ABSTRACT

Title of Dissertation: THE RELATIONSHIP BETWEEN PERCEIVED PARENTAL SELF-EFFICACY AMONG FIRST-TIME MOTHERS AND CHILDREARING BELIEFS, KNOWLEDGE OF INFANT DEVELOPMENT, AND EXPERIENCE WITH INFANTS

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Perceived parental self-efficacy has been assumed to contribute positively toward maternal behavior among mothers of infants, but previous research has been inconclusive with regard to the link between self-efficacy and behavior. Examination of Bandura's self-efficacy theory points to the need to assess perceived parental self-efficacy in conjunction with other parenting cognitions before judgment can be made about its significance for good parenting. In particular, childrearing beliefs were thought to be essential to mothers' ideas about what kinds of skills are necessary to be a good parent, and therefore to their evaluations of their parenting abilities. In the present study, two measures of perceived parental self-efficacy were obtained from 113 first-time mothers of 6 to 12-month-old infants, one measure tapping specific domains and

tasks of parenting infants, and the other tapping a more general sense of how one was functioning as a parent. The relationship between these measures and childrearing beliefs, knowledge of infant development, experience with infants, SES, maternal age, and ethnicity were assessed. The demographic variables and knowledge were unrelated to either measure of self-efficacy. Experience with infants was moderately correlated with the task-based measure of self-efficacy, but weakly related to the general measure. Childrearing beliefs showed low but significant correlations with both self-efficacy measures. Investigation of the subscales of the childrearing beliefs measure indicated that the dimension of enjoyment/aggravation regarding the parental role was most closely related to mothers' feelings of self-efficacy. Subscales measuring encouragement of autonomy, strictness, beliefs about spoiling, and beliefs in infants' need for warmth and affection were not related to either measure of perceived parental self-efficacy. The results of this study indicate that caution should be taken in reasoning that perceived parental self-efficacy is associated with appropriate parenting skills and behaviors, since high self-efficacy can occur in conjunction with undesirable

childrearing beliefs, and such beliefs may not be associated with positive maternal behavior.

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DEDICATION

To my husband, Jim Mohl.

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TABLE OF CONTENTS

Section	Page
List of Tables	vii
Chapter I Introduction	1
Rationale	2
Theoretical Considerations	5
Definition of Terms	16
Statement of the Problem	17
Research Hypotheses	19
Chapter II Review of the Literature	21
Perceived Parental Self-Efficacy	21
Childrearing Beliefs	33
Knowledge of Infant Development	34
Experience with Infants	35
Demographic Variables	36
Chapter III Methodology	38
Sample	38
Procedures	41
Measures	44
Dependent Variable	45
Perceived Parental Self-Efficacy	45
Independent Variables	47
Childrearing Beliefs	47
Knowledge of Infant Development	50
Experience with Infants	52
Demographic Variables	53
Data Analysis	53
Limitations	54
Chapter IV Results	56
Descriptive Data	56
Hypotheses Results	58
Hypothesis 1	59
Hypothesis 2	61
Hypothesis 3	62
Hypothesis 4	62
Hypothesis 5	62
Hypothesis 6	62

Section		Page
Other Results		63
	Relationship Between Measures of the Dependent Variable	63
	Relationships Among Independent Variables	63
	Relationships Among Demographic Variables	63
	Relationships Among Questionnaire Measures	63
	Relationships between questionnaire measures and demographic variables	63
Chapter V Discussion		65
Summary of Findings		67
Conclusions		74
Implications for Practice		75
Suggestions for Further Research		77
Appendix A	Communication with Subjects	80
Appendix B	Questionnaire Booklet Cover	98
Appendix C	Maternal Self-Efficacy Scale	100
Appendix D	Lips Maternal Self-Confidence Scale	103
Appendix E	Survey of Beliefs about Parenting Infants	108
Appendix F	Knowledge of Infant Development Inventory	117
Appendix G	Catalog of Previous Experience with Infants	123
Appendix H	Demographic Questionnaire	126
References		130

LIST OF TABLES

Number		Page
1.	Demographic Characteristics of the Sample	39
2.	Descriptive Data for the Instruments Used	57
3.	Zero-order Correlations Between Independent Variables and Self-Efficacy Measures	59
4.	Zero-order Correlations Between SBPI Subscales and Self-Efficacy Measures	61
5.	Zero-order Correlations Between Questionnaire Measures and Demographic Variables	64

Chapter I

Introduction

Parenting an infant is a complicated undertaking. Becoming a parent is regarded by some researchers as a crisis event (Dyer, 1963; LeMasters, 1957), and by others as a manageable transition (Hobbs, 1965; Hobbs & Cole, 1976). In either case, parents face the challenges of juggling new roles and developing the skills involved in caring for and raising an infant with varying degrees of confidence. Bandura's self-efficacy theory (1977; 1982b; 1986) suggests that strong feelings of competence as a parent, or high perceived parental self-efficacy, should benefit parental performance, but some evidence exists which refutes this notion (Luster, 1986; Luster & Rhoades, 1989; Zahr, 1991). In truth, not enough is known about the nature of perceived parental self-efficacy to draw conclusions about its effects on parental behavior. The purpose of this exploratory study is to investigate perceived parental self-efficacy in mothers of infants and its relationship to childrearing attitudes, knowledge of infant development, experience with infants, and several demographic variables.

Rationale

According to Bandura's theory of self-efficacy (1977; 1982b; 1986), high perceived parental self-efficacy should be advantageous in parenting, enhancing performance by enabling a parent to confidently undertake parenting tasks, invest considerable effort in them when needed, and persist should the tasks become challenging. There is research to support the notion that high perceived parental self-efficacy is beneficial in some ways: Cutrona and Troutman (1986) found it to be associated with a lower incidence of maternal depression; Teti and Gelfand (1991) and Teti, Gelfand, and Pompa (1990) found it to be associated with maternal behavioral competence; Leifer (1977) found it to be related to a more positive view of the experience of motherhood; Reilly, Entwisle, and Doering (1987) found it to be associated with a more positive evaluation of the infant; and Williams et al. (1987) found it to be positively related to mothers' emotional state, feelings of attachment to their infants, mothers' interactive behaviors with their infants, adaptation to the maternal role, fewer role conflicts and concerns, and the quality of the marital relationship.

The relationship between perceived parental self-efficacy and parental behavior, however, may not be as

clear-cut as these studies and self-efficacy theory suggest. Zahr (1991) found no relationship between measures of mothers' confidence in their parenting skills and concurrent measures of maternal behavior. Another line of research which has directly related perceived parental self-efficacy with evaluations of parenting is that of Luster (Luster, 1986: Luster & Rhoades, 1989). These studies, rather than aligning with self-efficacy theory and related findings, suggest that mothers with higher perceived parental self-efficacies tend to provide their infants with less supportive home environments than do less confident mothers. When Luster and Rhoades examined childrearing beliefs in conjunction with parental self-efficacy and parental behavior, they found that mothers who perceived themselves as being more competent as parents were more likely to believe that affectionate and responsive parenting can spoil infants, that babies' freedom to explore the home should be restricted, that strict discipline and control of children's behavior are important, and that talking and reading to young children are not essential. These mothers' attitudes were reflected in their behavior: ratings of the quality of the rearing environments they provided for their infants were low. This study suggests that

mothers who feel most competent in their parenting abilities have different ideas about parenting and different parenting practices than do less confident mothers, and that these ideas and practices may be less than optimal, in terms of what current child development and parenting "experts" suggest.

It is not clear, then, what perceived self-efficacy means when applied to parenting ability. Ideally, parents should possess both an appropriate set of childrearing attitudes and a strong sense of parental self-efficacy. What, though, of parents who have one of these attributes, but not the other? A strong sense of parental self-efficacy may not be a positive quality if coupled with a set of childrearing attitudes which are unsuitable. On the other hand, the effectiveness of a parent with an appropriate set of childrearing attitudes but a low perceived parental self-efficacy may be questionable. Although Bandura's theory (1977; 1982b; 1986) promotes the idea that a positive, accurate self-efficacy is beneficial and perhaps even necessary for good performance, in the area of parenting the relationship between perceived self-efficacy and performance is unclear, and perhaps confounded by other variables.

In view of this uncertainty, the area of perceived parental self-efficacy as it relates to parenting ability needs to be examined closely. Although it is beyond the scope of a single study to resolve the dilemma presented above and determine whether perceived parental self-efficacy or appropriate childrearing attitudes are more essential to effective parenting, this study seeks to answer some specific questions regarding perceived parental self-efficacy so that we can begin to understand its relevance to parenting behavior. The purpose of this research is to investigate whether perceived parental self-efficacy is related to childrearing attitudes, knowledge of infant development, experience with infants, and/or certain demographic characteristics. Knowing more about what factors contribute to perceived parental self-efficacy among parents of young children will allow parent educators to focus their efforts in the relevant areas so that parents can get the kind of help they need to learn appropriate childrearing practices and gain the confidence they need to effectively use them.

Theoretical Considerations

Self-efficacy theory was introduced in 1977 by Albert Bandura to explain and predict the changes that occurred in phobics' behavior as the result of different

types of treatment. Bandura proposed that changes in behavior could be attributed to changes in the belief that one was capable of executing the behavior in question. He called this belief perceived self-efficacy, and defined it as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (1986, p. 391).

Since its introduction, the application of self-efficacy theory has gone far beyond the study of phobias, successfully predicting performance in such diverse areas as academic achievement, social interaction, physical stamina, career strivings, and the self-regulation of addictive behaviors (See Bandura, 1982b; 1986 for reviews). Because the present study is concerned with whether Bandura's concept of self-efficacy is appropriate for the study of parenting behavior, a review of the theory, along with comments about its possible relevance to parenting, is presented here.

Bandura (1986) believes that perceived self-efficacy may be the most influential aspect of self-knowledge affecting people's everyday behavior, having an influence on all but the most habitual activities. An accurate appraisal of one's abilities is seen as an

adaptive part of human functioning, since it affects individuals' choice of activities and environments, allowing them to behave confidently when they are capable, and to avoid situations where their lack of skills will lead to failure (Bandura, 1977, 1982b, 1984, 1986). An inaccurate appraisal of abilities, on the other hand, may lead to repeated failure if perceived self-efficacy is inflated, or may be self-limiting if self-efficacy is underestimated and potentially enriching activities are curtailed (Bandura, 1986).

Perceived self-efficacy affects behavior in several ways, influencing whether or not a person will initiate a behavior, the amount of effort put into a task, and how persistent the individual will be if the task becomes challenging (Bandura, 1977, 1982b, 1986). A person with a high self-efficacy with regard to a particular task will be more likely to attempt it than will a person whose perceived self-efficacy is lower, will exert more effort in an attempt to be successful, and will be less likely to give up if the task should seem too difficult.

This basic tenet of self-efficacy theory, that perceived self-efficacy is positively related to performance, is what leads to the dilemma involving perceived parental self-efficacy and childrearing

beliefs. Following the logic of self-efficacy theory, parents, regardless of their childrearing beliefs, perform according to their perceptions of their abilities as parents. Thus, according to the theory, parents who hold childrearing attitudes which child development experts would find inappropriate, but who have a high perceived parental self-efficacy, would be effective at using the parenting techniques they believe in to raise their children. For example, if a mother believes that infants can be spoiled by picking them up every time they cry, her confidence in her parenting ability would enable her to ignore her infant's cries when she feels they are unfounded, to invest the effort needed to refrain from answering a cry when it could be easily terminated by giving in, and to persist in ignoring a cry even if it continues for quite a while. On the other hand, parents who hold childrearing beliefs which child development experts would find more suitable, but who have a low perceived parental self-efficacy, may not be capable of raising their children using the parenting techniques they believe are best. For example, even though a mother believes that it is best to respond as quickly as possible to an infant's cries, her lack of confidence in her parenting skills would undermine her ability to consistently answer her

baby's cries, to invest the effort needed to answer them regularly, and to persist in responding to the baby when he is having an especially fussy day. (For the sake of clarity, mothers will be referred to as "she" and babies will be referred to as "he".)

Which of the mothers in the above examples is the better parent? Although it is not clear how pervasive the debilitating effects of low perceived parental self-efficacy are in the mother with the appropriate childrearing attitudes, it is clear that high perceived parental self-efficacy, when combined with inappropriate childrearing attitudes, may not be the positive attribute that self-efficacy theory assumes it to be in so many other domains.

Bandura does say that both ability and self-efficacy are crucial to competent functioning (1977, 1986). Although a strong sense of self-efficacy is enabling, there is little chance of successful performance if the necessary skills and abilities are lacking. In an area such as parenting, though, the skills which are necessary depend upon the belief system one espouses. If a parent believes that firm discipline is important in childrearing, then the ability to be strict and stern may be necessary skills. If a parent believes that children need affectionate and responsive

parenting, then nurturance and patience may be necessary skills.

According to Bandura (1982b, 1984, 1986), people with different levels of perceived self-efficacy tend to think and feel differently, which also affects their performance. When attempting a task, individuals with low perceived self-efficacies for that task tend to dwell on their shortcomings and are therefore less able to concentrate on the behaviors they need to perform. Their lack of confidence often leads them to experience considerable anxiety and stress. As a result, performance is impeded, and failure is attributed to lack of ability, reinforcing the low self-efficacy. People with low perceived self-efficacies tend to behave ineffectually, even when they know what to do (Bandura, 1982b). In contrast, individuals with high perceived self-efficacies for the same task are able to devote their attention to their performance and avoid being plagued by anxiety and stress. With such benefits, these people perform more successfully (Bandura, 1982b, 1984, 1986). When self-efficacy is high, failures are attributed to lack of effort, rather than lack of ability, so perceived self-efficacy is not easily damaged (Bandura, 1986). In a learning situation, however, the amount of effort invested by people of

varying degrees of self-efficacy is the reverse of what would be expected in a performance situation. People with lower self-efficacies with regard to a task are more likely to invest effort in an attempt to learn the task, while those with higher self-efficacies may feel confident enough to believe that extra preparation would be unnecessary (Bandura, 1982a, 1986).

Self-efficacy theory makes an important distinction between perceived self-efficacy and outcome expectancies (Bandura, 1977, 1984, 1986; Maddux & Stanley, 1986). Perceived self-efficacy is the judgment of one's ability to reach a certain level of performance; outcome expectancies are the anticipated consequences of the performance. For example, a mother's belief that she can successfully breastfeed a baby is a judgment of self-efficacy; her belief that breastfeeding her baby will make him healthier is an outcome expectancy.

The best prediction of behavior is achieved by considering both perceived self-efficacy and outcome expectancies. When perceived self-efficacy is high and a favorable outcome is expected, the behavior in question is more likely to be performed than when a favorable outcome cannot be predicted (Bandura, 1982b, 1986). This is an important consideration in a field such as parenting, where outcomes are complex, are not

always clear, or are so far removed in time from a behavior that an evaluation of the effectiveness of the behavior may be difficult to make. Bandura, although referring to goals which motivate behavior rather than outcome expectancies, does say that temporally distal goals do not provide sufficient information about progress to ensure a growing sense of self-efficacy (1986). In the same way, the effects of parenting behavior as they relate to outcome expectancies are seldom immediately clear; there may not be sufficient information to cause parents to reevaluate and correct their parental self-efficacies continually; thus perceived parental self-efficacy may have little true relationship to ability.

According to self-efficacy theory, information used to form a perception of self-efficacy is gained in four ways: through direct experience; vicariously through observing others' performances; through verbal persuasion and social influences; and through physiological information (Bandura, 1977, 1982b, 1986; Maddux & Stanley, 1986). The way in which information from any of these four sources affects perceived self-efficacy will be determined by how the information is cognitively appraised (Bandura, 1977, 1982b, 1986).

Direct performance experience is the most powerful source of self-efficacy information (Bandura, 1977, 1982b, 1986). In general, failures lower perceived self-efficacy and successes raise it, but the weight given to each experience in molding the self-efficacy depends upon the situation surrounding the experience and upon the strength of the existing perception of efficacy (Bandura, 1986). A firmly established perception of efficacy is more difficult to sway than is a perception about capabilities for a task with which one has little experience to base a judgment on. The effect of failure early in the learning process is especially debilitating. In addition, the negative effect that failure has on perceived self-efficacy is stronger than the positive effect of success (Kirsch, 1986).

Self-efficacy information can be gained vicariously through modeling (Bandura, 1977, 1982b, 1986). When people observe the target behavior being performed by a model with whom they can identify for various reasons, they come to believe that they are capable of performing at a similar level. This can serve to raise perceived self-efficacy if the model is performing successfully, or lower it if the model experiences failure. The more similar to themselves in personal characteristics and

abilities that people believe a model to be, the more likely it is that what is modeled will affect self-efficacy.

Verbal persuasion is often attempted in an effort to increase self-efficacy, but its effects on self-efficacy are limited unless they can be backed up by successful performance; so persuasory efforts must be within realistic bounds, or combined with the teaching of new skills to be effective (Bandura, 1977, 1982b, 1986). Probably the most enduring effects of verbal persuasion on perceived self-efficacy are the negative ones; criticism which undermines belief in abilities can become a self-fulfilling prophecy (Bandura, 1986).

The final source of efficacy information which Bandura discusses is physiological arousal (1977, 1982b, 1986). Information is gained by judging the level of one's physiological arousal, and attributing the level of arousal to certain situations and emotions. If people judge themselves to be highly aroused and the situation leads them to judge that the arousal they are feeling is due to anxiety, they will perceive themselves as being less efficacious, and their performance will suffer.

Perceptions of efficacy vary along three dimensions: magnitude, generality, and strength

(Bandura, 1977, 1986; Maddux & Stanley, 1986). Magnitude refers to the level of performance a person feels capable of reaching. This can often be thought of as a continuum, with less difficult levels of performance at one end and more difficult levels at the other, although not all tasks can be ranked in this way. Generality refers to how much perceptions of efficacy for other tasks are affected by changes in perceived self-efficacy for a certain task. Perceptions of efficacy can be very specific, affecting only closely related tasks, or can be quite general, affecting perceived self-efficacy for a whole realm of behavior. Strength refers to how easily a self-efficacy perception which is held can be changed by new information. Some perceptions of efficacy have been reinforced by a long history of success or failure; others are not firmly held. In addition, a low perceived self-efficacy may serve to shield an individual from something he or she is trying to avoid, and may be quite resistant to change for that reason (Bandura, 1986).

Bandura's self-efficacy theory has provided an informative framework for understanding human behavior. In Bandura's words, "convergent evidence from divergent domains and procedures lends broad support to the notion that perceived self-efficacy operates as an influential

mechanism in human agency" (1984, p. 251). It is not clear, though, how useful the concept is for the study of people's perceptions of their abilities as parents. This research attempts to apply Bandura's ideas about self-efficacy to the area of parenting, examining the factors which contribute to perceived parental self-efficacy among parents of infants.

Definition of Terms

To clarify the constructs under study in this research, several variables are defined below as they are used in this research.

Perceived parental self-efficacy refers to mothers' judgments of their abilities as parents of their infants. These judgments reflect mothers' feelings about their abilities for specific tasks of parenting, and a more global idea of their capabilities to raise their infants. For this study, the specific, task-based dimension of self-efficacy is operationally defined as scores on the Maternal Self-Efficacy Scale (MSES; Teti & Gelfand, 1991), and the global dimension of self-efficacy is operationally defined as scores on the Lips Maternal Self-Confidence Scale (LMSCS; Lips, 1984)

Childrearing beliefs are beliefs about how infants should be raised. This construct encompasses Holden and Edwards' (1989) domains of attitudes, behavioral

intentions, and instrumental beliefs with regard to issues relating to caring for and guiding the behavior of infants. For the purpose of this study, the operational definition of childrearing beliefs is subjects' scores on the Survey of Beliefs about Parenting Infants (SBPI), an instrument designed for use in this research.

Knowledge of infant development is defined as subjects' ideas about developmental principles and timetables. This construct corresponds to Holden and Edwards' (1989) dimension of descriptive beliefs regarding infant development. This variable is operationally defined for this research as scores obtained on the Knowledge of Infant Development Inventory (KIDI; MacPhee, 1981).

Experience with infants refers to the extent of mothers' time spent and involvement with other infants previous to the birth of their own. For this study, experience with infants is operationally defined as scores obtained on the Catalog of Previous Experience with Infants (COPE; MacPhee, 1981).

Statement of the Problem

Self-efficacy theory has provided a useful way of examining many types of human behavior. It is not clear, though, whether it can be applied to parenting

behavior, since some research casts doubt about the usefulness of the construct for this domain (Luster, 1986; Luster & Rhoades, 1989; Zahr, 1991). There are several possible reasons that perceived parental self-efficacy may not be related to what experts might see as "good" parenting practices. It could be that high perceived parental self-efficacy is associated with certain sets of childrearing attitudes and practices. It could be that parents with low perceived parental self-efficacies have a greater understanding of the complexities of infant development and thus feel a bit more overwhelmed by the task of childrearing. It could be that the complexity, vagueness, or temporal distance of outcome expectancies makes it difficult for parents to maintain accurate assessments of their abilities. Finally, it could be that parents who have certain demographic characteristics have different levels of perceived parental self-efficacy, perhaps due to different experiences. On the other hand, self-efficacy theory (Bandura, 1977, 1982b, 1986) suggests that perceived parental self-efficacy should be beneficial in parenting, and there is research to support this notion (Cutrona & Troutman, 1986; Leifer, 1977; Reilly, Entwisle, & Doering, 1987; Teti & Gelfand, 1991; Teti, Gelfand, & Pompa, 1990; Williams et al., 1987). The

lack of consensus about the usefulness of the construct of self-efficacy for the study of parenting indicates the need for further investigation in this area.

This study addresses the following research questions:

(1) Are childrearing beliefs related to perceived parental self-efficacy among mothers of infants?

(2) Is knowledge of infant development related to perceived parental self-efficacy among mothers of infants?

(3) Is experience with infants related to perceived parental self-efficacy among mothers of infants?

(4) Is SES related to perceived parental self-efficacy among mothers of infants?

(5) Is maternal age related to perceived parental self-efficacy among mothers of infants?

(6) Do white mothers of infants have different levels of perceived parental self-efficacy than nonwhite mothers?

Research Hypotheses

Self-efficacy theory predicts a relationship between perceived parental self-efficacy and several of the independent variables. For the independent variable for which self-efficacy theory provides no prediction, the null hypothesis is stated.

(1) There is no relationship between childrearing beliefs and perceived parental self-efficacy among mothers of infants.

(2) Knowledge of infant development is positively related to perceived parental self-efficacy among mothers of infants.

(3) Amount of previous experience with infants is positively related to perceived parental self-efficacy among mothers of infants.

(4) SES is positively related to perceived parental self-efficacy among mothers of infants.

(5) Maternal age is positively related to perceived parental self-efficacy among mothers of infants.

(6) White mothers of infants have higher levels of perceived parental self-efficacy than nonwhite mothers.

Chapter II

Review of the Literature

Because little research has directly investigated perceived parental self-efficacy, not much is known about its relationship to most of the variables of interest in this study. In this chapter, research employing measures of perceived parental self-efficacy is reviewed, followed by a review of research on childrearing attitudes, knowledge of infant development, experience with infants, and demographic variables as each may relate to perceived parental self-efficacy.

Perceived Parental Self-Efficacy

As mentioned in the previous chapter, most research employing the concept of perceived parental self-efficacy has operated under the assumption that it is a positive attribute which enables parents to more effectively fulfill their roles as parents. In fact, even the main body of research which challenges this assumption was initiated with the same notion. The studies involving perceived parental self-efficacy among parents of infants are reviewed here, followed by an analysis of the ways in which perceived parental self-efficacy was measured.

Cutrona and Troutman (1986) studied mothers' parenting self-efficacy in the early months of

parenthood and found that it was positively related to a prenatal rating of social support, and negatively related to concurrent measures of infant temperamental difficulty and maternal depression. They concluded that parenting self-efficacy was a mediating variable, enhancing the effects of social support and diminishing the effects of difficult infant temperament on postpartum depression.

Maternal self-efficacy was also described as a mediating variable, in this case affecting maternal behavioral competence among depressed and nondepressed mothers of infants, in a pair of studies by Teti and Gelfand (1991) and Teti, Gelfand, and Pompa (1990). In each study, maternal self-efficacy was a significant predictor of ratings of maternal behavioral competence. In addition, in the Teti and Gelfand research, maternal self-efficacy was positively related to social-marital supports and negatively related to maternal depression and perception of infant difficulty; maternal self-efficacy mediated the effects of these variables on maternal competence. In the Teti, Gelfand, and Pompa research, maternal self-efficacy was positively related to maternal education, family income, and the number of hours the mother worked outside of the home and negatively related to life stress, marital conflict,

poor social support, and perceived infant difficulty. The relationship between these variables and maternal competence was mediated by maternal self-efficacy.

In a small longitudinal study of psychological changes during the transition to motherhood, Leifer (1977) assessed mothers' confidence in their maternal abilities during the first trimester of pregnancy. She found that women who displayed low levels of confidence prenatally also showed low levels of adaptation and satisfaction with parenthood at 6-8 weeks and at seven months postpartum, while women with high levels of confidence prenatally reported higher levels of adaptation and satisfaction at seven months postpartum.

In another study which employed a prenatal measure of mothers' sense of competence in their maternal role, Reilly, Entwisle, and Doering (1987) followed a sample of mothers through the transition to parenthood. They found that women who had a stronger sense of competence in the maternal role during the ninth month of pregnancy were more likely to rate their infants as being peaceful and happy at one month postpartum.

Williams et al. (1987), in a longitudinal study, measured mothers' parenting confidence at 8 months of pregnancy, one month postpartum, and when their children were two years old. Among the measures of parenting

confidence, prenatal confidence was predictive of postpartum confidence, but no relationship existed between parenting confidence at the postpartum and toddler assessments. Parenting confidence at the three assessments showed concurrent and predictive relationships to various other self-report measures, such as positive emotional state, maternal feelings of attachment, adaptation to the maternal role, and fewer role conflicts and concerns. Only one behavioral variable, mothers' interactive behaviors with their infants at one month, showed a small (r =.18) but significant concurrent relationship with parenting confidence. Several other variables which reflected maternal behavior, caregiving and holding at one month and mother-child interaction in two situations at two years of age, were not related to parenting confidence at any of the three assessments.

Although the previous studies found perceived parental self-efficacy to be beneficial, other research has produced conflicting results. Zahr (1991), in a longitudinal study of mothers of prematurely born infants, measured maternal confidence and obtained ratings of mothers' behavior during feeding and play at four and eight months corrected age. She found no relationship between mothers' ratings of their

confidence in their parenting skills and their behaviors with their babies at either age.

Two studies by Luster (Luster, 1986; Luster & Rhoades, 1989) provide further evidence that the relationship between perceived parental self-efficacy and parental behavior may not be in the assumed direction. In the first of these studies (Luster, 1986), mothers' perceived competency in their role was measured via self-report, and the home environment of each mother-infant pair was evaluated using the HOME inventory (Home Observation for Measurement of the Environment; an observation/interview assessment of quantitative and qualitative aspects of the rearing environment; Caldwell & Bradley, 1979). Although Luster hypothesized that perceived competency would be positively related to HOME scores, what he found was a trend in the opposite direction; in effect, mothers with more confidence in their parenting abilities were providing less supportive home environments for their infants and toddlers. In the second of these studies, Luster and Rhoades (1989) investigated parenting confidence among adolescent and adult mothers. When the two groups of mothers were compared, the adolescents judged themselves to be more competent than the adult mothers did, yet their HOME scores were lower. Within

the groups of mothers, perceived competency was negatively related to HOME scores in the adult mothers, and the same trend was evident among the adolescent mothers, although it did not quite reach significance. In addition, among adult, but not adolescent mothers, perceived competency was negatively related to a measure of perceived contingency--how much mothers perceive developmental outcomes to be dependent upon their childrearing practices. Luster and Rhoades also examined childrearing beliefs and found relationships with perceived parental self-efficacy. The childrearing beliefs examined were: 1) beliefs regarding spoiling; 2) beliefs regarding the amount of freedom children should be given to explore the home environment; 3) beliefs regarding discipline and control; and 4) beliefs regarding the importance of talking to and reading to children. Adult and adolescent mothers who expressed higher levels of perceived competency believed that babies could be spoiled by responsive and affectionate parental behavior, and that babies should be restricted in the amount of freedom they are given to explore the home. Adult mothers expressed the belief that disciplining children and controlling their behavior are important, a trend which was also evident among the adolescent mothers. In addition, among the adult

mothers, those who perceived themselves as highly competent underemphasized the importance of talking to and reading to their young children.

In the Luster studies, then, the mothers with the most confidence in their abilities as parents believed least that their childrearing practices affected their children's development, held the least desirable childrearing beliefs in terms of what current child development and parenting experts suggest, and provided the least supportive rearing environments for their young children.

Of the seven research groups reported on above which have investigated the effects of perceived parental self-efficacy, three focus exclusively on outcome variables which are not direct indicators of parenting competence (Cutrona & Troutman, 1986; Leifer, 1977; Reilly, Entwisle, & Doering, 1987), although postpartum depression, maternal adjustment and satisfaction, and the perception of one's infant as peaceful and happy inarguably affect parenting behavior indirectly. Of the four research groups which did focus on parenting behavior as outcome variables, one study (Williams et al., 1987) found only one small correlation with parenting confidence, accounting for just 3% of the variance in interactive behavior; one research group

(Teti & Gelfand, 1991; Teti, Gelfand, & Pompa, 1990) found positive relationships between parental self-efficacy and maternal behavior, one study (Zahr, 1991) found no relationship, and another (Luster, 1986; Luster & Rhoades, 1989) found negative relationships. The evidence presented indicates that high perceived parental self-efficacy is beneficial to mothers' well-being; it is not as clear whether it is beneficial to the mother-infant relationship directly.

One reason for the lack of convergence among the studies may be the way in which perceived parental self-efficacy was measured. None of the studies had the same operational definition of the construct, and they may in fact have been measuring different things.

Cutrona and Troutman (1986), stating that they were measuring self-efficacy in the parenting role, used the self-efficacy subscale of the Parenting Sense of Competence Scale (PSCS; Gibaud-Wallston, 1977). This subscale consists of eight Likert items describing positive feelings about the capability of caring for one's infant and the easiness of motherhood, which were rated on a six-point scale, ranging from 'strongly agree' to 'strongly disagree'. Reliability and validity data were provided from Gibaud-Wallston's research; Cronbach's alpha for the subscale was .72, and scores

were said to correlate .48 with a measure of self-esteem.

The Teti and Gelfand (1991) and Teti, Gelfand, and Pompa (1990) studies both employed the same measure of perceived parental self-efficacy, the Maternal Self-Efficacy Scale, developed by Teti and Gelfand to assess mothers' feelings of efficacy in the maternal role. The 10 items in the scale include 9 items which tap mothers' feelings of efficacy in very specific situations/tasks which apply to parenting infants, and one global rating of efficacy. Mothers rated their proficiency at these tasks using a 4-point scale, ranging from 'not good at all' to 'very good'. A coefficient alpha of .86 attested to the reliability of this scale, and evidence of concurrent validity was provided by a .75 correlation with the Sense of Competence Scale of the Parenting Stress Index (PSI; Abidin, 1986).

Leifer (1977) used a measure, apparently of her own design, which was said to tap self-confidence as a mother. This was a semantic differential instrument on which subjects used a 6-point scale to rate themselves and their concept of the ideal mother on six pairs of bipolar adjectives. A sum of the differences between the ratings of themselves and their ideal mother yielded a score, with low scores representing similarity to the

ideal mother, and therefore confidence in the maternal role. No reliability or validity data for this instrument were provided.

Another study which employed a semantic differential measurement was the research by Reilly, Entwisle, and Doering (1987). They had mothers rate themselves during an interview on the concept "Myself as a Mother" using sets of bipolar adjectives. Six of these adjective pairs, which factor analysis showed to load on a potency dimension, were summed and used to represent a woman's sense of competence in her maternal role. This measure was apparently designed by the authors for this study, and no reliability or validity data were provided.

Williams et al. (1987) used Likert-format questionnaire items to compose their measures of parenting confidence at each of the three assessments. This variable at the prenatal evaluation was the mean of three questionnaire items which reflect the subjects' experience with infants, how well prepared they felt to care for their infants, and how clear they felt their expectations of parenthood were (T. M. Williams, personal communication, February 13, 1992). At the one-month assessment, the variable was again composed of three items, this time asking about how well feeding was

progressing, how well mothers were able to understand their babies' wants and needs, and the ease or difficulty of quieting their fussing or crying baby (T. M. Williams, personal communication). At the two-year assessment, the variable was composed of 22 items from a questionnaire designed for the study which asked how confident mothers felt about their parenting abilities in general and in several areas specific to parenting a toddler (T. M. Williams, personal communication). Cronbach's alpha was computed to estimate the reliability of the measures at each assessment. For the prenatal variable, alpha was .58; for the one-month variable, alpha was .65; and for the two-year variable, alpha was .85. In addition, factor analysis was performed separately on each of the three variables and in each case the items loaded on a single factor (T. M. Williams, personal communication). No evidence to support the validity of the instrument was provided.

Zahr (1991) measured maternal confidence with the Maternal Confidence Questionnaire (MCQ; Parker & Zahr, 1985), a 14-item Likert scale. Items are said to assess mothers' confidence in their parenting skills and ability to recognize their infants' needs, and are answered on a 5-point scale, ranging from 'never' to 'a great deal'. Reliability of the instrument was

supported by a mean alpha of .89, and a 4-month test-retest reliability of .69. Correlations with perceived social support and the Parenting Sense of Competence Scale (PSCS; Gibaud-Wallston, 1977) were presented as evidence of the validity of the instrument.

In the Luster (1986) and Luster and Rhoades (1989) studies, perceived competency was measured using the perceived competency subscale of the Perception of Parental Efficacy (POPE) scale, designed by Luster. This subscale consists of two Likert-format items on which mothers used a 6-point scale, ranging from 'strongly agree' to 'strongly disagree', to rate their competence and confidence as parents in comparison with other mothers they knew. Internal consistency of the scale was indicated by an alpha of .82; validity data were not provided.

Perceived parental self-efficacy has not been defined or measured in any uniform fashion, which leads to questions about our ability to compare results of the various lines of research which have investigated the construct. This lack of consistency in definition and measurement is surely a contributing factor in the lack of consensus about the nature of the contribution which perceived parental self-efficacy makes to parenting competence.

Childrearing Beliefs

Although childrearing beliefs have been studied extensively, especially in relation to child outcome and parental behavior (Kochanska, 1990; Kochanska, Kuczynski, & Radke-Yarrow, 1989; Luster, Rhoades, & Haas, 1989; Murphey & Alexander, 1991; Reis, Barbera-Stein, & Bennett, 1986; Trickett & Susman, 1988; Tulkin & Cohler, 1973), the relationship between perceived parental self-efficacy and childrearing beliefs has received virtually no research attention. Considering the inconclusiveness of the ongoing debate about whether childrearing beliefs predict parental behavior (Holden & Edwards, 1989), it is somewhat surprising that perceived parental self-efficacy has not been investigated as a possible mediator between childrearing beliefs and parental behavior, since it is often thought of as a mediator between knowledge about how to perform and behavior itself (Bandura, 1982b; 1986). Only one line of research, (Luster, 1986; Luster & Rhoades, 1989) has investigated the relationship between perceived parental self-efficacy and childrearing beliefs, and as previously mentioned, these studies concluded that mothers' perceived parental self-efficacy was related to undesirable childrearing beliefs.

Knowledge of Infant Development

In addition to childrearing beliefs, knowledge of infant development is a variable which may be related to perceived parental self-efficacy. Parents who know more about the principles of infant development may feel that their understanding of infants makes them good parents, or they may feel overwhelmed by the complexities of raising an infant and have lower self-efficacies. Although direct links between knowledge of infant development and parental self-efficacy have not been studied, some related work has been undertaken. In one study, pregnant women's information-seeking about motherhood was shown to be positively related to prenatal self-confidence as a mother (Deutsch, Ruble, Fleming, Brooks-Gunn, & Stangor, 1988), although the same relationship did not hold true after the birth of their babies. Several studies have found positive relationships between knowledge of infant development and HOME scores (Parks & Smeriglio, 1986; Reis, Barbera-Stein, & Bennett, 1986; Stevens, 1984), and one has uncovered a positive relationship between knowledge of infant development and appropriate parenting attitudes (Larsen & Juhasz, 1985).

Experience with Infants

Because self-efficacy theory emphasizes the importance of experience in developing the sense of self-efficacy, the contribution of previous experience with infants to perceived parental self-efficacy is an important area for investigation. Although it may seem that experience with one's previous children or unrelated infants would be closely related to knowledge of child development, this may not be the case. Although some evidence supports the existence of such a relationship (Gross, Rocissano, & Roncoli, 1989; Gullo & Paludi, 1989; Peters & Hoekelman, 1973), MacPhee (1983), in both a review of the literature and his own research, and others (Cutrona & Troutman, 1986; Reis, 1988) found no relationship between the two variables.

In comparison to the sparsity of research relating perceived parental self-efficacy to other variables of interest in this study, the relationship between experience with infants and self-efficacy has received quite a bit of attention, although without consensus. Although some researchers have found that perceived parental self-efficacy is unrelated to parity and/or experience with infants (Cutrona & Troutman, 1986; Gross & Rocissano, 1988; Mebert, 1989), others have come to the opposite conclusion (Froman, 1986; Gage &

Christensen, 1991; Zahr, 1991). Although studying a different population (mothers and fathers of preschool and school-age hyperactive and normal children), Mash & Johnston have found that parents' feelings of self-efficacy are related to child behavior problems (Johnston & Mash, 1989; Mash & Johnston, 1983) and that parents of older hyperactive children have lower self-efficacy ratings than do parents of younger hyperactive children and controls (Mash & Johnston, 1983). They suggest that parents who are not experiencing success with their children tend to have reduced feelings of parental self-efficacy, supporting Bandura's theory.

Demographic Variables

Several demographic variables are of interest in this study; specifically, education, SES, age, marital status, and ethnicity were assessed. Although several researchers investigating perceived parental self-efficacy have related it to demographic variables, little consensus has been found. Education has consistently shown a positive relationship with perceived parental self-efficacy (Cutrona & Troutman, 1986; Gross, Rocissano, & Roncoli, 1989; Teti & Gelfand, 1991; Zahr, 1991), but there is less agreement about other relationships. SES has been found to be positively related (Teti & Gelfand) and unrelated

(Gross, Rocissano, & Roncoli; Reilly, Entwisle, & Doering, 1987) to self-efficacy. Results are also mixed with regard to age, with one study finding older mothers more confident in their parenting abilities (Gross, Rocissano, & Roncoli), and another finding younger mothers more confident (Luster & Rhoades, 1989). Marital status and ethnicity have each been found to be related to perceived parental self-efficacy, with married mothers (Teti & Gelfand), and white mothers (Gross, Rocissano, & Roncoli) expressing higher levels of confidence.

Although the research to date provides some clues about the nature of perceived parental self-efficacy among mothers of infants, it also points to the need for further investigation of the construct, the individual variables that relate to it, and the relative contribution that each of these variables makes to self-efficacy.

Chapter III

Methodology

This study was designed to explore variables which relate to perceived parental self-efficacy among mothers of infants. A volunteer sample completed pencil and paper instruments measuring the dependent variable, perceived parental self-efficacy, and the independent variables; childrearing beliefs, knowledge of infant development, experience with infants, and demographic variables. Relationships between perceived parental self-efficacy and the independent variables were assessed.

Sample

The sample consisted of 113 first-time mothers of 6- to 12-month-old infants. An additional 11 mothers completed the questionnaires but were excluded from analyses because they had twins or infants older or younger than the targeted age group. The mean age of the mothers was 29.8 years and their babies averaged 38.8 weeks of age. 56.6% of the mothers had male babies. The mothers in the sample were mostly white (95.6%), married (92%), well educated (73.5% college graduates), and upper middle class (mean Hollingshead SES = 51.5, which corresponds to minor professional or technical worker). A more complete profile of the demographic makeup of the sample appears in Table 1.

Table 1

Demographic Characteristics of the Sample

Mother's Age (years)		
Mean	29.8	
SD	4.6	
Range	18 - 42	
Baby's Age (weeks)		
Mean	38.8	
SD	8.3	
Range	25 - 53.6	
Gender (%)		
Male	56.6	(n = 64)
Female	43.4	(n = 49)
Ethnicity (%)		
Caucasian	95.6	(n = 108)
African American	2.7	(n = 3)
Native American	.9	(n = 1)
Missing	.9	(n = 1)

Table 1 (continued)

Marital Status (%)		
Married	92.0	(n = 104)
Single, not living with partner	5.3	(n = 6)
Single, living with partner	2.7	(n = 3)
Education (%)		
Junior High School	.9	(n = 1)
Some High School	1.8	(n = 2)
High School Graduate	9.7	(n = 11)
Some College	14.2	(n = 16)
College Graduate	39.8	(n = 45)
Some Graduate School	19.5	(n = 22)
Completed Graduate Degree	14.2	(n = 16)
SES (Hollingshead Index)		
Mean	51.5	
SD	10.5	
Range	22.0 - 66.0	

Procedures

A total of 133 questionnaires were mailed or distributed to volunteer mothers between January and April 1993. Nine of these questionnaires were not returned, resulting in a return rate of 93%. Subjects were recruited from a variety of sources. Most volunteers telephoned the researcher to inquire about the study in response to notices in local newspapers (12) and parents' guides (39), flyers sent to a mothers' group (5), and flyers placed in pediatricians' offices and stores (5). Copies of the notices and flyers are included in Appendix A.

Several volunteers were recruited through postcards sent to mothers from a childbirth preparation class list and newspaper birth announcements (14 responses from 71 postcards sent). These postcards briefly described the study and invited mothers to call the researcher to participate. A copy of the postcard used for the study is included in Appendix A.

Additional subjects were recruited through telephone calls made by the researcher to mothers whose names were passed on by previous subjects (30), or by friends and acquaintances of the researcher (10). Mothers who responded to ads or flyers and contacted the researcher to volunteer did not differ on any of the

measures from those mothers who were contacted by the researcher by phone or by postcard and asked to participate.

During the initial phone call, subjects were told that the researcher was studying mothers of infants and was interested in their opinions about several parenting issues to be assessed via questionnaires which would take 30 to 45 minutes to complete. As an incentive to complete the forms, mothers were told that a packet of parenting and child development information and coupons for baby products would be sent to them once their questionnaires were returned. (A script of what mothers were told during the initial phone call is included in Appendix A.)

All of the mothers who called or were contacted by the researcher agreed to participate. Each participant was mailed a packet containing a letter repeating what they were told over the phone about the study, an informed consent form attached to the letter, the questionnaires combined in booklet form, and a self-addressed stamped envelope. They were asked to complete the forms within a few days and return them by mail. Most questionnaires were completed and returned within one to two weeks. A reminder letter was sent to seven subjects whose questionnaires were not received within

one month; three of these subsequently returned them. A copy of the cover letter/informed consent form and the follow-up letter are included in Appendix A.

Although an attempt was made to speak directly with each subject prior to sending the questionnaires, several additional subjects had no contact with the researcher about the study. Two participating mothers had requested questionnaires for friends (because they didn't know their phone numbers or didn't want to give them out) and a day care center and two leaders of classes for new mothers agreed to distribute questionnaires directly to qualifying mothers in their groups. The cover letter included with these surveys differed slightly from the standard cover letter to briefly introduce the researcher. A copy of this cover letter is included in Appendix A.

Five of the questionnaires given out through the new mothers' classes were not returned, resulting in a return rate of 72% for mothers who did not discuss the study with the researcher, while 97% of the mothers who talked to the researcher completed the questionnaire. The 11 mothers who had no contact with the researcher did not differ on any of the measures from mothers who discussed the study with the researcher.

When the completed forms were received by the researcher, a packet containing a brief thank-you note, coupons for baby products, and parenting information was mailed to the subjects, using their name and address from the cover of the questionnaire booklet as a mailing label. A list of the contents of the packet is included in Appendix A.

Measures

The instruments were presented in the questionnaire booklet in the following order: Catalog of Previous Experience, Maternal Self-Efficacy Scale, Lips Maternal Self-Confidence Scale, Survey of Beliefs about Parenting Infants, Knowledge of Infant Development Inventory, and the demographics questionnaire. The instruments were pilot tested on a convenience sample of three mothers to check for clarity of instructions, ambiguous or questionable items, and time needed for completion. No revisions were made on the basis of pilot testing.

The instruments were printed on the front and back of 8 1/2" X 14" paper in such a way that they could be folded together and stapled in the center into booklet form in hopes that an attractive and professional appearance would encourage a good response rate. A title, 'New Mothers Survey', appeared on the cover of the booklet, followed by brief instructions, a place for

the subjects' name and address, space for subjects to list other new mothers who may be interested in participating, and a place to indicate interest in receiving a summary of the results of the research. A copy of the booklet cover is presented in Appendix B.

Dependent Variable

Perceived parental self-efficacy. Perceived parental self-efficacy was measured using two self-report instruments, the Maternal Self-Efficacy Scale (MSES; Teti & Gelfand, 1991), and the Lips Maternal Self-Confidence Scale (LMSCS; Lips, 1984). The use of these two measures was designed to tap mothers' feelings of efficacy for both the day-to-day parenting tasks and a more global feeling that they are doing a good job of raising their infant in a general sense.

The Maternal Self-Efficacy Scale, which is presented in Appendix C, consists of 10 Likert items which were written to assess mothers' feelings of self-efficacy for specific parenting situations and domains. Nine items ask mothers to rate their competence at a specific parenting task (i.e., soothing the baby, understanding the baby's needs, entertaining the baby) on a 4-point scale ranging from 'not good at all' to 'very good' (with the exception of one item which has different anchors specific to the question), and the

final item asks for a global assessment of maternal competence, again rated from 'not good at all' to 'very good'. Scores for the scale are obtained by summing responses of the 10 items, with higher scores indicating greater self-efficacy. Reliability of the Maternal Self-Efficacy Scale as assessed by Cronbach's alpha has been measured at .79 and .86 on two samples of mothers (Teti & Gelfand, 1991; Teti, Gelfand, & Pompa, 1990); and concurrent validity has been established by a sizable and significant correlation with the Sense of Competence Scale of Abidin's (1986) Parenting Stress Index (Teti & Gelfand). Cronbach's alpha computed using the data from the current sample was .74.

The Lips Maternal Self-Confidence Scale, presented in Appendix D, was originally designed to be used with mothers of 6-week-old infants, but all items appear to be appropriate for use with older infants. The 24 Likert items in this scale reflect mothers' general feelings of competence in the maternal role (e.g., Mothering comes very easily to me; I worry a lot about whether I am doing the best thing for my child), and are rated on a 6-point scale from 'strongly disagree' to 'strongly agree'. Approximately half of the items are reverse coded, with lower scores indicating greater confidence. Scores for the scale are obtained by

recoding reverse coded items and summing all item scores, so that high total scores indicate greater confidence. Norms for the instrument were obtained on a sample of 177 mothers of heterogeneous backgrounds, and scores were found to be normally distributed (Lips, Bloom, & Barnett, 1988), with a mean of 114.24 (out of a possible score of 144) and a standard deviation of 12.37. Reliability was established using test-retest (r = .88) and internal consistency (Cronbach's alpha = .88 to .91) procedures. As evidence of validity, Lips, Bloom, & Barnett report that mothers' previous childcare experience is a significant predictor of scores on the LMSCS. Data from the current sample yielded a Cronbach's alpha of .89.

Independent Variables

Childrearing beliefs. Although many instruments exist which assess childrearing beliefs (see Holden & Edwards, 1989 for a review), no instrument could be located which was geared specifically toward parents of infants and which had demonstrated acceptable levels of reliability in previous use. Although research has been conducted with parents of infants using instruments designed to assess childrearing beliefs among parents of older children (Ernhart, 1975; Holden & Edwards; Kochanska, 1990; Kochanska, Kuczynski, & Radke-Yarrow,

1989), parents have difficulty responding to items which are inappropriate for their child's age range (Holden & Edwards). In such cases, parents' responses to these items are often based on their projections of how they plan to behave as parents in the future, which introduces a potential source of bias.

For this study, an instrument was developed to assess childrearing beliefs which is appropriate to use with parents of infants. This instrument, the Survey of Beliefs about Parenting Infants (SBPI), was designed to tap two dimensions which have repeatedly emerged in the literature as distinct factors in parents' childrearing beliefs: parental control vs. encouragement of autonomy, and nurturance of the child and acceptance of the parental role (see Kochanska, Kuczynski, & Radke-Yarrow, 1989; Maccoby & Martin, 1983). A table of specifications for the instrument was drawn up (see Appendix E), an item pool was developed by collecting individual items from such instruments as the Parent Attitude Research Instrument (Schaefer & Bell, 1958), the Parental Attitudes toward Childrearing questionnaire (Easterbrooks & Goldberg, 1984), the Ideas About Parenting questionnaire (Heming, Cowan, & Cowan, 1985), the Parental Beliefs Survey (Luster, 1985), and several others. A questionnaire consisting of 37 items selected

from the pool was assembled and used for this research. The questionnaire is included in Appendix E.

The items selected for the first dimension, parental control vs. encouragement of autonomy, were written in four subareas: importance of discipline and discipline methods endorsed (discipline; 5 items), encouragement of autonomy (autonomy; 5 items), strictness (strictness; 5 items), and freedom to explore (freedom; 5 items). The second dimension, nurturance of the child/acceptance of the parental role, was made up of three subareas: beliefs about spoiling (spoiling; 5 items), beliefs in infants' need for warmth and affection (affection; 6 items), and feelings of enjoyment/aggravation regarding the parental role (enjoyment; 6 items).

The questionnaire is presented in the Likert format, with a 5-point response scale, ranging from 'strongly disagree' to 'strongly agree'. Approximately half of the items are reverse coded, with lower scores indicating less desirable attitudes about parenting. Scores for the scale are obtained by recoding reverse coded items and summing all item scores, so that high total scores indicate more appropriate parenting beliefs. Cronbach's alpha for the complete instrument computed on the current sample was .85.

Although the current sample was not large enough to perform factor analysis on the scale, internal reliability was computed for each of the seven a priori subscales for which items were written. Cronbach's alpha for each subscale was as follows: for discipline, $\alpha = .49$; for autonomy, $\alpha = .61$; for strictness, $\alpha = .64$; for freedom, $\alpha = .46$; for spoiling, $\alpha = .78$; for affection, $\alpha = .34$; and for enjoyment, $\alpha = .70$.

For the present, evidence of validity of the instrument consists of the face validity of the items and of the table of specifications from which the instrument was developed.

Knowledge of infant development. A shortened version of the Knowledge of Infant Development Inventory (KIDI; MacPhee, 1981) was used to assess subjects' knowledge of infant development. This instrument was written to tap knowledge of developmental processes, effective rearing strategies, and developmental timetables. The questionnaire has two parts. In the questionnaire's original form, the first section consists of 39 statements about developmental issues (e.g., Infants understand only words they can say; The baby's personality or temperament is set by 6 months of age), followed by an agree/disagree/not sure response format. The second part of the questionnaire consists of

19 developmental milestones, each paired with an age (e.g., Most babies can sit on the floor without falling over by 7 months; A 1-year-old knows right from wrong), followed by the response selection 'agree', 'younger' (meaning that a younger child would show the behavior), 'older' (meaning that an older child would show the behavior) or 'not sure'. A Cronbach's alpha of .83 has been obtained for the complete instrument (D. MacPhee, personal communication, November 10, 1992). Evidence of validity of the instrument includes its relationship with experience with infants and its sensitivity to intervention.

To shorten the instrument, the item categories of parenting (which overlapped the constructs tapped by the childrearing beliefs instrument) and health and safety were eliminated. The remaining categories, norms and milestones, principles of development, and individual differences, were retained, but three easier items which had not been found to contribute to the reliability of the scale were deleted (D. MacPhee, personal communication, November 10, 1992). The remaining items included 15 of the developmental issues items and all 19 of the developmental milestone/age pairing items. Scores were obtained by coding each item as correct or incorrect and computing the percentage correct. A copy

of the shortened version of the KIDI is included in Appendix F. For the current sample with the shortened version of the instrument, a Cronbach's alpha of .58 was obtained.

Experience with infants. A portion of the Catalog of Previous Experience with Infants (COPE; MacPhee, 1984) was used to assess experience with infants. The COPE is a 27-item questionnaire, consisting mostly of Likert items. Fifteen items from the COPE which assess the amount of time spent in various infant care situations (five Likert items listing situations with five response categories ranging from 'never have' to 'every few days', and one question about the number of infants known) and sources of information used to learn about infants (seven Likert items with four response categories ranging from 'very little' to 'a lot', and two questions about number of classes about infants taken) were selected. Items from the COPE which assess enjoyment of previous experiences and the quality of one's role models were not used for this study. Because of the different ranges of responses these questions called for, responses were transformed into *z* scores before being summed for a total score. A copy of the version of the COPE used for this research is presented in Appendix G. Reliability of the COPE had not been

determined (D. MacPhee, personal communication, October 6, 1992), but the current sample with the shortened version of the COPE yielded a Cronbach's alpha of .74.

Demographic variables. Several demographic variables of interest in this research were assessed via self-report. Marital status, education, and occupation were used to compute SES using the Hollingshead Four Factor Index of Social Status (Hollingshead, 1975). In addition, information on age and ethnicity were collected. A copy of the demographic questionnaire is included in Appendix H.

Data Analysis

Preliminary data analysis examined the descriptive statistics for each of the measures employed.

During the second phase of data analysis, inferential statistics were used to address the research questions. Multiple regression was performed to assess how the independent variables in combination were related to the dependent variables, and correlations between each independent variable and perceived parental self-efficacy were computed. Finally, the intercorrelation between the measures of the dependent variable was computed and relationships among the independent variables were examined.

Limitations

The study has several limitations, stemming from the nature of the sample, the measures being employed, and the technique used for data analysis.

First, the sample is composed of mothers who are mostly white, married, well-educated, and middle class. Because the results obtained may be very different with other groups of mothers, generalization beyond this population is not advisable.

In addition, because the sample is composed of volunteers, it may not be representative of the target population. Concerns have been raised that people who volunteer for research may differ in some ways from people who decline to participate (Borg & Gall, 1983). Again, caution should be taken in generalizing the results beyond a similar sample.

The second set of limitations is associated with the measures being used in the study. Self-report data should be interpreted with caution, since there is limited evidence that self-reported behavior mirrors observed behavior (Holden & Edwards, 1989). In addition, the Likert response format used in this research has been criticized (Holden & Edwards) as often being vague, with distinctions between the probability terms usually employed subject to individual

interpretation. An attempt has been made in each of the instruments in this study to give a response anchor to each point on the Likert scale to reduce the ambiguity of the middle of the range and items have been scrutinized to ensure that the responses presented are appropriate for the stems of each of the items.

The final limitation mentioned above is associated with the correlational techniques of data analysis used in this study. Causal relationships cannot be determined using correlational techniques, so the interpretation of the results must be limited to discussions of associations between variables.

Chapter IV

Results

Scores were computed for all of the questionnaire variables. There were very little missing data; in all only 21 items were left blank. Two missing pieces of data were demographic items, which were coded as missing. For the scale scores, in order to retain as much useful information as possible and minimize subject loss through listwise or casewise deletion of data, item means were substituted for missing items in cases for which only one item was missing for a scale. In two cases where several items for the COPE scale were left blank, a scale score was not computed. All computations are based on 113 subjects unless noted otherwise.

Because of the small number of non-white (African American and Native American) subjects, these categories were combined. Ethnicity was dummy coded for use in regression equations, with 0 representing non-white, and 1 representing white categories.

Descriptive Data

Descriptive data for the instruments used are provided in Table 2. The scores from each of the measures were normally distributed, except for the Maternal Self-Efficacy Scale, which had a distribution skewed to the left and leptokurtic. To force a more

Table 2

Descriptive Data for the Instruments Used

	Scale Mean	SD	Range
Maternal Self-Efficacy Scale (MSES)	34.35	2.79	24 to 39
Lips Maternal Self-Confidence Scale (LMSCS)	115.09	12.99	71 to 139
Survey of Beliefs about Parenting Infants (SBPI)	154.39	14.23	117 to 184
Knowledge of Infant Development Inventory (KIDI)	.75	.10	.41 to .94
Catalog of Previous Experience (COPE) (n = 111)	.06	7.02	-13.37 to 26.46

normal distribution, the score of one outlier on this variable was transformed to a value closer to the remainder of the distribution.

Hypotheses Results

Multiple regression of each of the measures of the dependent variables on the set of six independent variables was performed. The combination of variables did predict the Maternal Self-Efficacy Scale scores ($\underline{R}$ = .40, $\underline{R}^2$ = .16, adj$\underline{R}^2$ = .11, $\underline{F}$ [6, 102] = 3.24, $\underline{p}$ < .05), but did not adequately predict the Lips Maternal Self-Confidence Scale scores ($\underline{R}$ =.33, $\underline{R}^2$ = .11, adj$\underline{R}^2$ = .05, $\underline{F}$ [6, 102] = 2.01, $\underline{p}$ > .05).

To test the individual hypotheses, zero-order correlations were computed between the measures of the dependent variables and each of the six independent variables. Of the questionnaire measures, the KIDI did not show any relationship with the Maternal Self-Efficacy Scale or the Lips Maternal Self-Confidence Scale, but the SBPI and the COPE did show modest but significant correlations with both of the self-efficacy measures. None of the demographic variables were related to either of the self-efficacy measures. Table 3 presents the correlations between the independent and dependent variables.

Table 3

Zero-order Correlations Between Independent Variables and Self-Efficacy Measures.

	Maternal Self-Efficacy Scale	Lips Maternal Self-Confidence Scale
Questionnaire Measures		
SBPI	.21*	.18*
KIDI	.04	.13
COPE	.31 (n = 111)***	.17 (n = 111)*
Demographic Variables		
SES	-.04 (n = 112)	-.12 (n = 112)
Mother's age	-.02	.05
Ethnicity	.01 (n = 112)	-.03 (n = 112)

* p < .05; *** p < .001.

Hypothesis 1

The first hypothesis predicted no relationship between childrearing beliefs and perceived parental self-efficacy. This hypothesis was not supported by the data. It appears that there is a positive relationship between childrearing beliefs and perceived parental

self-efficacy, although the magnitude of the relationship is small, accounting for less than 5% of the variance between childrearing beliefs and each of the two measures of self-efficacy (see Table 3).

To test which aspects of childrearing beliefs are related to perceived parental self-efficacy, multiple regression was performed using the subscales of the SBPI to predict both measures of the dependent variable. The set of subscales significantly predicted both the MSES (R = .48, R^2 = .23, adjR^2 = .18, F [7, 105] = 4.53, p < .001) and the LMSCS (R = .68, R^2 = .46, adjR^2 = .42, F [7, 105] = 12.98, p < .001). The individual correlations between the subscale scores and the dependent measures were then examined (see Table 4). A similar pattern of results emerged for both the MSES and the LMSCS, with the subscale measuring enjoyment/ aggravation regarding the parental role having the largest correlation with perceived parental self-efficacy, and most of the other subscales having no relationship. Because of the a priori nature of the subscales, these relationships should be interpreted as approximations which indicate an important direction for further research.

Table 4

Zero-order Correlations Between SBPI Subscales and Self-Efficacy Measures.

	Maternal Self-Efficacy Scale	Lips Maternal Self-Confidence Scale
Discipline	.16*	.09
Autonomy	.04	.00
Strictness	.07	-.03
Freedom	.25**	.18*
Spoiling	.06	.09
Affection	.10	.11
Enjoyment	.40***	.64***

* $p < .05$; ** $p < .01$, *** $p < .001$.

Hypothesis 2

The second hypothesis was that knowledge of infant development was positively related to perceived parental self-efficacy. The data do not support this hypothesis (see Table 3). The low reliability of the KIDI hampers drawing decisive conclusions about the relationship between these two variables.

Hypothesis 3

It was hypothesized that amount of previous experience with infants would be positively related to perceived parental self-efficacy. The data support this hypothesis; it appears that, especially for the specific parenting situations and domains tapped by the MSES, experience with infants is associated with more positive feelings about one's parenting abilities (see Table 3). To check whether the amount of experience (in terms of elapsed time) with one's own infant is related to self-efficacy, correlations between babies' age and the dependent measures were computed. For both the MSES and the LMSCS, the relationships were not significant (r = -.02; p > .05).

Hypothesis 4

It was predicted that SES would be positively related to perceived parental self-efficacy. There was no evidence to support this hypothesis (see Table 3).

Hypothesis 5

Maternal age was hypothesized to be positively related to perceived parental self-efficacy. The data did not support this hypothesis (see Table 3).

Hypothesis 6

The final hypothesis predicted that white mothers would have higher levels of perceived parental self-

efficacy than nonwhite mothers. This hypothesis was not supported by the data (see Table 3), although the low proportion of nonwhite mothers in the sample could not have allowed for accurate comparison.

Other Results

Relationship Between Measures of the Dependent Variable

The Pearson correlation coefficient computed between the Maternal Self-Efficacy Scale and the Lips Maternal Self-Confidence Scale was .68 ($p < .001$).

Relationships Among Independent Variables

Relationships among demographic variables. The three demographic variables were intercorrelated; the relationship between maternal age and SES was .43 ($n = 112$; $p < .001$), between SES and ethnicity was .28 ($n = 111$; $p < .001$), and between maternal age and ethnicity was .18 ($n = 112$; $p < .05$).

Relationships among questionnaire measures. The only significant correlation between the independent questionnaire variables was between the KIDI and the SBPI ($r = .40$; $p < .001$).

Relationships between questionnaire measures and demographic variables. There were several significant correlations between questionnaire measures and demographic variables. The SBPI was positively related to mother's age and SES; the KIDI was positively related

to SES and ethnicity, and the COPE was negatively related to maternal age (see Table 5).

Table 5

Zero-order Correlations Between Questionnaire Measures and Demographic Variables.

	Maternal Age	SES	Ethnicity
SBPI	.24 **	.31 (n=112)***	.13 (n = 112)
KIDI	.08	.18 (n = 112)*	.20 (n = 112)*
COPE	-.17 (n = 111)*	-.13 (n = 110)	-.10 (n = 110)

* p < .05; ** p < .01; *** p < .001.

Chapter V

Discussion

Mothers' feelings of self-efficacy in the parenting role have been measured in various studies and related to several variables, but little is actually known about the nature of perceived parental self-efficacy among mothers of infants. This lack of knowledge about the influences which shape parents' feelings of self-efficacy and other aspects of parenting which relate to it leaves researchers with a rather incomplete picture of this construct. It should not be surprising, then, that relationships between perceived parental self-efficacy and parenting behaviors are difficult to capture and explain.

Perceived parental self-efficacy has been thought of by researchers as a positive trait which enables mothers to perform effectively as parents of infants. This assumption, which follows the thinking of Bandura's self-efficacy theory, has for the most part been accepted without challenge. The present research was undertaken in part to investigate the assumption that high self-efficacy in the parenting role is necessarily associated with positive parenting by examining its relationship with other variables which are thought to contribute positively to parental behavior with infants:

appropriate childrearing beliefs, knowledge of infant development, and previous experience caring for infants. It is important that perceived parental self-efficacy be examined in conjunction with such parenting cognitions before judgment is made about its significance for good parenting. In addition to parenting cognitions, demographic variables were assessed to see whether such characteristics are related to mothers' levels of confidence in their parenting abilities. Although the scope of this research is not broad enough to determine how the variables under study relate to maternal behavior, it was an attempt to begin to illuminate the construct of perceived parental self-efficacy as it relates to other parental variables.

Predictions were made on the basis of self-efficacy theory about the expected direction of the relationships assessed. Because the theory offered no position on the relationship between childrearing beliefs and perceived parental self-efficacy, the null hypothesis was tested for this relationship. Positive relationships were foreseen between the dependent variable and knowledge of child development, experience with infants, SES, and maternal age. In addition, ethnicity was expected to be related to self-efficacy, with white mothers displaying higher levels than nonwhite mothers.

Summary of Findings

Of the variables under study, only childrearing beliefs and experience with infants showed significant relationships with perceived parental self-efficacy. Knowledge of infant development, SES, maternal age, and ethnicity were found to be unrelated to the measures of self-efficacy.

Although the expected relationships between the demographic variables and self-efficacy were not found, the outcomes for SES and maternal age are not out of line with previous research. SES has previously been found to be unrelated to self-efficacy (Gross, Rocissano, & Roncoli, 1989; Reilly, Entwisle, & Doering, 1987), and mixed results have been obtained with regard to age (Gross, Rocissano, & Roncoli; Luster & Rhoades, 1989). The finding of no relationship between the dependent measures and ethnicity is contrary to previous research, which has uncovered relationships in the expected direction (Gross, Rocissano, & Roncoli), but the lack of ethnic diversity in the present sample prohibits conclusive interpretation of this relationship.

Although it was predicted on the basis of self-efficacy theory that mothers with a greater knowledge of infant development would have higher self-efficacies, no

relationship was found. At least part of the explanation for the unexpected result lies with the measurement of the knowledge variable. The shortened version of the KIDI was not as reliable as anticipated, which put a limit on the extent of its relationship with other variables. Assessing knowledge of infant development presents a special difficulty because most instruments which posses good psychometric qualities have the appearance of tests. The implications of using a measure which may cause anxiety in some subjects must be weighed against the possible loss of information if less stress-producing instruments are employed.

Other than measurement problems, a possible explanation for the lack of relationship obtained between knowledge and self-efficacy may be that the effects of knowledge are not straightforward. For example, more knowledgeable mothers' understanding of the complexities of raising an infant may counterbalance any positive effect that greater knowledge has on self-efficacy. An alternative explanation, reflecting Bandura's ideas about the effects of self-efficacy in a learning situation, suggests that mothers with lower self-efficacies have sought out more knowledge about infant development, but their increased knowledge did not result in a corresponding increase in self-efficacy.

The relationships between experience with infants and the dependent measures are interesting. Although the correlations are not high, they are in the expected direction, with mothers who report more previous experience with infants feeling more assured about their parenting abilities.

As might be anticipated, previous experience with infants was more highly correlated with the more specific, task-based measure of self-efficacy. The relationship between experience and the general measure of parental self-efficacy was minimal. Because this is a correlational relationship, it is not possible to attribute cause and effect between the variables; therefore there are several possible valid explanations for the relationship. In line with self-efficacy theory, the relationship may indicate that having taken care of young children previously gives mothers a sense that they can perform the specific jobs that parenting requires, and to a lesser degree, a sense that they can be good mothers to their infants. Alternatively, it is possible that women who feel that they have the capacities to be competent mothers seek out experience with infants prior to having their own.

The relationship between experience with infants and self-efficacy does not extend to amount of

experience (in terms of elapsed time) with one's own infant across the six-month age-span covered in this study. Mothers of older infants do not tend to have higher levels of self-efficacy than mothers of younger infants, although it is important to keep in mind that this is a cross-sectional, not longitudinal comparison. In addition, there are likely to be many other factors, such as infant temperament (Cutrona & Troutman, 1986; Teti & Gelfand, 1991; Teti, Gelfand, & Pompa, 1990; Zahr, 1991), life stress (Teti, Gelfand, & Pompa; Williams et al., 1987), and social support (Cutrona & Troutman; Teti & Gelfand; Teti, Gelfand, & Pompa) at play over time which this research was not designed to investigate.

The relationships between previous experience and self-efficacy are not of the magnitude that self-efficacy theory would predict, since direct experience is thought to be the most important source of self-efficacy information. It is possible that previous experience with other infants is different enough from life with one's own infant that its effect on self-efficacy is minimized.

Although it was hypothesized that there would be no relationship between childrearing beliefs and perceived parental self-efficacy, a small but significant positive

correlation was uncovered. The size of the correlation, which accounted for less than 5% of the variance shared between beliefs and each of the self-efficacy measures, prohibits making persuasive statements that a positive sense of parental self-efficacy is associated with an appropriate set of childrearing beliefs.

Analysis of the subscales of the measure of childrearing beliefs revealed that the subscale measuring the dimension of enjoyment/aggravation regarding the parental role was most closely related to mothers' feelings of self-efficacy. This was especially true for the general parental self-efficacy measure, where the relationship was rather substantial. Not surprisingly, mothers who enjoy their roles as parents also feel positive about their parenting capabilities.

Two other subscales also showed some relationship to self-efficacy: the measurement of the importance of discipline and discipline methods endorsed and the measurement of freedom to explore. The discipline subscale was slightly correlated with the task-specific measure of self-efficacy but was unrelated to the more general measure. The freedom subscale was related to both measures of self-efficacy, but again the relationships were not strong. Once more, both of these correlations support the idea that high self-efficacy is

associated with appropriate childrearing beliefs, but the magnitudes of the relationships limit the applicability of this notion in real-life situations.

The subscales measuring encouragement of autonomy, strictness, beliefs about spoiling, and beliefs in infants' need for warmth and affection were not related to either measure of perceived parental self-efficacy. In the absence of relationships between these dimensions and self-efficacy, it is possible for mothers to hold undesirable beliefs in these areas and still feel that they are doing a good job as parents. This is incompatible with the assumption that self-efficacy has a positive influence on maternal behavior and may account for the lack of consensus in the debate about the link between mothers' feelings of self-efficacy and their behavior with their babies.

Although the dependent variable, perceived parental self-efficacy, was found to be significantly related to experience with infants and childrearing beliefs, interpretations of these relationships must be made with extreme caution since the magnitudes of the relationships were small. Although the COPE and the MSES shared almost 10% of their variance, the remaining significant relationships accounted for less than 5% of the variance between the measures being assessed. This

leaves an overwhelming majority of the variance unexplained. Much has been written about the difference between significance and meaningfulness (Chow, 1988; Harcum, 1989; Harmatz & Greenblatt, 1992; Thompson, 1989); the admonitions about misinterpreting statistical significance as realistically useful information must be heeded.

The results of this study indicate that caution should be taken in reasoning that perceived parental self-efficacy is associated with appropriate parenting skills and behaviors. The relationship between self-efficacy and childrearing beliefs, although significant, is small enough that a positive sense of self-efficacy is still associated with a wide range of childrearing beliefs, and therefore possibly with a wide range of parenting behaviors. The weak link between these two variables may mean that parents, regardless of the appropriateness of their beliefs, evaluate their efficacy as parents based on the skillsets which fit the beliefs they hold. In this case, the relationship of self-efficacy to behavior could only be tested by relating perceived parental self-efficacy to the specific set of beliefs a parent holds.

Conclusions

Mothers with higher levels of perceived parental self-efficacy tended to hold more appropriate childrearing beliefs and report more previous experience with infants. In particular, mothers indicating more previous experience with infants were more likely to report greater self-efficacy for specific parenting tasks. No relationships were found between self-efficacy and knowledge of infant development or the demographic variables. Certain childrearing beliefs were especially likely to be held by mothers with higher self-efficacies: More confident mothers tended to express more enjoyment and less aggravation about parenting, and to a lesser degree, indicated more appropriate attitudes about discipline, and more willingness to give their infants freedom to explore. There were no relationships between self-efficacy and mothers' endorsement of encouragement of autonomy, ideas about strictness, beliefs about spoiling, or belief in infants' need for warmth and affection.

In conclusion, the results of this research give some indication that perceived parental self-efficacy is related to childrearing beliefs and previous experience with infants.

Implications for Practice

The results of this research have implications for parent education. People who work with parents have often said that those parents who sign up for parent education courses and read books on parenting are not the parents who need the most help; those parents are at home thinking they don't need much outside guidance in raising their children. This research supports such observations: Mothers' feelings of confidence in their parenting abilities do not necessarily reflect the fact that they have adequate knowledge of child development or appropriate ideas about how to raise their infants. Indeed, the mothers who skip the parent education seminars because they are confident in their abilities may have very different ideas about parenting infants from what they might have heard if they had attended. Self-efficacy theory would predict such an occurrence. Bandura asserts that people with lower self-efficacies are more motivated in a learning situation, while those with higher self-efficacies may not feel the need to exert the effort to gain more knowledge. This may be especially true for parents who have high self-efficacies, and who know that the "experts" disagree with them. Not only would their motivation to learn be low, but to endure the discomfort of having their

beliefs challenged would make it unlikely that they would seek out such a situation. For parent educators, this may mean that the population who most need their services is the most resistant to receiving them.

One job of parent educators, then, is to develop confidence among mothers who have adequate knowledge and appropriate childrearing beliefs. Self-efficacy theory would suggest that reassuring such parents that parenting well is within their capabilities may help them become better parents. It is more of a challenge to develop parent education programs to reach parents at the opposite end of the spectrum, those whose confidence is high but knowledge inadequate and beliefs inappropriate. Prevention may be the best hope: Parent education beginning in middle school may increase knowledge and shape childrearing beliefs before clear feelings of adequacy develop and preclude further input. For those hard-to-reach parents who are firmly entrenched in their inappropriate beliefs and high self-efficacies, such methods as public service announcements on television about appropriate parenting may, over time, plant the notion that alternative parenting techniques are valid and effective and arouse an interest in learning more.

Suggestions for Further Research

The results of this study point to the need for further research in this area. Self-efficacy theory may have some implications for parenting behavior. What is needed for a clearer understanding of the relationship between self-efficacy and behavior is more knowledge about the factors which may influence the relationship.

An area for investigation is the effect of feedback on self-efficacy. Parents get little empirical feedback about the job they are doing. The feedback they do receive is usually in the form of commentary from others about their performance; seldom do they receive results-oriented feedback. Bandura maintains that confidence must be combined with the necessary skills to perform well, but the shortage of feedback makes parents' assessments of their skills difficult. This makes the relationship between skills and outcome unclear and gives parents very little on which to base their judgments of self-efficacy. Helping parents see that specific behaviors they perform (such as reading daily to a one-year-old) result in specific outcomes in their infants (such as increased vocabulary) and observing the effects on self-efficacy would be informative.

Parents' differing skill levels also may come between self-efficacy and behavior, and this is another

area to address in further research. Specific skills which are thought to be essential for effective parenting, such as patience and listening skills, could be assessed and related to self-efficacy and behavior.

Self-efficacy theory addresses the area of outcome expectancies, and this is another important area for further research. Parents who believe that what they do has little effect on how their child turns out may behave very differently from parents who think they have a great deal of influence on their child's outcome, even if their levels of self-efficacy are similar. This is especially relevant in today's society, where there is widespread belief that even children of the best parents can be profoundly affected by extrafamilial influences. Measuring outcome expectancies and relating them to perceived parental self-efficacy and parenting behavior could be very informative.

The results of this study are limited because its conclusions must be restricted to the population to which it can be generalized. Further research should attempt to employ more diverse samples in terms of ethnicity, age, and SES, to see if the relationships found here hold true among wider groups of mothers. In addition, a range of parity could be examined to see what influence mothers' experience with their previous

children has on self-efficacy. It would also be interesting to investigate relationships between these variables among fathers and among parents of older children.

In summary, research is needed investigating the relationship between perceived parental self-efficacy and parenting behavior in conjunction with other variables which may influence the effects: skills necessary for good parenting, feedback about performance, outcome expectancies childrearing beliefs, and knowledge of infant development. Such research should be undertaken using more diverse samples of subjects. Knowing more about the variables which effect the relationship will help us decide whether it is appropriate to look upon high self-efficacy as a positive quality for parents to possess.

It is hoped that the results of this research and further research in this area will increase the body of knowledge about the nature of perceived parental self-efficacy among mothers of infants, so that the construct can be used appropriately in research and so that parent educators can foster suitable feelings of confidence along with the other skills essential for good parenting.

Appendix A

Communication with Subjects

The following materials were used to recruit subjects, explain the study to potential subjects, obtain informed consent for the study, and thank subjects for their participation.

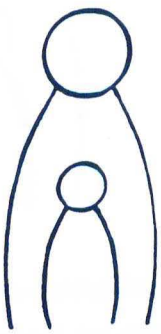
1. A notice which was placed in local newspapers and parents' guides
2. Flyers (large and small) which were distributed to a mothers' group and placed in pediatricians' offices and stores
3. A postcard which was sent to mothers from a childbirth preparation class list and newspaper birth announcements
4. The script of what mothers were told during the initial phone call
5. Two versions of a cover letter/informed consent form: one for subjects with whom the researcher discussed the study before sending the questionnaire; the other for subjects who received the questionnaire from another source
6. The follow-up letter sent to subjects who had not returned their questionnaires within one month
7. A "thank you" packet sent to all participants when the completed forms were received by the researcher

Notice Placed in Local Newspapers and Parents' Guides

First-time mothers of 6 to 12 month-old infants are needed to complete a confidential questionnaire on motherhood and parenting infants for University of Maryland graduate student's research. The questionnaire is sent through the mail, takes 30-45 minutes to complete, and participants receive coupons for baby products and parenting information. Call Anne Luebering at (410) 836-7995 (feel free to call collect if necessary).

Flyers

Two types of flyers were used: small (4 1/4" X 5 1/2") flyers printed on blue paper and large (8 1/2" X 11") flyers printed on yellow paper.

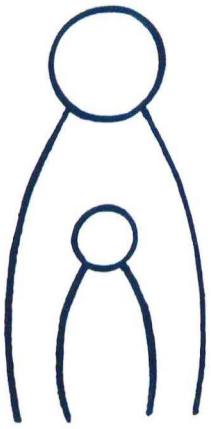


NEW MOTHERS

First-time mothers of 6 to 12 month old infants needed to complete questionnaire on motherhood and parenting infants for University of Maryland graduate student's research. Participants will receive coupons for baby products and useful parenting information.

The questionnaire is sent through the mail, takes 30-45 minutes to complete, and all responses are confidential!

Interested?
Call Anne Luebering
(410) 836-7995
(If it's long distance, call collect.)



NEW MOTHERS

First-time mothers of 6 to 12 month old infants needed to complete questionnaire on motherhood and parenting infants for University of Maryland graduate student's research. Participants will receive coupons for baby products and useful parenting information.

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Mothers survey
Anne Luebering
(410) 836-7995
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Mothers survey
Anne Luebering
(410) 836-7995

Postcard

The following text was printed on blue card stock (4 1/4" X 5 1/2"), hand-signed, and addressed on the reverse side to mothers from a childbirth preparation class list and newspaper birth announcements.

Dear New Mom,

I am a graduate student at the University of Maryland working on my doctoral research in human development. I am looking for **first-time mothers of 6 to 12 month-old infants** to complete a 30-45 minute questionnaire on motherhood and parenting infants. It's all done through the mail and it's completely confidential. To thank the mothers who participate, I am sending them a packet of coupons for baby products and useful parenting information.

As a mother of young children myself, I know how valuable 30 minutes of your time is, but I hope you'll take this opportunity to make a contribution which may help other new mothers. This kind of research, using volunteer mothers like yourself, is what lets people who work with parents, such as parent educators and pediatricians, know how new mothers feel and what sort of support they want in raising their children.

If you or anyone you know would be interested in participating by completing the questionnaire, please call me at **(410) 836-7995** (I live in Harford County, so if it's long distance, call collect) or drop me a line at the address on the front.

Thank you!!!

Script

The following is the script of what mothers were told during the initial phone call. The first paragraph was used only when subjects were being contacted by the researcher. When subjects called the researcher in response to an ad or a flyer, the first paragraph was eliminated and the conversation began with the second paragraph.

My name is Anne Luebering. I got your name from (name) . I'm a graduate student at the University of Maryland and I'm doing some research with first-time mothers of 6 to 12-month-old infants. (Name) helped me out by completing a questionnaire for me and she gave me your name thinking that you may be willing to do the same.

Let me tell you what I'm doing. I am working on my doctorate in Human Development, and this is my dissertation research. I am interested in learning more about first-time mothers of 6 to 12-month-olds and their feelings about several parenting issues, and I'm doing this by using a questionnaire, which takes about 30-45 minutes to complete. The questionnaire asks about your feelings on the best ways to raise an infant, your feelings about yourself as a mother, how much previous

experience you've had with infants, and your ideas about how babies grow and develop. It is completely confidential. I send the questionnaire through the mail and include a stamped envelope for you to return it to me. In return for your time (because I'm a mother myself, and I know that time is scarce when you have a baby), I've put together a packet of coupons for baby products and some parenting information that I'm sending to everyone who completes the survey. Does this sound like something you'd be willing to help with?

Cover Letter/Informed Consent Forms

There are two versions of the cover letter/informed consent form: one for subjects with whom the researcher discussed the study before sending the questionnaire; the other for subjects who received the questionnaire from another source. Both letters were formatted to fit onto a single sheet of paper and copied with the University of Maryland letterhead.

Dear New Mother,

Thank you so much for agreeing to help me with my doctoral dissertation research by sharing your feelings about parenting infants. Your opinions, along with those of the other mothers who assist with this research, are very valuable. You will be providing an important service to other new mothers because the results of this type of research allow people who work with parents of infants to understand what kind of support and information parents want and need to get off to a good start with their babies.

This questionnaire, which should take about 30-45 minutes to complete, asks for your opinions about a number of parenting issues: your opinions on the best ways to raise an infant, your feelings about yourself as a mother, your previous experience with infants, and your ideas about how babies grow and develop.

I hope you will find the time to complete the questionnaire in the next few days and mail it back to me in the enclosed envelope as soon as you can. When I receive your completed questionnaire, I will send you a packet of child development information and some coupons for baby products.

I want to reassure you that your answers to the questions will be completely confidential. Your name on the questionnaire booklet will be removed to use as a mailing label for the packet of parenting information and coupons. The consent form that you sign will be kept separately from your questionnaire, so no identifying information will remain with your responses. When I summarize the research, I will talk in general terms about the responses of the group of mothers who participated, not about the answers of any individuals.

Again, thank you for participating. If you have any questions about the study or the questionnaire, please call me at 836-7995 (call collect if it's long distance).

Sincerely,

Anne Luebering

Please sign and return the bottom of this form with your questionnaire.

I have decided to participate in a study of mothers of infants and to complete a questionnaire about parenting infants. My signature indicates that I have read and understand the information above and have decided to participate. I understand that I may withdraw my consent at any time without prejudice.

_____ _____

Signature Date

Dear New Mother,

I am a graduate student at the University of Maryland working on my doctorate in Human Development. For my dissertation research, I am interested in learning more about mothers of infants and their feelings about several parenting issues. I am hoping that you will help me by taking the time to complete the enclosed questionnaire, and in return, I will send you a packet of useful parenting information and coupons for baby products. Your opinions, along with those of the other mothers who assist with this research, are very valuable. You will be providing an important service to other new mothers because the results of this type of research allow people who work with parents of infants to understand what kind of support and information parents want and need to get off to a good start with their babies.

This questionnaire, which should take about 30-45 minutes to complete, asks for your opinions about a number of parenting issues: your opinions on the best ways to raise an infant, your feelings about yourself as a mother, your previous experience with infants, and your ideas about how babies grow and develop.

I hope you will find the time to complete the questionnaire in the next few days and mail it back to me in the self-addressed stamped envelope as soon as you can. When I receive your completed questionnaire, I will send you the parenting information and coupons.

I want to reassure you that your answers to the questions will be completely confidential. Your name on the questionnaire booklet will be removed to use as a mailing label for the packet of parenting information and coupons. The consent form that you sign will be kept separately from your questionnaire, so no identifying information will remain with your responses. When I summarize the research, I will talk in general terms about the responses of the group of mothers who participated, not about the answers of any individuals.

Again, thank you for participating. If you have any questions about the study or the questionnaire, please call me at 836-7995 (call collect if it's long distance).

Sincerely,

Anne Luebering

Please sign and return the bottom of this form with your questionnaire.

I have decided to participate in a study of mothers of infants and to complete a questionnaire about parenting infants. My signature indicates that I have read and understand the information above and have decided to participate. I understand that I may withdraw my consent at any time without prejudice.

_____ _____

Signature Date

Follow-up Letter

This letter was sent to subjects who had not returned their questionnaires within one month of when they were mailed.

1201 Brighton Lane
Bel Air, MD 21014
(Date)

(Name)
(Address)
(Address)

Dear (Name),

A few weeks ago, I mailed you a questionnaire on motherhood. Since I have not received it back yet, I wanted to let you know that I am still working on the research and still hoping to receive your response. I know it is often difficult with a baby to find time for such things, but your contribution is a very important part of my study and I hope you are still interested in participating. If you have not had time to complete the questionnaire, I hope that you will within the next few days. If you have any questions about the survey or the study, please call me at 836-7995.
Thanks again for your help.

Sincerely,

Anne Luebering

Contents of "Thank You" Packet

Listed below are the contents of the "thank you" packets sent to participants upon receipt of their completed forms. Most participants received all of the items listed, but a few items were no longer available toward the end of the research.

The Pink & Blue Pages (a Baltimore area phone directory for parents)

"Mr. Yuk" stickers (for identifying poisonous products in the home)

Poison Control Center phone stickers

Pamphlets on childproofing the home from the Poison Control Center and on parenting from the University of Maryland Cooperative Extension Service

Coupons for:

- 55¢ off Evenflo bottles
- 50¢ off Playtex bottles
- $1.00 off Enfamil formula
- $1.00 off Similac formula
- 2-50¢ off Carnation formula
- free jar Heinz baby food
- Beech-Nut baby food
- 3-35¢ off Baby Orajel products
- 35¢ off Desitin ointment

A note:

Enclosed are the coupons and parenting information I promised. I hope you will find them useful.

Thanks again for taking the time to complete my survey. I really appreciate your help. I will send you a summary of my findings when I finish my research--I hope by the end of the year. If the questionnaire raised any questions or issues that you would like to discuss with me, please feel free to call me at 836-7995.

Appendix B

Questionnaire Booklet Cover

The following is the cover of the questionnaire booklet as it was sent to subjects.

NEW MOTHERS SURVEY

Thank you for agreeing to participate in this study. Your responses to these questions are very important and I appreciate you taking the time to answer the questionnaire. Please mark a response for every question; try not to leave any blank.

Please print your name and address below. This will be used as a mailing label for your packet of coupons and parenting information.

Name _____

Address _____

_____

Do you know any other first-time mothers of 6 to 12 month old babies who might be interested in participating in this study? Please list their names and phone numbers here:

_____

_____

_____

_____ I would like to receive a summary of the results of the study when the research is completed.

Appendix C

Maternal Self-Efficacy Scale

The Maternal Self-Efficacy Scale (MSES; Teti & Gelfand, 1991) was the second instrument presented in the questionnaire booklet. The item numbers reflect placement in the booklet.

Next are some questions about yourself and your baby. I would like to get a general idea of how you usually handle different situations with your baby. I realize that no one is always effective or always ineffective, and we all do better in some situations than in others. I would like to have you think about some situations that all mothers encounter.

6. When your baby is upset, fussy or crying, how good are you at soothing him or her?

not good at all	not good enough	good enough	very good

7. How good are you at understanding what your baby wants or needs? For example, do you know when your baby needs to be changed or wants to be fed?

I do not understand my baby	I understand my baby some of the time	I understand my baby most of the time	I understand my baby all of the time

8. How good are you at making your baby understand what you want him/her to do? For example, if you want your baby to eat dinner or play quietly, how good are you at making him or her do that?

not good at all	not good enough	good enough	very good

9. How good are you at getting your baby to pay attention to you? For example, when you want your baby to look at you, how good are you at making him or her do it?

not good at all	not good enough	good enough	very good

10. How good are you at getting your baby to have fun with you? For example, how good are you at getting your baby to smile and laugh with you?

not good at all	not good enough	good enough	very good

11. How good are you at knowing what activities your baby will enjoy? For example, how good are you at knowing what games and toys your baby will like to play with?

not good at all	not good enough	good enough	very good

12. How good are you at keeping your baby occupied when you need to do housework? For example, how good are you at finding things for the baby when you need to do the dishes?

not good at all	not good enough	good enough	very good

13. How good do you feel you are at feeding, changing, and bathing your baby?

not good at all	not good enough	good enough	very good

14. How good are you at getting your baby to show-off for visitors? For example, how good are you at making your baby smile or laugh for people who visit?

not good at all	not good enough	good enough	very good

15. In general, how good a mother do you feel you are?

not good at all	not good enough	good enough	very good

Appendix D

Lips Maternal Self-Confidence Scale

The Lips Maternal Self-Confidence Scale (LMSCS; Lips, 1984) was the third questionnaire presented in the questionnaire booklet. The item numbers reflect placement in the booklet.

Next are a set of statements that mothers may make about motherhood and caring for an infant. Some of these may describe the way you feel, while others may not. Please respond to each item by circling the response that most closely matches they way you feel.

16. I am a good mother.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

17. I feel nervous and unsure of myself when dealing with my child.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

18. I don't think I have enough patience in dealing with my baby.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

19. Mothering comes very easily to me.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

20. I feel panicky when my child starts to cry.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

21. I'm not sure I can be the kind of mother I think I should be.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

22. I am not doing a very good job as a mother.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

23. I am sure that I can learn the skills I need to do a good job of raising my child.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

24. I am awkward and clumsy when handling the baby.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

25. I am the type of person who can be a good mother.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

26. Other people think I am good at being a mother.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

27. Generally, I feel secure and confident about being a mother.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

28. Sometimes the responsibility of being a parent seems like more than I can handle.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

29. I worry a lot about whether I am doing the best thing for my child.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

30. I am proud of the way I can calm my child down when s/he is upset.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

31. I know that I will be able to teach my child a lot.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

32. I can usually figure out what my child wants when s/he is upset.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

33. Being a mother seems to take more energy than I've got sometimes.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

34. I feel strong and protective when I'm with my child.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

35. Since becoming a mother, I feel as if I've been ill a lot more of the time.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

36. Many of my friends are better mothers than I am.

strongly disagree | disagree slightly | disagree slightly | agree slightly | agree | strongly agree

37. I need a lot of advice in handling my child.

strongly disagree	disagree	disagree slightly	agree slightly	agree	strongly agree

38. Motherhood is more difficult than I thought it would be.

strongly disagree	disagree	disagree slightly	agree slightly	agree	strongly agree

39. I am calm and relaxed when I am with my child.

strongly disagree	disagree	disagree slightly	agree slightly	agree	strongly agree

Appendix E

Survey of Beliefs about Parenting Infants

Included here are:

1. The table of specifications used to develop the Survey of Beliefs about Parenting Infants (SBPI)
2. The Survey of Beliefs about Parenting Infants as it was used for this research. This instrument was the fourth instrument presented in the questionnaire booklet. The item numbers reflect placement in the booklet.

Table of Specifications

Childrearing Beliefs

Two dimensions have repeatedly emerged in the literature as orthogonal factors in parents' childrearing beliefs: parental control vs. encouragement of autonomy, and nurturance of the child and acceptance of the parental role (see Maccoby & Martin, 1983). Although instruments are available for parents of older children which tap these dimensions (e.g., Block, 1981; Easterbrooks & Goldberg, 1984), these are not appropriate for use with infants. This instrument is being developed to assess mothers' beliefs about appropriate levels of control and nurturance in parenting infants.

Following are the content areas for which items were selected. The numbers following the areas refer to item numbers in the instrument as it appeared in the questionnaire booklet. Items which are to be reverse coded are followed by an (R).

1. Parental control vs. encouragement of autonomy (High scores reflect less desire for parental control and more encouragement of autonomy.)
   A. Importance of discipline and discipline methods endorsed: 41(R), 58, 70(R), 73(R), 76
   B. Encouragement of autonomy vs. control: 46(R),

54, 57(R), 59, 61(R)

C. Strictness: 47, 51(R), 64(R), 68, 72(R)

D. Freedom to explore: 40(R), 43, 44, 52, 65(R)

2. Nurturance of the child and acceptance of the parental role (High scores reflect greater nurturance and acceptance.)

A. Beliefs about spoiling: 42, 53(R), 67, 71(R), 74(R)

B. Belief in infants' need for warmth and affection: 45(R), 48(R), 50(R), 55, 56, 66

C. Feelings of enjoyment/aggravation regarding parental role: 49, 60, 62, 63, 69(R), 75(R)

Different parents have many different ideas about how babies should be brought up. I am interested in knowing your opinions about the best parenting practices with infants. Below are statements about how parents should raise their babies. Please give your opinion about each of these by circling the appropriate response.

40. Babies need to learn to play by themselves and therefore should spend a few hours each day in the playpen with little adult supervision.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

41. I believe that physical punishment is the best way of disciplining.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

42. You cannot spoil a tiny baby by picking him/her up every time he/she cries.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

43. I encourage my baby to be curious and to explore.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

44. An infant should be allowed to play with almost any object in the home that interests him/her, as long as the infant is safe and the object will not be damaged.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

45. I believe that too much affection and tenderness can harm or weaken an infant.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

46. A wise parent will teach a child early just who is boss.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

47. Other people will probably think I am permissive with my baby.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

48. Parents should limit how much they express the affection they feel toward their babies by limiting the amount of rocking, cuddling, and holding they do.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

49. I feel that my child and I have warm, intimate times together.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

50. Mothers who are very affectionate toward their babies are likely to have children who grow up being overly dependent on their mothers.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

51. I have strict rules for my baby.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

52. Infants will learn more if they do not spend much time in a playpen.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

53. Too much cuddling spoils a baby.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

54. I won't insist that my child eat food that he/she really dislikes.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

55. I believe that it is important to spend a lot of time talking to my baby even before he/she can understand what it is I am saying.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

56. I believe a baby should be given comfort and understanding when he/she is scared or upset.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

57. It is never too early to start teaching a child to obey commands.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

58. I believe that praising a child when he/she is good gets better results than punishing when he/she is bad.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

59. I encourage my baby to express anger as well as more positive emotions.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

60. I thoroughly enjoy spending time with my baby.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

61. One of the best ways to prepare an infant to be a good learner is to teach him/her to be obedient.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

62. I am easygoing and relaxed with my baby.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

63. I find some of my greatest satisfactions in my baby.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

64. A child will be grateful later on for strict training in the first year.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

65. In order to keep a baby out of mischief (that is, pulling things out of their proper places, playing with things that aren't toys, etc.), mothers should strictly limit the area of the house in which the baby is allowed to play.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

66. I express affection by hugging, kissing, and holding my baby.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

67. It is not possible to spoil an infant by giving him/her too much attention.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

68. If babies are raised with too many rules, they will grow up to be unhappy children.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

69. Taking care of a baby is much more work than pleasure.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

70. I believe that scolding and criticism make my baby improve.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

71. Responding quickly to an infant's crying encourages him/her to be demanding.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

72. Parents should be strict with their babies during the first year or they will be difficult to manage later on.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

73. The most important task of parenting an infant is disciplining the child.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

74. A baby is spoiled when he/she gets into the habit of being held and rocked frequently.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

75. I feel that there is a great deal of conflict between my baby and me.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

76. When my baby misbehaves, I talk to him/her and explain what he/she did wrong.

strongly disagree	disagree somewhat	neutral/ not sure	agree somewhat	strongly agree

Appendix F

Knowledge of Infant Development Inventory

The shortened version of the Knowledge of Infant Development Inventory (KIDI; MacPhee, 1981) which was used for the study is presented here. This was the fifth instrument in the questionnaire booklet. The item numbers reflect placement in the booklet.

The following questions ask you about how infants typically develop. Each question describes what might be the behavior of a typical infant or what could affect a baby's growth and behavior. For each statement, decide whether you AGREE, DISAGREE, or are NOT SURE of the answer. Please answer each item based on your knowledge of infants in general--how you think most babies act, how they grow, and how to care for them. Please be sure to check only one answer for each item.

		AGREE	DISAGREE	NOT SURE
77.	Babies cannot see and hear at birth.	A	D	NS
78.	Infants understand only words they can say.	A	D	NS
79.	If a child is shy or fussy in new situations, it means that he/she has an emotional problem.	A	D	NS
80.	The way a child is brought up has little effect on how smart he/she will be.	A	D	NS
81.	All infants need the same amount of sleep.	A	D	NS
82.	Babies have little effect on how parents care for them, at least until they get older.	A	D	NS
83.	A brother or sister may start wetting the bed or thumb sucking when the new baby arrives in the family.	A	D	NS

		AGREE	DISAGREE	NOT SURE
84.	The 2-year-old's sense of time is different from an adult's.	A	D	NS
85.	Most premature babies end up being abused, neglected, or mentally retarded.	A	D	NS
86.	Some healthy babies spit out almost every new food until they get used to it.	A	D	NS
87.	The baby's personality or temperament is set by 6 months of age.	A	D	NS
88.	The way the parent treats a baby in the first months of life determines whether the child will grow up to be well-adjusted or a moody misfit.	A	D	NS
89.	Children learn all of their language by copying what they have heard adults say.	A	D	NS
90.	Infants may stop paying attention to what is going on around them if there is too much noise or too many things to look at.	A	D	NS
91.	Some normal kids do not enjoy being cuddled.	A	D	NS

Each of the following asks about the age at which infants can do something. If you AGREE with the statement, circle A. If you do not agree, decide whether a YOUNGER or OLDER child would show the behavior. If you're NOT SURE, circle NS.

		AGREE	YOUNGER	OLDER	NOT SURE
92.	Most babies can sit on the floor without falling over by 7 months.	A	Y	O	NS
93.	A 6-month-old will respond to someone differently if the person is happy or upset.	A	Y	O	NS
94.	Most 2-year-olds know the difference between make-believe and true stories on TV.	A	Y	O	NS
95.	Infants usually are walking by about 12 months of age.	A	Y	O	NS
96.	An 8-month-old acts differently with a familiar person than with a person not seen before.	A	Y	O	NS
97.	A baby is about 7 months old before he/she can reach for and grab things.	A	Y	O	NS

		AGREE	YOUNGER	OLDER	NOT SURE
98.	A 2-year-old is able to reason logically, much like an adult would.	A	Y	O	NS
99.	A 1-year-old knows right from wrong.	A	Y	O	NS
100.	A 3-month-old often will smile when he/she sees an adult's face.	A	Y	O	NS
101.	Most children are ready to be toilet trained by 1 year of age.	A	Y	O	NS
102.	An infant begins to respond to his/her name at 10 months.	A	Y	O	NS
103.	Babies begin to laugh at things at around 4 months.	A	Y	O	NS
104.	6-month-olds know what "No" means.	A	Y	O	NS
105.	A 4-month-old lying on his/her stomach starts to lift his/her head.	A	Y	O	NS
106.	Babbling ("a-bah-bah" or "bup-bup") begins around 5 months.	A	Y	O	NS

107.	18-month-olds often cooperate and share when they play together.	A	Y	O	NS
108.	An infant of 12 months can remember toys he/she has watched being hidden.	A	Y	O	NS
109.	Babies usually say their first real word at 6 months.	A	Y	O	NS
110.	Infants will avoid high places, like stairs, by 6 months of age.	A	Y	O	NS

Appendix G

Catalog of Previous Experience with Infants

The shortened version of the Catalog of Previous Experience with Infants (COPE; MacPhee, 1981) which was used for the research is presented here. In the questionnaire booklet, this was the first instrument presented.

The first questions ask about your previous experience with infants. Some mothers have spent very little time with infants before they had their own, and others have been around many babies.

1. Listed below are several situations in which you may have spent time with infants. How often did you do so? (Check the appropriate box.)

	Never have	Once a month or less	Several times a month	Once a week	Every few days
A. Babysitting a brother or sister when growing up	☐	☐	☐	☐	☐
B. Babysitting infants when you were a teenager	☐	☐	☐	☐	☐
C. Babysitting infants as an adult	☐	☐	☐	☐	☐
D. Volunteering in a nursery	☐	☐	☐	☐	☐
E. In a professional setting (daycare, nursing, social work, public health, or psychology)	☐	☐	☐	☐	☐

2. How many classes or workshops in child care or parent education have you had, not including college classes? _____

3. How many college classes in child psychology or parenting have you had? _____

4. About how many infants have you gotten to know well (from babysitting or being around their families for several months)? _____

5. People learn about infants and parenting from many places. How much have you learned about infants from the following sources? (Check the appropriate box.)

	very little	some	a fair amount	a lot
A. the mass media--radio, movies, television, or newspapers	☐	☐	☐	☐
B. reading magazine articles or books about infants or toddlers	☐	☐	☐	☐
C. watching infants and their parents when you were younger	☐	☐	☐	☐
D. talking to your own family (mother, father, sister, grandparent)	☐	☐	☐	☐
E. talking to friends or other adults who have babies of their own	☐	☐	☐	☐
F. comparing your baby to others whom you see or know	☐	☐	☐	☐
G. talking to doctors or nurses before and after your baby was born	☐	☐	☐	☐

Appendix H

Demographic Questionnaire

The demographic questionnaire was included at the end of the questionnaire booklet, following all of the other instruments. The items in this questionnaire were unnumbered.

In order to apply the results of this research to larger groups of mothers, I need to be able to describe the average background of the group of mothers I studied here. Some information about you would be very helpful. Remember that all of the information you give me will be kept completely confidential.

What is your birthdate? _____

What is your baby's birthdate? _____

Is your baby a boy _____ or a girl _____?

What is your occupation? _____

What is the highest level of schooling you have completed?

_____ less than 9th grade
_____ junior high school (9th grade)
_____ some high school (10th or 11th grade)
_____ graduated from high school
_____ some college (at least 1 year) or specialized training
_____ graduated from college
_____ some graduate school
_____ completed graduate degree

What is your marital status?

_____ single, not living with partner
_____ single, living with partner
_____ married, living with spouse
_____ separated
_____ divorced
_____ widowed

What is the occupation of your husband/partner/former husband?_____

What is the highest level of schooling your husband/partner/former husband has completed?

_____ less than 9th grade
_____ junior high school (9th grade)
_____ some high school (10th or 11th grade)
_____ graduated from high school
_____ some college (at least 1 year) or specialized training
_____ graduated from college
_____ some graduate school
_____ completed graduate degree

What is your ethnic background? (optional)

_____ African American
_____ Asian
_____ Caucasian
_____ Hispanic
_____ Native American
_____ Other (please specify)_____

If you are single and living with one or both of your parents, please complete the following for the parent(s)/stepparent <u>with whom you live.</u>

What is the occupation of your mother (or stepmother)?_____

What is the highest level of schooling your mother (or stepmother) has completed?

_____ less than 9th grade
_____ junior high school (9th grade)
_____ some high school (10th or 11th grade)
_____ graduated from high school
_____ some college (at least 1 year) or specialized training
_____ graduated from college
_____ some graduate school
_____ completed graduate degree

What is the occupation of your father (or stepfather)?_____

What is the highest level of schooling your father (or stepfather) has completed?

_____ less than 9th grade
_____ junior high school (9th grade)
_____ some high school (10th or 11th grade)
_____ graduated from high school
_____ some college (at least 1 year) or specialized training
_____ graduated from college
_____ some graduate school
_____ completed graduate degree

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