	3	31	White	----	4	12	D	M	Abusive	42	-4
26	15	3	29	White	----	4	13	M	M	Nonabusive	26	-2
27	19	2	24	Black	84	2	12	S	F	Abusive	22	-3
28	18	1	17	Black	84	2	11	S	F	Abusive	24	-2
29	7	2	26	White	700	4	13	M	M	Abusive	20	-8
30	16	2	25	White	----	4	12	M	F	Abusive	26	-1
31	17	1	23	White	900	3	12	M	M	Abusive	25	0
32	10	3	28	White	600	6	12	M	M	Abusive	24	-4
33	19	3	25	Indian	400	5	11	D	F	Abusive	44	-5
34	13	5	28	Other	800	6	9	M	M	Nonabusive	18	-1
35	17	2	32	Indian	500	4	16	M	F	Nonabusive	40	-1
36	12	2	23	Indian	900	4	10	M	F	Abusive	30	-3
37	13	2	21	White	400	4	11	D	F	Abusive	31	-2
38	17	2	22	Black	500	3	11	S	F	Abusive	23	-6
39	11	1	25	Black	400	4	16	M	F	Nonabusive	36	-1
40	16	2	25	Black	400	4	16	M	M	Nonabusive	18	-3

APPENDIX H (Continued)

subject	Mother's Expectation	Birth Order	Mother's Age	Ethnicity	Monthly Income	Family Size	Mother's Educational Level	Marital Status	Sex of Child	Type of Relationship	Child's Age	Mother's Perception
41	12	1	30	White	----	3	18	M	F	Nonabusive	36	-1
42	17	1	40	Indian	800	3	13	M	F	Nonabusive	24	-1
43	14	1	34	White	3000	4	13	M	F	Nonabusive	36	-3
44	10	2	32	White	2500	4	17	M	M	Nonabusive	30	-3
45	7	2	33	White	2500	4	16	M	M	Nonabusive	40	-4
46	17	1	22	Indian	800	2	12	S	M	Nonabusive	23	-2
47	18	3	32	White	----	5	12	M	M	Nonabusive	40	-1
48	14	1	26	Indian	800	2	18	S	M	Nonabusive	18	-5
49	17	1	29	White	2600	3	16	M	F	Nonabusive	28	-2
50	19	2	30	Indian	1200	3	16	D	F	Nonabusive	18	-1
51	19	1	30	Indian	1200	3	16	D	F	Nonabusive	42	0
52	17	1	19	Indian	700	3	11	S	M	Nonabusive	24	-1
53	17	2	19	Indian	700	3	11	S	M	Nonabusive	24	-1
54	13	1	22	Indian	----	3	12	M	F	Nonabusive	14	-4
55	17	1	30	Indian	1800	3	14	M	M	Nonabusive	24	-1
56	15	3	30	White	1800	5	16	M	F	Nonabusive	25	-1
57	12	2	32	White	----	4	16	M	M	Nonabusive	30	-3
58	19	1	28	White	1900	3	16	M	M	Nonabusive	37	-1
59	9	2	23	Indian	500	4	12	M	M	Nonabusive	34	0
60	15	1	24	White	3500	3	15	M	M	Nonabusive	35	0
61	15	1	25	White	1000	3	13	M	F	Nonabusive	18	-1
62	18	1	32	White	1500	4	12	M	M	Nonabusive	40	-4
63	16	1	27	White	1400	4	12	M	M	Nonabusive	34	-5
64	18	1	30	White	5000	3	13	M	F	Nonabusive	35	0
65	17	1	29	White	4400	4	16	M	M	Nonabusive	33	-3
66	16	2	29	White	4400	4	16	M	M	Nonabusive	15	0
67	14	1	30	White	2000	3	18	M	M	Nonabusive	30	-4
68	14	1	28	White	1200	3	12	M	F	Nonabusive	35	-1
69	15	2	21	White	2000	5	12	M	M	Nonabusive	30	-1
70	8	2	30	White	2000	4	16	M	M	Nonabusive	36	-4

2
VITA

Marilynn M. Jones

Candidate for the Degree of

Doctor of Philosophy

Thesis: THE RELATIONSHIP OF MATERNAL EXPECTATIONS TO MOTHER'S AGE, MOTHER'S PERCEPTION, TYPE OF RELATIONSHIP, CHILD'S BIRTH ORDER AND SEX, AND DEMOGRAPHIC INFORMATION

Major Field: Applied Behavioral Studies

Biographical:

Personal Data: Born in Duncan, Oklahoma, January 11, 1948, the daughter of Mr. and Mrs. J. B. Butler.

Education: Graduated from Duncan High School, Duncan, Oklahoma, in May, 1966; received Bachelor of Science in Education Degree from the University of Oklahoma in May, 1970; received the Master of Education Degree from the University of Oklahoma in December, 1976; enrolled in the doctoral program at Oklahoma State University in Spring of 1978; completed requirements for the Doctor of Philosophy degree at Oklahoma State University in May, 1982.

Professional Experience: Elementary Teacher, Shawnee, Oklahoma, September 1970 to May 1971; Elementary Teacher, Midwest City, Oklahoma, March 1972-February 1973; Child Developmental Specialist, Edmond Guidance Center, Edmond, Oklahoma, February 1977-August 1979; Developmental Specialist, Red Rock Comprehensive Mental Health Center, Oklahoma City, Oklahoma, August 1979-May 1980; Graduate Teaching Associate, Department of Applied Behavioral Studies, Oklahoma State University, September 1980-May 1982.