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**Paternal, infant, and social contextual characteristics as
determinants of competent parental functioning by fathers with
young infants**

Edwards, Lienne Deshaies, Ph.D.

The University of North Carolina at Greensboro, 1990

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PATERNAL, INFANT, AND SOCIAL CONTEXTUAL CHARACTERISTICS
AS DETERMINANTS OF COMPETENT PARENTAL FUNCTIONING
BY FATHERS WITH YOUNG INFANTS

by

Lienne Deshaies Edwards

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

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1990

Approved by

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APPROVAL PAGE

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The purpose of this investigation was to examine factors considered salient to competent parental functioning by fathers with infants. Only recently has fathers' ability to be sensitive, competent parents for infants been recognized. The void remaining in our knowledge of competent parenting by fathers is an identification and understanding of factors associated with fathers' sensitive involvement with infants. The current study sought to explore the association of paternal, infant, and social contextual characteristics with fathers' behaviors during father-infant play.

Sixty couples completed questionnaires when their infants were three months old. Fathers completed measures of locus of control, knowledge of infant development, beliefs of effective parenting practices, value of parenthood, infant temperament, spousal support, and participation in infant care activities. Mothers completed measures of infant temperament, paternal participation in infant care activities, and demographic information. When the infants were five to six months old, fathers were observed interacting with their infants in a free-play situation.

The results demonstrated that, for the fathers in this study, competent parental functioning with infants is associated with factors from three sources of influence: fathers' personal psychological resources, infant behavioral characteristics, and social contextual sources of support/

stress. Of these three sources, fathers' personal psychological resources had the strongest association. Statistically significant relationships were demonstrated for fathers' Infant Development Knowledge and amount, quality, appropriateness, and general impression of paternal behavior during play.

Second in importance as a factor associated with competent parental functioning by fathers in this study was Activity/Reactivity, an indicator of infant behavioral characteristics. This measure of infant temperament was significantly related to appropriateness and general impression of fathers' play interactions with infants. Awareness/Predictability, another indicator of infant behavioral characteristics, was associated significantly with appropriateness of fathers' behavior.

The third most important factor in this study associated with competent parental functioning during play was an indicator of social contextual sources of support/stress. A statistically significant relationship was found between general impression of paternal behavior during play with young infants and Support.

A large proportion of the variance in fathers' behavior with infants during play remains to be explained. Replication of this study is needed to examine further the impact of the indicators used in the present study, as well as additional indicators, on fathers' behavior during play with young infants.

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CHAPTER I

INTRODUCTION

Statement of the Problem

Parental competence, or sensitivity, has been shown to promote healthy infant socioemotional development and cognitive competence (Dickstein & Parke, 1988; Egeland & Farber, 1984; Main & Weston, 1981; Pettit & Bates, 1989; Sroufe, 1985). Sensitive parents are warm, attentive, responsive, stimulating, nonrestrictive, and growth-promoting (Belsky, 1984; Farran, 1985). Their interactions with infants reflect an appreciation of the developmental needs and interests of the infant (Belsky, 1984; Farran, 1986; Lamb & Easterbrooks, 1982). Sensitive parents may be characterized as mature, psychologically secure, empathetic, nurturant, and able to take another's perspective. For years, research related to parental sensitivity and competence has focused on the mother as parent. Ainsworth and colleagues (Ainsworth, Bell, & Stayton, 1972) found that mothers could be differentiated by the key dimension of sensitivity-insensitivity. Sensitivity pertains to the accuracy of perception of infant signals and the promptness and appropriateness of maternal responses. Other dimensions included acceptance-rejection of infant needs, cooperation-interference with infant desires, and accessibility for/ignoring of infant cues. Ainsworth described sensitive

mothers as having warm and empathetic interactions with their infants. These mothers provided contingent responses to distress cues, were accepting of the many demands of their infants, and held the babies in tender and careful ways.

Responsivity and flexibility as characteristics associated with sensitive maternal behavior have been supported in other studies (Belsky, 1984; Crockenberg & Smith, 1982; Isabella, Belsky, & von Eye, 1989). An attitude of sensitivity to infant cues and acceptance of the negative aspects of child care accounted for a positive perception of infants by mothers (Glass, 1983).

While we have long recognized that mothers can provide sensitive parenting to infants, only recently has fathers' ability to be sensitive, competent parents for infants been recognized. The void that remains in our knowledge of competent parenting by fathers of infants is an identification and understanding of the sources of influence associated with fathers' day-to-day sensitive involvement with their infants.

A majority of the studies of fathers' involvement with infants have focused on the amount of time fathers spend and what fathers do when they are with their infants. Two consistent findings have been demonstrated in the literature regarding fathers in our Western culture: (a) they spend less time than mothers with infants and (b) their interactions with infants tend to be characterized by stimulating social

interaction and play rather than caretaking (Clarke-Stewart, 1980; McHale & Huston, 1984; Ninio & Rinott, 1988; Tomlinson, 1987a).

Fewer studies have focused on how competent fathers can be during interactions with their infants. Sensitivity factors (i.e., awareness of infant state, ability to quiet a distressed infant, appropriate handling of the infant, and unnecessary moving, bouncing, or jostling of a quiet baby) measured at 2 months, have been found to predict infant-father attachment at 7 1/2 months (Chibucos & Kail, 1981). That fathers can be as sensitive and responsive as mothers while interacting with infants has been demonstrated as well (Crawley & Sherrod, 1984; Lamb & Goldberg, 1982; Lamb & Easterbrooks, 1982; Levy-Shiff, Sharir, & Mogilner, 1989). However, no studies are available that have focused on factors that influence fathers' parental competence with infants.

Over two decades ago, researchers of child development and family relations spoke to the need to include fathers as integral participants in studies of parenting, parent-child relations, and child development. Nash (1965), in a review of literature on fathers, cited numerous studies about parenting that made no mention of fathers at all. Other studies described the paternal role and experience as a parent via second-hand information from wives and professionals (Benedek, 1970; Benson, 1968; Bigner, 1970). Rebelsky and Hanks (1971) spoke to the lack of studies on

father-infant interactions and called for research to determine how fathers interact with their infants. They also called for clearer hypotheses regarding how fathers interactions with their infants affect subsequent child development.

Despite reminders from researchers of the sixties and seventies, the paucity of research on fathers and their parenting behaviors has continued into the eighties (Katsh, 1981; Parke & Tinsley, 1987). Given the continuing scarcity of research on parenting by fathers, and given the need to assess what factors influence how sensitively fathers interact with their infants, the proposed study will focus on father-infant interactions and evaluate factors considered salient to competent parental functioning by fathers.

Lamb and Easterbrooks (1982) have called for efforts to synthesize the diverse views on determinants of parental sensitivity. They suggest that determinants of parental sensitivity involve enduring personality characteristics of the parent, situational influences on the parent, and characteristics of the infant. Belsky (1984), in reiterating Lamb's plea, cited studies that look at various parent, infant, and contextual variables linked to parenting and concluded that few studies provide all the evidence needed for a model that delineates the multiple determinants of competent parenting. No single study has been reported in which all three major determinants of parental functioning

identified by Belsky were examined for fathers of infants. Therefore, a second purpose of the proposed study will be to demonstrate support of the model of competent parental functioning proposed by Belsky (1984).

Research Questions

The proposed study seeks to address the following questions about determinants of parental competence of fathers of young infants:

1. What are the individual and collective contributions of locus of control, value of parenthood, parenting beliefs about childrearing, and knowledge of infant development to fathers' personal psychological resources?

2. What are the individual and collective contributions of infant temperament as rated by the father and infant temperament as rated by the mother to infant behavioral characteristics?

3. What are the individual and collective contributions of the marital relationship and divergence of spouses' perceptions of paternal role to fathers' social contextual sources of support/stress ?

4. What are the individual and collective contributions of fathers' personal psychological resources, fathers' social contextual sources of support/stress, and infant characteristics to competent parenting by fathers with young infants?

Theoretical Foundations

Belsky's Model of Competent Parental Functioning

The conceptual framework that will guide this study is

the general process model of competent parental functioning proposed by Belsky (1984). Competent parenting is conceptualized as being multiply determined by three general sources of influence: (a) personal psychological resources, (b) behavioral characteristics of the infant, and (c) social contextual sources of stress/support for the father. These sources of influence directly impact parenting, which in turn influences child development. Personal psychological resources of the parent are depicted as indirectly affecting parenting, as well, through the impact on the social context. Contextual sources of support/stress indirectly affect parenting via their effect on the parent's psychological resources (see Figure 1: Belsky's model).

The process model presumes that personal psychological resources, characteristics of the infant, and contextual sources of support are not equally influential as sources of support or stress for parenting. Because parental competence is multiply determined, parenting is buffered against stress derived from any single component. Psychological resources of the parent are viewed as the most important determinant because of their direct effect on parenting and their indirect effect on parenting via their direct effect on the social context in which the parent-infant relationship is embedded (Belsky, 1984; Belsky, Robins, & Gamble, 1984).

Personal psychological resources. Personal psychological resources are deemed important because a mature, healthy

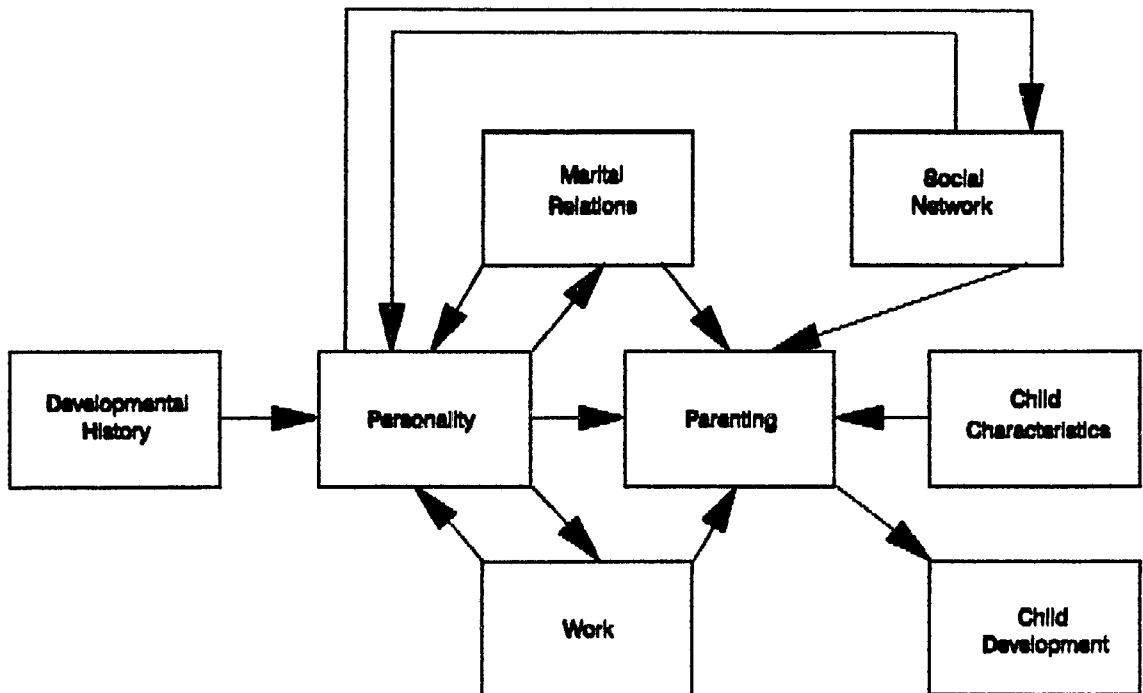


Figure 1. A process model of the determinants of parenting (Belsky, 1984).

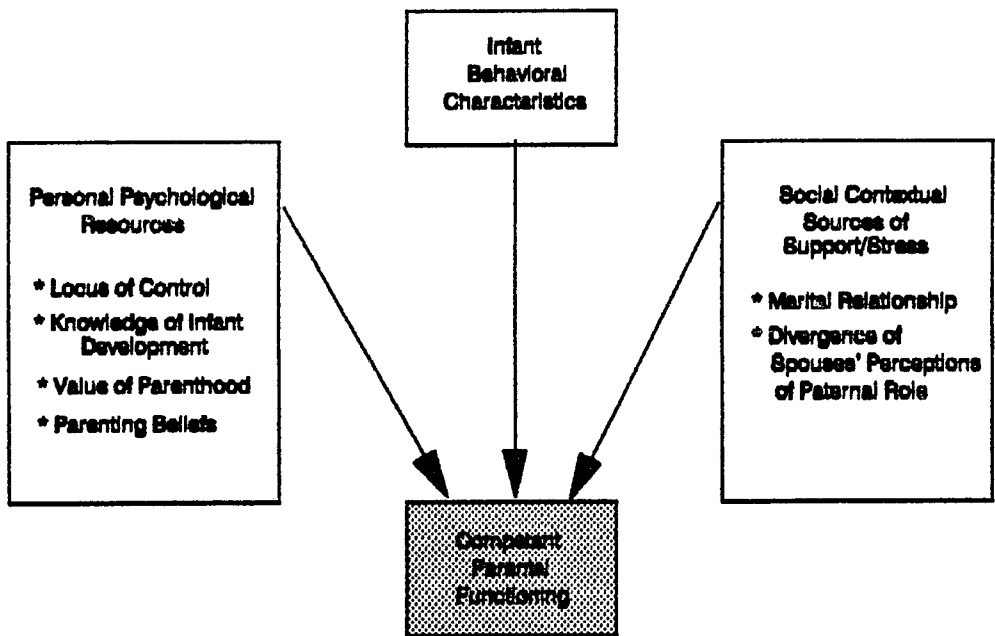


Figure 2. The study model of determinants of competent parental functioning by fathers with young infants: An adaptation of the Belsky model.

personality is a psychological resource most likely to direct a person in providing the sensitive parental care needed for optimal child development. Examples of healthy personal psychological resources are general psychological well-being, an internal locus of control orientation, ability to decenter and consider the point of view of others, and the ability to be empathetic and nurturant. Although psychological resources are viewed as enduring characteristics of the parent, these resources can be modified by subsequent experiences. Psychological resources that the person brings to the parenting system are presumed to be influenced by the person's own developmental history (Belsky, 1984; Belsky, Robins, & Gamble, 1984).

Behavioral characteristics of the infant. The influence of the child on the caregiver has long been recognized. Characteristics such as behavioral style or temperament can make an infant more or less easy to care for (Belsky, 1984; Belsky, Robins, & Gamble, 1984). Infant cues that are clear can directly influence a parent to respond sensitively to the infant's needs. An easy infant can enhance a parent's self-esteem and confidence in the parent role and, thereby, positively influence parental competence.

Social contextual sources of support/stress. Social support is a salient component of the model because of its benefit to physical and emotional health. Support from a spouse, for example, can be love and affection, advice, help

with tasks, and consistency in expectations (Belsky, 1984; Belsky, Robins, & Gamble, 1984). Such support can make a parent feel good as a person and as a parent, providing him with emotional energy to be responsive to his infant.

Social support is depicted as emanating from three sources within the social context: marital relationship, work, and social network. Of these three, the marital relationship is viewed as the primary source of support. The emotional investment and time spent in the relationship allow the marital relationship the potential for exerting the most positive or negative effect on parental competence (Belsky, 1984; Belsky, Robins, & Gamble, 1984).

Summary. Belsky's general process model of competent parental functioning offers a comprehensive framework with which to investigate parental competence of fathers. The three constructs---personal psychological resources, infant behavioral characteristics, and social contextual sources of support/stress---provide a logical classification for the multiple sources of influence which determine how competently, or sensitively, fathers can interact with their infants.

For this study, the construct personal psychological resources included paternal locus of control, parenting beliefs about childrearing, value placed on parenthood, and knowledge of infant development. The construct infant behavioral characteristics included father-rated infant temperament and mother-rated infant temperament. The marital relationship and divergence of spouses' perceptions of

paternal role composed the construct social contextual sources of support/stress. The literature supports these variables as plausible sources of influence on parental competence.

Definition of Constructs

Personal Psychological Resources

Locus of control. Locus of control refers to a person's belief about where decision-making factors that influence his life are located: within himself, in the environment, or in a combination of both. Generally, the person's behavior reflects an internal or external control belief. A person who believes that his own decisions and actions can influence another person or event outcome has an internal locus of control. A person with an external locus of control believes that other people, fate, or luck control their available choices and influence the outcome of their behavior and of events. Locus of control can be conceptualized as the degree to which a person believes that reinforcements are contingent on his own behavior (Rotter, 1966) and as a person's perception of being able to choose from different options in his environment (Langer, 1983). Fathers with an internal locus of control would believe that they have control over choices, behavior, and event outcomes and that their behavior as parents has an effect on their infants. Thus, it would be expected that fathers with an internal locus of control would interact more, and in a more qualitative and appropriate way,

with their infants.

Parental beliefs about childrearing. Parental beliefs can be conceptualized as fathers' ideas on how they can help their infants achieve behaviors which they as parents value (Luster, Rhoades, & Haas, 1989). Ideas regarding such practices as allowing freedom for infants to explore their environment is an example of parental beliefs. More competent parental functioning would be seen in fathers who believe (a) that it is important to talk and read to infants, (b) that infants cannot be spoiled by attention and affection, (c) that floor freedom is important for infant development, and (d) that it is not necessary to emphasize discipline for infants.

Value placed on parenthood. The degree to which fathers value parenthood reflects the amount of their own identity which they willingly invest in the parent role (Wilkie & Ames, 1986). Value is placed on parenthood vis-a-vis other roles. It would be expected that fathers who value the parent role more would interact more, and in a more qualitative and appropriate way, with their infants.

Knowledge of infant development. Knowledge of infant development indicates how aware fathers are of infants' social, cognitive, and motor abilities. Knowing what to expect of infants at certain ages helps fathers to have reasonable expectations of their infants. Thus, fathers are better prepared to interact with infants in appropriate ways, to nurture their infants and challenge development. Knowl-

edge of infant development should be positively related to fathers' competent parental functioning.

Infant Behavioral Characteristics

Infant temperament. Infant temperament reflects individual behavioral differences with regard to intensity/activity, regularity, approach-withdrawal, sensory sensitivity, attentiveness, and manageability (Hagekull, 1985). Infant behavioral differences are viewed as factors contributing to father-infant interactions. Temperamentally difficult infants exhibit intense emotional reactions, are irritable and fussy, slow to accept new things, unmanageable, and unpredictable. It would be expected that less competent parental functioning would be associated with ratings of infant temperament dimensions that reflect difficult temperament.

Social Contextual Sources of Support/Stress

Marital relationship. The degree to which the marital relationship acts as a source of support or stress for fathers is reflected in their perception of how well their emotional and interactional needs are fulfilled by their spouses in accord with their expectations (Hoskins, 1978). Interpersonal confirmation is a potentially powerful source of support leading to satisfaction with the marital relationship. If fathers perceive that their own emotional and interactional needs are being met (i.e., that they are receiving understanding and nurturance from their wives)

fathers self-esteem will be enhanced. Enhanced self-esteem in turn will impact fathers' self-confidence. The enhanced self-esteem and self-confidence should help fathers interact in more positive, nurturing ways with their infants. Thus, a supportive marital relationship should be associated with more competent parental functioning by fathers.

Divergence of spouses' perceptions of paternal role.

Divergence of spouses' perceptions of paternal role is defined as the extent to which fathers and their wives agree about fathers' involvement in child care behaviors. A large absolute difference in spouses' perceptions of father involvement could be a source of stress within the marriage and, therefore, a stressor for the father. A negative association would be expected between divergence of spouses' perceptions of paternal role and competent parental functioning by fathers.

Competent Parental Functioning

Competent parental functioning is conceptualized as the amount, quality, and appropriateness of fathers' involvement with their infants. Patterns of involvement assessed are those considered likely to foster optimum infant development. Behaviors indicating involvement are physical involvement, verbal involvement, responsiveness, play interaction, teaching, structuring infant activities, structuring of specific behaviors, sequencing of infant activities, positive and negative emotion, and goal setting (Farran, Kasari, Comfort, & Jay, 1986).

CHAPTER II

REVIEW OF THE LITERATURE

The following literature review is organized according to the three sources of influence in the conceptual model of competent parental functioning proposed by Belsky (1984). The three sources of influence on competent parenting are (a) personal psychological resources of the parent, (b) behavioral characteristics of the infant, and (c) contextual sources of stress and support for the father.

Personal Psychological Resources

Locus of control. To date, no studies have been conducted which explore paternal locus of control as a determinant of competent parenting by fathers of infants. However, there are findings from research on maternal characteristics associated with maternal involvement during mother-infant interactions that offer support for the supposition that paternal locus of control impacts paternal competence. Huntington (1985) found that mothers with a more internal locus of control orientation interacted more with their infants and exhibited a greater degree of warmth and acceptance. These mothers also were more sensitive to their infants' behaviors and levels of development. Maternal locus of control accounted for as much as 40% of the variance in maternal behavior during observed mother-child interactions.

Maternal locus of control remained the strongest predictor of maternal behavior (accounting for 36% of the variance) when infant characteristics were entered into the equation. It is plausible that paternal locus of control can be as powerful a predictor of father involvement in father-infant interaction as is maternal locus of control.

That internal locus of control in parents is positively associated with competent parental functioning, characterized by warmth, protectiveness, acceptance, consistency, and encouragement, has been documented in other studies (Mondell & Tyler, 1981; Shaefer, 1983; Swick & Graves, 1986). Parents with an internal locus of control are more likely to interact with their infants more and to strive for higher quality and appropriateness of interactions (Maisto & German, 1981). Parenting beliefs reflecting sensitive, involved parenting practices (e.g., affection, praise, listening, verbal interaction) have been associated with internal locus of control orientations in fathers and mothers of young infants (Galejs & Pease, 1986).

The negative impact of parental external locus of control on parenting behaviors has been supported by studies of parents of elementary school age children. Parental external locus of control has been found to be associated with feelings of incompetence, reported lack of control, low parental self-efficacy accompanied by a sense of frustration and a sense of being dominated by children's demands (Campis, Lyman, & Prentice-Dunn, 1986). Parents with an external

locus of control orientation are parents who have the most inconsistent parenting behaviors (Ollendick, 1979).

Knowledge of infant development. Relatively few studies are available that have examined parents' knowledge of infant development. The studies conducted are limited in that they exclude fathers and focus on adolescent mothers who are poor, have restricted education, and are single parents (Jarrett, 1982; Smeriglio & Parks, 1983; Stevens, 1984). Nevertheless, results of these studies provide support for the notion that knowledge of infant development is important for competent parenting by fathers, just as it is for mothers.

Research on low SES and adolescent mothers has demonstrated that the amount and type of infant development knowledge possessed by these mothers is limited and unrealistic (Jarrett, 1982). The limited nature of parents' knowledge of infant development has been documented in studies comparing middle class fathers and mothers as well (Kliman & Vukelich, 1985; Linde & Engelhardt, 1979). While fathers and mothers in the study by Kliman and Vukelich both have a limited knowledge of infant development, fathers' margins of error tend to be as much as 2 1/2 times larger (Kliman & Vukelich, 1985). Results are inconclusive as to whether parents expect behaviors to occur earlier or later than is indicated by developmental time-tables. Some studies indicate that when parents are incorrect, they tend to expect the behavior to appear later in infancy (Kliman & Vukelich,

1985). Other studies report that parents expect motor and language development to occur early in infancy and social and adaptive skills late in infancy (Donate-Bartfield & Passman, 1985; Linde & Engelhardt, 1979). Adolescent mothers tend to expect infant behaviors to develop earlier (Jarrett, 1982).

Studies on adolescent mothers have demonstrated that mothers' knowledge of infant development is associated with their skill in providing a supportive learning environment and with their ability to be sensitively responsive to their infants (Brooks-Gunn & Furstenburg, 1986; Stevens, 1984). As much as 20% of the variance in parenting skill of low SES mothers has been explained by knowledge of development. After controlling for the effects of income and education, knowledge of infant development (normative timetables plus awareness of influence of caregiving practices) accounts for 14% of the variance in overall parenting competence. Accuracy of early infant normative development was found to be the best predictor of the dimension of competent parenting characterized by emotional support and responsivity (Stevens, 1984). Lack of knowledge of norms for infant development is a factor contributing to less adequate parenting skill (Brooks-Gunn & Furstenburg, 1986).

Given that fathers' knowledge of infant development is similar to mothers' (Kliman & Vukelich, 1985; Linde & Engelhardt, 1979) and that knowledge of infant development is predictive of competent parenting by mothers (Stevens, 1984), it is plausible that fathers' knowledge of infant development

is associated with supportive, responsive parenting by fathers as well.

Although no study is available that examines knowledge of infant development as a predictor of parental competence in fathers, a recent study demonstrated a positive relationship between fathers' involvement in infant care and their attributions of social and cognitive competence to infants (Ninio & Rinott, 1988). Fathers who are more involved in caring for their infants attribute more competence to infants than do fathers who are less involved. While fathers generally attribute less competence to their infants than mothers, the difference between spouses' attributions diminishes as fathers become more involved in infant care (Ninio & Rinott, 1988).

Value of parenthood. Despite the fact that there is little in the literature regarding the association between value of parenthood and paternal involvement, the few studies that are available suggest that fathers who place a high value on parenthood are more involved with their infants. One index of the value a man places on parenthood is the time spent psychologically rehearsing for and anticipating the arrival of his infant. Men who invest time in such psychological rehearsal are more committed to caregiving and play involvement (Feldman, Nash, & Aschenbrenner, 1983). Fathers' reports of investing a significant part of themselves in being a spouse during early parenthood (Wilkie & Ames, 1986)

may be viewed as an indirect indication of the father's value of parenthood via his support for his spouse as parent.

Another index of value of parenthood is the value fathers place on their work role vis-a-vis the parent role. Fathers characterized as very motivated by fatherhood, rather than by educational or occupational pursuits, are found to be more positive about fatherhood and more confident in the parental role (Soule, Standley, & Copans, 1979). Low salience of work has been found to predict high paternal involvement, whether in caretaking or playfulness with infants (Feldman et al., 1983). Value of work prior to parenthood is negatively related to fathers' value of parenthood five months into parenthood (Lamb, Frodi, Hwang, & Frodi, 1982). Strong career or vocational ambitions can take fathers away from their families and make them unavailable for parenting (Entwisle & Doering, 1981). There is some evidence that wealthier and more educated men (Russell, 1982) and men in high status careers (Grossman, Pollack, & Golding, 1988) find other ways to self-actualize than through parenthood and, therefore, value parenthood less. Nontraditional fathers appear to value parenthood more than traditional fathers (Lamb et al., 1982).

Fathers' reports of the extent to which they value parenthood prenatally are predictive of paternal commitment to caring for infants postnatally. Postnatal value of parenthood is positively related to paternal satisfaction with parenthood, and both value and satisfaction are

positively related to paternal caregiving and involvement. Evidence suggests that fathers' value of parenthood remains stable throughout the transition to parenthood (Lamb et al., 1982).

Parenting beliefs. Studies examining beliefs of parents typically do so from the perspective of the consequences for child development (Sameroff & Feil, 1985; Shaefer & Edgerton, 1985). Often, the parental beliefs of empirical interest are beliefs regarding children's cognitive development (McGillicuddy-De Lisi, 1985; Sigel, 1985). Relatively few studies have been reported that link parents' beliefs about effective and appropriate parenting practices to parental behaviors.

There are findings from research on mothers' parenting beliefs as related to maternal behavior that offer support for the supposition that fathers' parenting beliefs influence paternal parenting behavior. Luster, Rhoades, and Haas (1989) found that mothers who believe that infants can be spoiled by responsive and affective behavior score lower on measures of maternal warmth, involvement, emotional and verbal responsiveness, and overall support. The same relationship held for mothers who emphasize discipline and control. Mothers who endorse restriction of floor freedom for infants score lower on measures of maternal warmth, overall support, and involvement. Maternal belief in responsiveness and flexibility has been found to be a significant predictor of

more involved contact and quicker response to infant distress for mothers of young infants (Crockenburg & Smith, 1982).

Not only are parenting beliefs linked to parental behavior, but parenting beliefs have been found to mediate parental values and behaviors (Luster et al., 1989). Mothers who value self-direction emphasize being responsive to infant cries rather than worrying about creating a spoiled child, emphasize talking and reading to the infant, and endorse the idea of placing few restrictions on infants' floor freedom. On the other hand, mothers valuing conformity emphasize their role in providing restraint and being strict disciplinarians and believe in being more reticent in responding to infant cries so as not to spoil the infant.

It appears that maternal parenting beliefs (i.e., what mothers believe is appropriate and effective parenting behavior) are based in part on the outcomes mothers hope to promote in their children. Evidence also suggests that mothers' parenting beliefs impact how they interact with their infants. One can surmise, then, that what fathers believe is appropriate and effective parenting behavior will influence how they interact with their infants.

Studies that focus on the impact of fathers' parenting beliefs on paternal competence in interactions with infants are virtually non-existent. The sole study available regarding parenting beliefs of fathers of infants is descriptive in nature and compares parenting beliefs of fathers and mothers of 3-month-olds (Galejs & Pease, 1986). The results showed

fathers and mothers to be in close agreement regarding beliefs of parenting practices and in their emphasis on physical well-being, rest, and sleep for their infants, as well as providing daily shows of affection.

Infant Behavioral Characteristics

Infant temperament. Empirical literature which addresses the influence of infant temperament on quality of paternal involvement with infants is sparse. The majority of studies have focused on mothers. In general, evidence from studies on the effect of infant temperament on mother-child interactions suggests that there is a negative relationship between infant temperament and quality of maternal involvement: the more difficult the infant (irritable, fussy, irregular, unmanageable), the less sensitive and responsive are maternal attitudes and behavior (Crockenburg & Smith, 1982; Hagekull & Bohlin, 1986; Vaughn, Crichton, & Egeland, 1982). Some studies indicate that as much as 1/4 to 1/3 of the variance in observed maternal behavior can be accounted for by infant temperament (Hagekull & Bohlin, 1986; Vaughn, Crichton, & Egeland, 1982). That mothers behave differently with their own temperamentally different children has been documented as well (Dunn & Kendrick, 1980). Although the majority of studies have found infant temperament to be predictive of maternal sensitivity and responsivity, other studies have found infant temperament to be a weak predictor (Huntington, 1985) or not a predictor at all (Belsky, Rovine,

& Taylor, 1984).

The few studies that examine infant temperament and father-infant interaction suggest that infant temperament does not have an effect on paternal involvement. In a study comparing fathers who experienced extended contact with their newborns and fathers who did not, paternal behavior during free play and feeding was found not to be significantly related to infant temperament (mother-rated) at six weeks (Keller, Hilderbrandt, & Richards, 1985). The two groups of fathers differed significantly on participation in child care; none of the infants were rated as difficult.

In a second study, infant temperament (joint mother/father rating) failed to have a significant effect on amount and type of involvement for fathers of 6-month-olds and 13-month-olds (Rendina & Dickerscheid, 1976). However, a significant interaction effect of temperament and gender on paternal social involvement emerged. Fathers were more involved in social activities and talked more with temperamentally difficult boys than difficult girls, and with temperamentally easy girls than easy boys. Gender alone was unrelated to amount and type of father involvement. Similar results were obtained in a study on the effects of infant characteristics on father-infant attachment (Jones, 1981).

Some evidence exists suggesting that fathers and mothers conceptualize infant temperament in similar ways (Bates, Freeland, & Lounsbury, 1979), that mothers' and fathers' perceptions of their infants become similar over time (Perry,

1983), and that fathers are more sensitive to the physical activity dimension of temperament whereas mothers are more sensitive to the adaptive dimension (Jones & Parks, 1983). However, the literature also suggests that infant temperament may affect parental involvement differently for fathers than for mothers. One might question whether the effect of infant temperament on fathers' involvement with their infants is more subtle than the effect on mothers' involvement, or that paternal involvement is related more to other factors, such as beliefs or values, than to infant temperament. More father-focused research on infant temperament needs to be conducted before conclusions can be drawn as to the impact of infant temperament on competent parenting by fathers.

Social Contextual Sources of Support/Stress

Divergence of spouses' perceptions of paternal role.

Few studies have focused specifically on the degree to which spouses agree in their perceptions of the father's role and how the degree of agreement influences parenting. Nevertheless, studies on adjustment to parenthood and on parental roles provide information about paternal role from which conclusions about the impact of congruence of spouses' perceptions can be drawn.

Some parenthood adjustment studies have assessed the role preferences of each parent. In couples where spouses each prefer more traditional parenting roles, fathers are more involved as parents and perform a greater proportion of

caregiving than leisure activities with their infants (McHale & Huston, 1984). Spouses' role preferences for being involved in child care, while bearing no relationship prior to parenthood, have been found to become more complementary after spouses become parents (Lamb, Frodi, Hwang, & Frodi, 1982; McHale & Huston, 1984). Regardless of the role content, fathers' role preferences prior to parenthood have been found to be quite good predictors of what fathers actually do once they become parents (McHale & Huston, 1984).

Other studies have examined how parents each define or perceive the role of mother and father. Evidence indicates that the more difference fathers perceive between actual roles of mothers and fathers, the less willing fathers are to assume infant care responsibilities and the less positive are their reactions to their infants (Cordell, Parke, & Sawin, 1980), and the more likely the parents are to have assumed traditional parental roles (Russell, 1982). Wives' projections about their husbands' fathering behavior have been found to correlate well with fathers' projections of their own behavior (Fishbein, 1984). Father involvement with infants has been shown to be negatively associated with spousal ambivalence about the fathers' involvement (Tomlinson, 1987a).

While none of these studies have examined congruence of spouses' perceptions of paternal role, evidence suggests that when spouses' parental roles complement each other's, there is increased paternal involvement in parenting. While

complementarity of roles and congruence of perceptions of a role do not have to go hand-in-hand, a parenting system where one is present without the other is difficult to imagine. A reasonable assumption would be that, for spouses whose parenting role behaviors are complementary, spouses' perceptions of each other's roles would be more congruent than disparate. If spouses' perceptions of the paternal role are in agreement, the congruence would act as a source of support for fathers and positively impact their involvement with their infants.

A study that more directly examines the congruence of spouses' perceptions of paternal role is the classic study on fathers' experiences with parenthood conducted by Fein (1976). Fathers' feelings about parenthood with young infants was found to be affected by the extent to which the fathers saw themselves to be included or excluded from their families. Some fathers were content with the provider role; but, many wanted to be more involved in home life activities. Fathers' feelings of being able to handle their new roles were affected directly by spousal agreement about roles. Effective parenthood adjustment for fathers appeared to be related more to the development of a coherent role or pattern of behavior that met their needs and the needs of their families, rather than to a specific role.

The change in roles that spouses experience with parenthood have been identified as a source of stress for parents

(Cowan, Cowan, Coie, & Coie, 1978; Hangesleben, 1983). If spousal agreement about roles assists effective adjustment to parenthood and positively influences fathers' feelings of confidence, a natural conclusion is that the competence and sensitivity of fathers' interactions with their infants will be influenced positively as well.

Marital relationship. Evaluation of the marital relationship has been included in parenthood research for decades. Much of the evidence gathered in the early studies demonstrated an overall decrease in marital satisfaction as couples adjusted to parenthood (Cowan et al., 1978; Dyer, 1963; Feldman, 1974; Hobbs, 1965; Hobbs & Cole, 1976; Meyerowitz & Feldman, 1966; Russell, 1974). However, some researchers also found evidence that couples can feel gratified, happier, and closer once they become parents (Cowan et al., 1978; Feldman, 1974; Hobbs & Cole, 1976; Russell, 1974).

The disparity as to whether or not satisfaction with the marital relationship declines with parenthood continues to be evident in the more recent literature of the eighties. Despite this disparity, there is consensus that the addition of a child does bring about change, however conceptualized, in the marital relationship. Marriages appear to become increasingly instrumental and less focused on emotional expression between spouses after childbirth (Belsky, Spanier, & Rovine, 1983; Belsky, Lang, & Rovine, 1985). Factors reported to impact change in the marital relationship during

the transition year include conflicting goals and conflict behavior (La Rossa & La Rossa, 1981), changes in communication patterns (Belsky et al., 1983; Tomlinson, 1987b), decreasing affection and joint-leisure time (Belsky et al., 1983), greater disagreements about goals and handling family affairs (Tomlinson, 1987a and b), and violated expectations (Belsky, 1985). Couples report coping with marital relationship changes through strategies such as trusting one's partner and attempting to maintain family integrity (Ventura, 1986; Ventura & Boss, 1983), seeking support (Ventura, 1986), and acknowledging the importance of the marital relationship (Miller & Sollie, 1980).

There is evidence to suggest that, while mean levels of marital satisfaction change over time, individual differences remain stable from pregnancy through nine months postpartum (Belsky et al., 1983; Belsky et al., 1985). Therefore, fathers who perceive their marital relationships as most satisfying prior to the infants' arrival are the ones who perceive the relationships as most satisfying after the infants come.

Throughout the studies on marital satisfaction and parenthood, quality of the marriage relationship has been found to be a most compelling and consistent predictor of paternal satisfaction and involvement with parenthood. Men reporting high-quality marital relationships are more involved in infant caregiving, more playful with their

infants, and feel greater satisfaction as parents (Feldman, Nash, & Aschenbrenner, 1983). Father involvement with young infants is positively associated with satisfaction with the marriage relationship, especially in regard to expression of affection and cohesion (Tomlinson, 1987 a & b). Maritally satisfied men seem to approach fatherhood positively and want to participate as parents (Feldman, Nash, & Aschenbrenner, 1983; Hangsleben, 1983; Soule, Standley, & Copans, 1979). A supportive marital relationship is central to fathers' adjustment to parenthood (Ventura, 1986; Wandersman, 1980).

Most of the reasons couples identify for the changes in their marital relationships and many of the strategies used to cope with the changes reflect spouses' perceptions of how well their own emotional and interactional needs are being met by their partners. When spouses perceive that they are not receiving the kind of psychosocial responses that they expect from their partners, conflict can occur in the marriage (Hoskins, 1977; Moore, 1983). Thus, if a father perceives that his emotional and interactional needs are being met by his wife, the marital relationship will be a source of support for the father to parent competently. If the father perceives that his spouse is not meeting his needs, the marital relationship will be a source of stress that can impact negatively on the father's involvement with his infant.

CHAPTER III

METHODOLOGY

Study Design

A predictive study was undertaken to examine factors thought to be associated with competent parental functioning by fathers of young infants. An ex post facto, short-term longitudinal panel design was employed.

Subjects

Couples were recruited from private pediatricians' offices, a family practice clinic, and public health department pediatric clinics located in a large southern metropolitan city and surrounding area. Couples were recruited through referrals from participating families, as well.

Initially, 62 couples agreed to participate; however, two couples subsequently withdrew from the study (reasons being marital separation, and not keeping appointment, despite numerous rescheduling and phone contact immediately preceding the appointment). The sixty remaining couples continued participation for both sessions, leading to a 97% retention rate.

Of the 60 couples, 58 were Caucasian, one was Black, and one was biracial (Black father, Caucasian mother). Ages of the subjects ranged from 20 to 39 years. Mean age for

fathers was 30.1 years; mean age for mothers was 28.4 years. Approximately 42% of fathers were first-time parents. Fifty percent were fathers of male infants and fifty percent were fathers of females.

In general, subjects were fairly well-educated, given that 86.9% of fathers and 85.4% of mothers had completed at least one year of college or specialized training. Education for both parents ranged from partial high school to graduate, professional degrees. All of the fathers were employed. Of the mothers, 39 (63.8%) were employed; 21 (36.2%) considered themselves housewives and did not work outside the home.

The three health care settings utilized to recruit participants reflect three socio-economic levels according to the ability (based on insurance, income, number of dependents) of the parents to pay for health care of their infants. Use of this sampling strategy was intended to afford a sample from which research results would be more generalizable, rather than solely relevant to a specific subgroup of fathers. However, many parents approached in the family practice clinic and the public health department clinics, especially, were either unmarried or unwilling to participate.

A measurement of socioeconomic status of each family, assessed with the Hollingshead (1975) Four Factor Index of Social Status which standardizes, weights, and sums the education and occupation of husband and wife, revealed a mean Hollingshead index of 50.2 (i.e., minor professional,

technical, medium business owner). Thus, the sample proved to be more representative of educated, upper middle and middle class socioeconomic parents. Using the scoring of the Four Factor Index of Social Status by Hollingshead (1975), the participant families were divided into the following SES strata: professionals/major business, 31.7% (n=19); minor professionals/medium business/ technical, 56.7% (n=34); skilled workers/clerical and sales, 8.3% (n=5); and, semi-skilled/machine operators, 3.3% (n=2). No families were classified in the lowest stratum, unskilled/ menial worker. See Table 1 for a complete breakdown of demographic characteristics of the sample.

Controls. Several criteria were used to guide subject selection in order to control for factors such as marital status, parental age, health of infant, that might confound results of the study. Couples were married and living together in the same residence, were between 20 and 39 years of age, and were able to read and understand English. Infants were normal and healthy (i.e., without major disease conditions, anomalies, or developmental/mental retardation) and were the biological children of the parents.

Procedures

Prospective participant parents were approached when they brought their infant to the pediatrician or nurse practitioner for the initial newborn appointment. The researcher approached whichever parent brought the infant,

Table 1

Sample Characteristics (n=60)		
	Father	Mother
Age		
mean	30.1	28.4
median	30.0	28.0
mode	31.0	26.0
Education	n(%)	n(%)
Partial high school	2(3.3)	2(3.3)
High school graduate	7(11.7)	8(13.3)
Partial college, special training	18(30.3)	14(23.3)
College degree	22(36.7)	24(40.0)
Graduate, professional degree	11(18.3)	12(20.0)
Occupation	n(%)	n(%)
Unskilled, menial service	0	1(1.7)
Semiskilled, machine operator	2(3.3)	1(1.7)
Skilled manual worker, smaller business owner	6(10.0)	2(3.3)
Clerical, salesperson	0	10(16.7)
Technician, semi-professional small business owner	9(15.0)	6(10.0)
Manager, minor professional	24(40.0)	11(18.5)
Administrator, lesser professional medium business owner	8(13.3)	7(11.7)
Major professional, higher executive, large business owner	11(18.5)	1(1.7)
Housewife	0	21(35.0)

introduced herself, and explained that she was conducting a study about infants and their fathers and that she would like to see if they would be able to participate. Those who met the criteria had the purposes and procedures described, as well as being given a written description (see Appendix A and B). Parents were informed of a gift incentive (donated by Ross Laboratories) to be given at the second session and of a written summary report to be mailed to them at the conclusion of the study. Verbal informed consent, which included explanation of participants' rights and the confidential nature of the study, was secured from interested parents. Mothers, whose husbands were not present at the initial contact but were believed to be willing to participate, were asked for permission for the researcher to phone their husbands about the study. Names of both parents, residence address, and phone numbers were obtained. When fathers not present at the well-baby visit were contacted by phone, the purposes and procedures of the study were explained, questions were answered, and verbal informed consent and directions to the residence were obtained. An appointment time, when the infant was three months old, was set through mutual agreement for the researcher/assistant to come to the participant's home for the first session (data collection via questionnaires). Two weeks prior to session one, a postcard was mailed to remind the participants of the appointment. A phone call reminder was made two days prior.

At the beginning of the first session, signed consent to participate was secured from fathers and mothers (see Appendix C). In an attempt to avoid collaboration on answers, parents were instructed to sit so that they could not confer with each other while completing the questionnaires. Directions for the various measures were explained just prior to the start of each one. The order in which the questionnaires were given to the parents was determined a priori using a list of random numbers. At this first session, fathers completed seven questionnaires: Personal Opinion Survey (Nowicki-Strickland Internal-External Control Scale for Adults, ANS-IE) (Nowicki & Duke, 1974); Parental Belief Survey (Luster, Rhoades, & Haas, 1989); The Value Pie; Infant Development Questionnaire; Baby Behavior Questionnaire (Hagekull, Lindhagen, & Bohlin, 1980); Spousal Support Measure (Interpersonal Conflict Scale, Hoskins, 1978); and Father Participation Measure (Alter, 1978). See Appendices D through J. Wives completed the Baby Behavior Questionnaire and the Father Participation Measure, as well as filling out the demographic sheet (Appendix K). At the end of session one, parents were thanked, the importance of their participation re-emphasized, and the confidentiality of their answers assured. An appointment time for the second session (observation of father-infant interaction), approximately two months later, was set through mutual agreement. An appointment card with the date and time of the second session was provided. Because two months would lapse before session

two, the name, address, and phone number of a neighbor, friend, or family member was obtained as a contact person. Two weeks prior to the second appointment, a postcard was mailed to participants to remind them of the second appointment. Two days prior to the second session, a reminder phone call was made.

In order to minimize the possible threat of evaluation apprehension at the time of the father-infant interaction observations, two precautions were taken. First, a brief amount of time was devoted to "breaking the ice" before the actual observation began. Second, the same researcher/assistant who was present at the first session did the observation at the second session. This procedure helped fathers feel more at ease during the observations to interact with their infants as they usually would. Therefore, the effect of the researcher's presence was minimized. While the same researcher/assistant collected data at both sessions, the researcher did not know at the time of the observation how the parents responded to the questionnaires. Each father/spouse set of questionnaires was coded with an identification number and the names removed so that scored questionnaires could not be connected with a specific father at the time of the observation. This procedure provided control for the threat of experimenter expectancy to construct validity.

At the second session, observations of father-infant

interactions were done. Approximately 5 minutes before the observation began, mothers (and siblings) were asked to leave the room so that their presence would not affect the father-infant interaction. The researcher/assistant explained to the fathers that they were to play with their infants as they usually did and to ignore the researcher while the observation was going on. The observation was concluded after 30 minutes. The parents were thanked for their participation, given a formula/sippy cup gift pack, donated by Ross Laboratories, and told that they would receive in the mail a written summary report of the findings once the study was completed.

Reliability. Prior to the first data collection phase, a training session was provided for the research assistants at which time the purpose of the study, the procedures and instruments, and the role of the assistants were discussed. Training of the research assistants for observing and rating the father-infant interactions in the second data collection phase involved instruction and practice using the Parent/Caregiver Involvement Scale Workbook and videotape (Farran, 1986). Interrater reliability for the training videotape was assessed at the beginning of the second phase just prior to actual observations. Reliability was computed by dividing the number of rated items (11) for each aspect of father behavior (quantity, quality, and appropriateness) by the number of rater agreements for each aspect of father behavior. For example, if raters were in agreement on 10 of

the 11 items when rating quality, the interrater reliability would be $10/11 = .91$. Interrater reliability was reassessed using videotapes of father-infant play interactions after every four observations rated by the research assistants. When reliability was computed to be less than .91 or when ratings of individual items differed by more than one rating point, the item was discussed, consensus reached, and reliability reassessed. Range of interrater reliability was .82 to .91.

Description of Measures

Personal Psychological Resources

Locus of control. Fathers' locus of control was measured via the Nowicki-Strickland Internal-External control scale for adults (ANS-IE). The ANS-IE has 40 items and is designed for adults with a minimum of fifth grade reading competency. The respondent replies "true" or "false" with respect to how descriptive items are regarding the respondent's own beliefs about the degree to which he has control over events and experience. The summary score reflects external control; that is, the higher the score, the more external the locus of control orientation (Nowicki & Duke, 1974). The total score was used as a variable or indicator for the construct personal psychological resources.

Psychometric characteristics were evaluated in 12 studies on 766 subjects (Nowicki & Duke, 1974). Split-half reliability ranged from .74 to .86, $N = 158$; test-retest

reliability over a 6-week period, $r = .83$, $N = 48$.

Discriminative validity was indicated by the scale not being related to social desirability or intelligence test scores. Construct validity was indicated by significant positive correlations between the ANS-IE and the Rotter locus of control scale ($r = .68$, $df = 47$, $p < .01$; $r = .44$, $df = 33$, $p < .05$) (Nowicki & Duke, 1974).

Parental beliefs about childrearing. The Parental Beliefs Survey (PBS) developed by Luster (Luster, Rhoades, & Haas, 1989) was employed to measure fathers' beliefs about effective and appropriate childrearing practices. The PBS has 20 items and can be divided into four subscales. Reliability coefficients for the subscales are based on responses of 65 mothers. The four subscale scores were used as variables or indicators for the construct, personal psychological resources. Use in this study is the first time the PBS has been used with fathers.

One subscale contains 7 items designed to measure beliefs about spoiling a child by being responsive and affectionate. These items were reverse scored so that higher scores indicate that a father believes babies cannot be spoiled with such behavior. This subscale's reliability coefficient, Cronbach's alpha, is $.86$ (Luster, Rhoades, & Haas, 1989).

A second subscale contains 6 items designed to measure beliefs about floor freedom. High scores indicate that a father believes the infant should be given considerable

leeway in exploring the home environment. The Cronbach alpha for this subscale is .58 (Luster, Rhoades, & Haas, 1989).

Four items comprise the third subscale which is designed to measure beliefs about discipline and control. These items were reverse scored so that high scores indicate that a father does not emphasize the importance of controlling his infant's behaviors and does not believe discipline of infants is an especially important parent task. The Cronbach alpha is .78 (Luster, Rhoades, & Haas, 1989).

The last subscale has three items designed to measure beliefs regarding talking and reading to the infant. A high score indicates that the father emphasizes the importance of talking and reading to his children early and often. The Cronbach's alpha is .55 (Luster, Rhoades, & Haas, 1989).

Value of parenthood. A Value Pie, similar to the "identity pie" technique used by Cowan et al. (1978) and Wilkie and Ames (1986) was used to measure the salience fathers place on their role as parent vis-a-vis their other roles (i.e., spouse, employee/work role, relative, friend). The pie technique involves a circle, the area of which is designated to represent the total of some concept, for example a person's identity. The circle can then be segmented to indicate how much a person perceives his own identity as being divided into parent, spouse, etc.

For value of parenthood, pie segments indicated how much the father was willing to invest himself in particular roles.

The researcher/assistant described how different roles are played by a person and cited an example. Fathers were asked to list their current roles. They were given a ruler with which to divide a circle 8 inches in diameter (the Value Pie) into segments representing the value or importance of each role to them at that time in their lives. The value of parenthood score equaled the number of degrees that the parent segment occupied in the circle. The score was used as a variable or indicator for the construct personal psychological resources.

Knowledge of infant development. The Infant Development Questionnaire (IDQ), composed of 20 selected items from two developmental milestone instruments used in other studies (Linde & Engelhardt, 1979; Ninio & Rinott, 1989), was used to measure fathers' knowledge of infant development. Fathers were instructed to indicate the age, in months, at which an average baby begins the behavior specified in each item. Each item was scored as to the absolute difference from the average month given by authorities on child development. Scores for all items were summed for a total score. A low score indicated that the father was more knowledgeable of infant development, i.e., less divergence from the authorities' average. The total score was used as a variable or indicator for the construct personal psychological resources.

Infant Behavioral Characteristics

Infant temperament. The Baby Behavior Questionnaire (BBQ) (Hagekull, Lindhagen, & Bohlin, 1980) was used to assess infant temperament. The BBQ was designed to measure individual behavioral differences in infants aged 3-10 months. The 31 items are scored from 5 to 1, with each item having descriptors for 5 and 1. All items are written so that a score of 5 indicates that the infant is very intense and active, very regular, very approachable, etc.

Six dimensions have been identified via factor analysis and serve as subscales: Intensity/Activity, Regularity, Approach-Withdrawal, Sensory Sensitivity, Attentiveness, and Manageability. The subscale scores (six from the fathers' ratings and six from the mothers' ratings) were used as variables or indicators for the construct infant behavioral characteristics.

Internal reliability has been established (Hagekull, 1982; Hagekull & Bohlin, 1981). Cronbach alphas for the subscales ranged from 0.51 (Manageability) to 0.72 (Regularity), N = 791. Test-retest coefficients ranged from 0.63 (Sensory Sensitivity) to 0.93 (Intensity/Activity), N = 26, time interval = 2 to 4.5 weeks.

Stability of measurement over a 9-month period was established at statistical significance for all six dimensions (Hagekull & Bohlin, 1981). Stability coefficients (corrected for attenuation) ranged from 0.25 (Manageability)

to 0.61 (Intensity/Activity), $N = 322$. These correlations are similar to those reported for other temperament measures (Hubert, Wachs, Peters-Martin, & Grandour, 1982). Exploration of age changes revealed that, in general, infants became more active and intense, more regular, more withdrawing in new situations, less sensitive to sensory stimulation, more attentive, and less manageable over the nine-month period (from age 3-6 months to age 11-15 months (Hagekull & Bohlin, 1981)).

Concurrent validity was established by comparing BBQ measures with data from direct observations of infants in the homes (Hagekull, 1982; Hagekull, Bohlin, & Lindhagen, 1984). After correcting for measurement error, validity coefficients ranged from 0.53 (Sensory Sensitivity) to 0.83 (Attentiveness), $N = 18, 20, 24$ (three studies were used for validity investigation).

Social Contextual Sources of Support/Stress

Marital relationship. The marital relationship as a source of support/stress for fathers was measured using the Interpersonal Conflict Scale (IPCS) (Hoskins, 1977) (titled Spousal Support Measure for this study). The IPCS is designed to measure the perceived degree of fulfillment of emotional and interactional needs by spouses on the perception of those needs. The IPCS examines emotional factors of security, recognition, and emotional satisfaction. and interactional factors of agreement in thinking, communication, disagreement in behavior, perception of the

other's feelings, and companionship behavior. The scale has 45 items; there are alternate forms for men and women. The IPCS has reported content and construct validity and reliability (Hoskins, 1977; Moore, 1983). The higher the total score, the more the interpersonal conflict (i.e., less perceived support from the spouse). The score was used as a variable or indicator for the construct social contextual sources of support/stress.

Divergence of spouses' perceptions of paternal role.

The Father Participation Measure (FPM) (Alter, 1978) was used to assess spouses' perceptions of the father's involvement in child care. The scale has 55 items that a father is directed to rate regarding his extent of involvement. Ratings are from 1 (never) to 5 (usually), with a "not applicable" option. An alternate form was used for wives to rate their husbands' extent of involvement in the same aspects of child care. Ratings for the individual items, excluding those marked not applicable, were averaged for a total score. A difference score was derived by subtracting the father's score from the mother's score. The larger the absolute difference, the greater the divergence of spouses' perceptions of the father's participation in infant care activities. The difference scores for each of five subscales were used as variables or indicators of the construct social contextual sources of support/stress.

The FPM has five subscales. The first subscale is

labeled Feeding Nurturance and includes routine chores, nurturant and decision-making behaviors all relating to feeding the infant. Kuder-Richardson reliability coefficient is 0.854. The second subscale, Mutual Companionship, includes items relate to talking and showing affection to the child. The Kuder-Richardson is for the second subscale is .817. Life Sustenance is the third subscale and includes items pertaining to the family's interactions with the doctor and babysitter. Its Kuder-Richarson is .831. The fourth factor is labeled Grooming Nurturance. It includes items reflecting grooming activities, such as bathing the baby and washing the baby's hair. The reliability coefficient for factor four is .837. The final factor is labeled Traditional Mothering and includes items such as shopping for baby clothes. The Kuder-Richardson is .665 (Alter, 1978). Information regarding validity of the tool was not reported.

Competent Parental Functioning

The Parent/Caregiver Involvement Scale (PCIS) (Farran, Kasari, Comfort, & Jay, 1986) will be used to rate the father's involvement with his infant following observation of a play session in the home setting. Fathers will be asked to interact with their infants just as they would during typical play times.

The PCIS is designed to assess caregiver behavior during play interactions with his/her child and to provide a global assessment of the amount, quality, and appropriateness of the involvement of the caregiver with the child. Patterns of

adult involvement that are focused on are those considered likely to foster optimum child development. Behaviors assessed are physical involvement, verbal involvement, responsiveness, play interaction, teaching, structuring of child's activities, structuring of specific behaviors, sequencing of activities, positive and negative emotion, and goal setting. Each item is scored on a scale of 1 to 5 with behavioral descriptors at each odd interval. Play interactions are observed for 20-30 minutes before the scale is scored. A mean score is derived for each of the rated aspects (amount, quality, appropriateness, and a general impression) of caregiver behavior, based on the number of items scored. The four scores were used as the criterion variables.

Inter-rater reliabilities range from .77 to .80 (N = 24) and intra-rater reliabilities from .92 to .95 (N = 21) over a one month interval with observations being made in the home (Farran, Kasari, & Comfort, 1985, in Huntington, 1985).

CHAPTER IV

RESULTS

Preliminary Analyses

Once the data were collected, scored, coded, and entered into the computer, several preliminary analyses were conducted. All analyses were done using SPSS/PC+ (SPSS Inc., Chicago, Illinois). The purpose of these preliminary analyses was threefold: (a) to screen the raw data prior to statistical manipulations, (b) to obtain a statistical description of the data, and (c) to check for violations of assumptions basic to the subsequent statistical techniques.

The preliminary analyses allowed assessment of input errors, missing data, and outliers. Descriptive statistics (measures of central tendency) and frequency histograms of the predictor variables/factors and the criterion variables provided information as to whether the distributions of the variables were normal or skewed. Finally, residual scatterplots provided information with which to evaluate violations of assumptions basic to multiple linear regression, those assumptions being normality, linearity, and homoscedasticity of errors between predicted and obtained values.

Analysis of histograms and measures of central tendency for the predictor variables revealed that several of those

variables were not normally distributed. To determine if the skewness of those variables was significantly different from zero, and thus requiring transformation of the variables, the values of skewness for the questionable variables were compared against the standard error for skewness. A z value in excess of ± 2.58 would lead to rejection of the assumption of normality of the distribution at $p \leq .01$ (Tabachnick & Fidell, 1983). Variables whose z values exceeded ± 2.58 were (a) value of parenthood, (b) parental belief regarding the importance of talking and reading to an infant, (c) knowledge of infant development, (d) spousal support within the marital relationship, (e) regularity dimension of infant temperament as rated by the mother, and (f) appropriateness of father-infant interaction. Natural log transformations were performed on these six variables prior to their use in the more detailed multivariate statistical procedures to render the distributions more normal.

Examination of histograms of the factors formed from the variables for each construct indicated that those factors were normally distributed. The correlation matrix of the factors indicated an absence of multicollinearity.

Examination of residual scatterplots related to each of the three criterion variables (amount, quality, and appropriateness of father involvement) revealed no significant violations of normality, linearity, or homoscedasticity.

Primary Multivariate Analyses

Factor Analyses: Building the Constructs

Four research questions guided this study. The first three were to determine the individual and collective contributions of the predictor variables to their respective constructs: fathers' personal psychological resources, infant behavioral characteristics, and social contextual sources of support/stress (see Table 1). Therefore, the predictor variables were subjected to an exploratory factor analysis. The factor analyses also aided in determining the most parsimonious combination of variables for computing the construct scores which would be needed for subsequent multiple regression analyses.

Initial factor analyses for each construct specified the formation of a single factor. This procedure would yield information on how the individual predictor variables loaded on a common factor. Thus, the variables (called indicators) for use in building the construct could be determined. Eigenvalues indicated that there was more than one factor important in contributing to the variance of each construct. For the construct, personal psychological resources, two additional factors added 33.2% to the total explained variance. Three additional factors added 40.1% to the total explained variance for the construct, infant behavioral characteristics. And, two additional factors added 37.3% to the total explained variance for the construct, social

Table 2

Listing of Predictor Variables for Each Construct

Personal Psychological Resources

Locus of Control

Parental Beliefs About Childrearing

* Spoiling by being attentive and affectionate

* Allowing floor freedom

* Emphasis of discipline

* Importance of talking and reading

Value of Parenthood

Knowledge of Infant Development

Infant Behavioral Characteristics

Intensity/Activity

Regularity

Approach-Withdrawal

Sensory Sensitivity

Attentiveness

Manageability

(each rated separately by fathers and mothers)

Social Contextual Sources of Support/Stress

Marital Relationship: Spousal Support

Divergence of Spouses' Perceptions of Paternal Role

contextual sources of support/stress. Examination of Cattell scree test plots of the percent of variance accounted for by each factor indicated support for the inclusion of more than one factor, as well.

A second set of exploratory factor analyses, using principal components analysis with varimax rotation, was performed to see how the variables (or indicators) loaded without specification of the number of factors. The results are outlined in Tables 3, 4, and 5.

Fathers' personal psychological resources. Three factors emerged for the construct, fathers' personal psychological resources (see Table 3 for factor loadings). The three factors together retained 68.4% of the original variance of the construct indicators.

Factor One was composed of three of the parental belief variables: belief about spoiling an infant with attention and affection; belief about floor freedom; and belief in the emphasis of discipline. These variables appeared to share a common theme of control; hence, Factor One will be called Control Beliefs. Factor One had an Eigenvalue of 2.46; 35.2% of the original variance of the indicators was retained.

Factor Two was composed of two variables: belief in the importance of talking and reading to infants, and knowledge of infant development. These variables reflected a theme of knowing and using information about infant development;

Table 3

Results of Exploratory Factor Analysis			
Construct: Personal Psychological Resources			
Variables/indicators	Factors		
	1	2	3
Belief: emphasis on discipline	.84		
Belief: spoiling with attention and affection	.79		
Belief: floor freedom	.75		
Belief: importance of talking and reading to infant		-.89	
Knowledge of infant development		.72	
Value of parenthood			.85
Locus of control			-.65
Eigenvalue	2.46	1.29	1.03
% variance	35.2%	18.5%	14.8%
Total variance	68.4%		

hence, Factor Two will be called Infant Development Knowledge. Factor Two had an Eigenvalue of 1.29; 18.5% of the original variability of the indicators was retained.

Two variables made up Factor Three: locus of control and value of parenthood. These variables seemed to be related to influences within the father; hence, Factor Three will be called Locus. Factor Three had an Eigenvalue of 1.03; 14.8% of the original variance of the indicators was retained.

Infant behavioral characteristics. Four factors emerged for the construct, infant behavioral characteristics (see Table 4 for factor loadings). The four factors together retained 64.3% of the original variance of the construct indicators.

Factor One was composed of four infant temperament variables: intensity/activity dimension as rated by the mother; sensory sensitivity dimension as rated by the mother; and manageability dimension as rated by both the father and the mother. Factor One reflected manageability, and infant actions and reactions as rated by the mother. Factor One will be called Manageability-M, the M denoting the weight of the mother's rating. This factor had an Eigenvalue of 2.89; 24.2% of the original variability of the indicators was retained.

Four infant temperament variables made up Factor Two: regularity dimension as rated by both father and mother; and attentiveness dimension as rated by both the father and

Table 4

Results of Exploratory Factor Analysis				
Construct: Infant Behavioral Characteristics				
Variables/indicators	Factors			
	1	2	3	4
Intensity/Activity-W	.75			
Manageability-W	-.69			
Manageability-F	-.64			
Sensory sensitivity-W	.63			
Attentiveness-F		.71		
Regularity-W		.71		
Regularity-F		.62		
Attentiveness-W		.58		
Sensory sensitivity-F			.82	
Intensity/Activity-F			.82	
Approachability-F				.81
Approachability-W				.81
Eigenvalue	2.89	2.09	1.03	1.25
% variance	24.2%	18.5%	14.8%	10.4%
Total variance	64.3%			

mother. These variables shared a common theme of predictability and awareness; hence, Factor Two will be called Awareness/Predictability. Factor Two had an Eigenvalue of 2.09; 17.5% of the original variance of the indicators was retained.

Factor Three was composed of two infant temperament variables: sensory sensitivity dimension as rated by the father; and, intensity/activity dimension as rated by the father. These variables reflect infant activity and reactivity and, thus, will be Activity/Reactivity-F, the F denoting the weight of the father's rating. The Eigenvalue for Factor Three was 1.47; 12.3% of the original variance of the indicators was retained.

Factor Four was made up of two infant temperament variables: approachability as rated by both father and mother. Factor Four will be called Approachability. The Eigenvalue for Factor Four was 1.25; 10.4% of the original variance of the construct indicators was retained.

Social contextual sources of support/stress. Three factors were extracted for the construct, social contextual sources of support/stress (see Table 5 for factor loadings). For the three factors collectively, 70.2% of the original variability of the construct indicators was retained.

Factor One was composed of three of the variables related to divergence of spouses' perceptions of the father's

Table 5

Results of Exploratory Factor Analysis			
Construct: Social Contextual Sources of Support/Stress			
Variables/indicators	Factors		
	1	2	3
Divergence of spouses' perceptions of father's role, participation in:			
*bathing and dressing infant.	.87		
*buying baby's needs, reading to and rocking infant to sleep.	.75		
*interaction with doctor and sitter.	.72		
*teaching, showing affection, talking to and reading to infant.		.76	
*decisions and actions related to feeding the infant.			.90
Spousal support		.77	
Eigenvalue	1.98	1.94	1.04
% variance	32.9%	19.9%	17.4%
Total variance	70.2%		

role via participation in child care activities: life sustenance (interaction with doctor and babysitter), grooming nurturance (bathing, dressing, and putting baby to bed), and traditional mothering (buying baby's needs, reading to baby, and rocking baby to sleep). These variables appear to reflect interaction and general care; hence, Factor One will be called Agreement: General Care. Factor One had an Eigenvalue of 1.98; 32.9% of the original variance of the indicators was retained.

Two variables made up Factor Two: father's perceived spousal support within the marital relationship and divergence of spouses' perception of the father's role via participation in mutual companionship (teaching new skills, showing affection, talking, and reading to infant). The Interpersonal Conflict Scale, used to measure perception of spousal support, measures the father's perception of getting his emotional and interactional needs met by his spouse. The mutual companionship variable reflects father behaviors that meet emotional and interactional needs of the infant. It appeared, then, that the common theme reflected by the variables in Factor Two was getting and giving nurturance; therefore, Factor Two will be called Nurturance. Factor Two had an Eigenvalue of 1.19; 19.9% of the original variance of the indicators was retained.

Factor Three was composed of one variable: feeding nurturance (decisions and actions related to feeding the baby). Infant feeding is not only a primary aspect of infant

care but it is also an aspect that is typically discussed by couples and decided upon prior to the infant's birth. It is not surprising that this single variable emerged alone for a factor. Factor Three, called Agreement: Infant Feeding, had 17.4% of the original indicator variance retained. The Eigenvalue for this factor was 1.04.

Construct scores. Once the factors for each construct had been extracted, construct scores needed to be developed for entry into the subsequent multiple regression analyses. Thus, factor scores were computed. Factor scores take into account the factor loading of each variable compared against the factor Eigenvalue and standardized with a z-score, so that variables and, therefore, factors, are appropriately weighted (Tabachnick & Fidell, 1983). Factor scores for each construct were summed and averaged to produce the construct scores.

Multiple Regression

In order to determine the individual and collective contributions of fathers' personal psychological resources, infant behavioral characteristics, and fathers' social contextual sources of support/stress to competent parenting by fathers of young infants multiple regression analyses were employed.

Because of a possible influence of socioeconomic status on the criterion variables (amount, quality, and appropriateness of father interaction with young infants), the

Hollingshead Four Factor Index score was forced to enter the regression as Block 1 prior to stepwise entry of the three construct variables. Socioeconomic status proved not to be statistically significant for either of the criterion variables. R-squared values were significantly less than .01 in relation to amount and quality of father interactions ($p=.536$ and $p=.836$, respectively). The R-squared value regarding appropriateness of father interaction was .037, $p=.142$.

Results of the stepwise entry in Block 2 (see Tables 6, 7, 8, & 9) of the regression revealed one construct related, at a statistically significant level, to amount of father interaction. Social contextual sources of support/stress accounted for 7.6% of the variance in amount of fathers' interactions with their infants (adjusted R-squared = .0763, $p=.039$). Fathers who perceived greater support from their spouses (i.e., less conflict in the marriage) and had perceptions of their role in infant care closer to their spouses' perceptions (i.e., less divergence) interacted with their infants significantly more in amount (Beta = $-.3185$, $p=.014$). Social contextual sources of support/stress approached significance for quality (Beta = $-.2308$, $p=.079$) and for appropriateness (Beta = $-.2203$, $p=.088$). Statistically significant relationships were not found for personal psychological resources or infant behavioral characteristics in regard to amount, quality, or appropriateness of fathers' interactions.

Table 6

Results of Stepwise Regression: Amount of Father Interaction

Predictor Variables: Constructs	Block 1		Block 2 Step 1	
	Beta	p	Beta	p
Socioeconomic Status	.0066	.536		
Personal Psychological Resources	-.2004	.128	-.1947	.122
Behavioral Characteristics of the Infant	.0187	.888	.0291	.819
Social Contextual Sources of Support/Stress	-.3185	.014	.0600	.014*
R-square	.0066		.1076	
Adjusted R-square	-.0105		.0763	
F-value	.387 (p=.536)		3.436 (p=.039)	

Table 7

Results of Stepwise Regression: Quality of Father Interaction				
Predictor Variables: Constructs	Block 1		Block 2 Step 1	
	Beta	p	Beta	p
Socioeconomic Status	-.0274	.836		
Personal Psychological Resources	-.2027	.125		
Behavioral Characteristics of the Infant	.0844	.526		
Social Contextual Sources of Support/Stress	-.2308	.079		<.10
R-square	.0008			
Adjusted R-square	-.0165			
F-value	.0435			
	(p=.836)			

Table 8

Results of Stepwise Regression: Appropriateness of Father Interaction

Predictor Variables: Constructs	Block 1		Block 2 Step 1	
	Beta	p	Beta	p
Socioeconomic Status	.1919	.142		
Personal Psychological Resources	-.2119	.102		
Behavioral Characteristics of the Infant	.0460	.725		
Social Contextual Sources of Support/Stress	-.2203	.088		<.10
R-square	.0368			
Adjusted R-square	.0202			
F-value	2.218 (p=.142)			

Table 9

Results of Stepwise Regression: General Impression of Father Interaction

Predictor Variables: Constructs	Block 1		Block 2 Step 1	
	Beta	p	Beta	p
Socioeconomic Status	.1608	.220		
Personal Psychological Resources	-.0935	.477		
Behavioral Characteristics of the Infant	-.0177	.893		
Social Contextual Sources of Support/Stress	-.2378	.067		<.10
R-square	.0259			
Adjusted R-square	.0091			
F-value	1.539 (p=.220)			

It is possible that, in forming construct scores, small significant differences were obscured by the combining of factor scores. In order to tease apart this phenomenon, a second set of stepwise multiple regressions was performed. Factors which had made up the constructs were used as predictor variables instead of the constructs. Each of the criterion variables was regressed on nine predictor variables: Control Beliefs, Infant Development Knowledge, Locus, Manageability-M, Awareness/Predictability, Activity/Reactivity-F, Approachability, Agreement: General care, Nurturance, and Agreement: Infant Feeding. Forced entry of socioeconomic status prior to the stepwise block revealed results consistent with those discussed above (see Tables 10, 11, 12, & 13).

Amount of father interaction. The only variable that emerged as a statistically significant factor associated with amount of father interaction was one of the factors from fathers' personal psychological resources. Infant Development Knowledge accounted for 12% of the variance in the amount of fathers' play interactions with their young infants (adjusted R-squared = .1205, $p=.0096$). Fathers who were knowledgeable of infant developmental milestones and believed in the importance of talking and reading to infants interacted significantly more during play with their infants than fathers who were not knowledgeable and did not believe in talking and reading to infants.

Table 10

Results of Stepwise Regression: Amount of Father Interaction

Predictor Variables: Factors	Block 1		Block 2 Step 1	
	Beta	p	Beta	p
Socioeconomic Status	.0815	.536		
Control Beliefs	.0012	.993	.0383	.769
Infant Development Knowledge	-.3970	.003	-.3970	.003*
Locus	.0188	.888	.0364	.771
Manageability-M	.0369	.786	.0635	.618
Awareness/Predictability	.1430	.278	.0926	.458
Activity/Reactivity	-.2310	.082	-.2163	.081
Approachability	.0894	.514	-.0005	.967
Agreement: General Care	-.0696	.599	-.0662	.596
Nurturance	-.2583	.051	-.2347	.058
Agreement: Infant Feeding	-.2295	.080	-.1816	.143
R-square	.0066		.1503	
Adjusted R-square	-.0105		.1205	
F-value	.387		5.041	
	(p=.536)		(p=.0096)	

Table 11

Results of Stepwise Regression: Quality of Father Interaction

Predictor Variables: Factors	Block 1		Block 2 Step 1	
	Beta	p	Beta	p
Socioeconomic Status	-.0274	.836		
Control Beliefs	.0702	.614	.1072	.417
Infant Development Knowledge	-.3649	.007	-.3649	.007*
Locus	-.0815	.544	-.0656	.606
Manageability-M	.1266	.352	.1514	.239
Awareness/Predictability	.2270	.084	.1825	.147
Activity/Reactivity	-.2263	.089	-.2128	.092
Approachability	.0434	.752	-.0462	.731
Agreement: General Care	-.1076	.417	-.1045	.405
Nurturance	-.1526	.255	-.1306	.304
Agreement: Infant Feeding	-.1438	.282	-.0975	.442
R-square	.0008		.1221	
Adjusted R-square	-.0165		.0913	
F-value	.0435 (p=.836)		3.964 (p=.024)	

Table 12

Results of Stepwise Regression: Appropriateness of Father Interaction							
Predictor Variables: Factors	Block 1	Block 2 Step 1		Block 2 Step 2		Block 2 Step 3	
		Beta	p	Beta	p	Beta	p
Socioeconomic status	.1519 .142						
Controls Beliefs	.1125 .410	.1605 .190	.1508 .196	.1436 .206			
Infant Development Knowledge	-.4710 .0003	-.4710 .0003*	-.4592 .0002*	-.4271 .0004*			
Locus	-.0381 .773	-.0174 .883	.0569 .625	.0916 .422			
Manageability-M	.1409 .291	.1729 .147	.1605 .158	.1592 .150			
Awareness/Predictability	.2794 .029	.2217 .057	.2224 .044*	-.2224 .044*			
Activity/Reactivity	-.3098 .017	-.2924 .011*	-.2924 .011*	-.2929 .009*			
Approachability	-.0224 .869	-.1428 .250	-.1256 .289	-.1187 .304			
Agreement: General Care	-.0682 .601	-.0641 .584	-.0206 .855	-.0267 .808			
Nurturance	-.1193 .366	-.0906 .445	-.1722 .136	-.1865 .097			
Agreement: Infant Feeding	-.1968 .129	-.1386 .239	-.1293 .250	-.1413 .196			
R-square	.0368	.2391	.3219	.3704			
Adjusted R-square	.0202	.2124	.2856	.3246			
F-value	2.218	8.953	8.861	8.090			
	(p=.142)	(p=.0004)	(p=.0001)	(p<.0001)			

Table 13

Results of Stepwise Regression: General Impression of Father Interaction							
Predictor Variables: Factors	Block 1	Block 2 Step 1		Block 2 Step 2		Block 2 Step 3	
		Beta	p	Beta	p	Beta	p
Socioeconomic status	.1608 .220						
Controls Beliefs	.1087 .429	.1519 .230	.1436 .243	.0796 .517			
Infant Development Knowledge	-.4231 .001	-.4231 .001*	-.4130 .001*	-.3919 .001*			
Locus	-.1289 .330	.1478 .223	.2219 .066	.1699 .154			
Manageability-M	.0110 .935	.0392 .753	.0263 .814	.1419 .249			
Awareness/Predictability	.1714 .188	.1181 .331	.1187 .314	.1351 .233			
Activity/Reactivity	-.2668 .041	-.2512 .037	-.1577 .037*	-.3193 .008*			
Approachability	-.0449 .741	-.0593 .645	-.0443 .724	-.1024 .402			
Agreement: General Care	-.0040 .976	-.0077 .949	-.0466 .694	.0555 .627			
Nurturance	-.2262 .085	-.2009 .098	-.2788 .020	-.2788 .020*			
Agreement: Infant Feeding	-.1950 .135	-.1431 .239	-.1351 .253	-.1317 .246			
R-square	.0259	.1890	.2502	.3211			
Adjusted R-square	.0091	.1606	.2100	.2717			
F-value	1.540 (p=.220)	6.643 (p=.003)	6.228 (p=.001)	6.500 (p=.0002)			

Nurturance, one of the factors from social contextual sources of support/stress, closely approached statistical significance (Beta = $-.2347$, $p = .058$). Fathers who perceived greater spousal support (i.e., less interpersonal conflict in significance ($B = -.21628$, $p = .081$)). Fathers with infants who were very active and very intense in their reactions (as rated by the father) appeared to interact less in amount than did fathers with infants who were not so active and intense in reactions.

Quality of father interaction. Only one variable was significantly related to quality of father interaction. Infant Development Knowledge accounted for 9.1% of the variance in quality of fathers' play interaction with their young infants (adjusted R-squared = $.0913$, $p = .024$). Fathers who were knowledgeable of infant development milestones and believed it important to talk and read to infants interacted with their infants in a significantly more qualitative way (i.e., sensitive, gentle, positive, enthusiastic, flexible, adjusting environment) than did fathers who were not knowledgeable and did not believe it important to talk and read to infants.

Again, Activity/Reactivity-F approached statistical significance ($B = -.2128$, $p = .092$). Fathers with infants who were very active and very intense in their reactions (as rated by the father) appeared to interact with their infants in a significantly less qualitative manner than did fathers

with infants who were less active and intense.

Appropriateness of father interaction. Three of the variables--Infant Development Knowledge (a personal psychological resource factor) and Activity/Reactivity-F and Awareness/ Predictability (both factors for infant behavioral characteristics)--explained 32.5% of appropriateness of father interaction. The most important of these was Infant Development Knowledge, which explained 21.2% of the variance in appropriateness of fathers' play interactions with young infants (adjusted R-squared = .2124, $p = .0004$). Second in importance was Activity/ Reactivity-F (adjusted R-squared = .2856; $p = .0001$). Awareness/ Predictability was third in importance as a predictor of appropriateness of fathers' interactions (adjusted R-squared = .3246; $p \leq .0001$). Significantly more appropriate interaction with young infants occurred for fathers who were knowledgeable of infant developmental milestones and believed in the importance of talking and reading to infants, had infants who were less active and intense in reactions (as rated by the father), and had infants who were very aware of and interacted with their environments and were very predictable (as rated by father and mother).

Nurturance, a social contextual source of support/stress factor, approached significance to enter (Beta= $-.1865$, $p = .097$). Fathers who perceived greater spousal support (i.e., less interpersonal conflict in the marriage) and had closer agreement with their spouses about their paternal role

(i.e., less divergence in spouses' perceptions of fathers' participation in infant care activities) appeared to interact more in amount during play with their infants.

The results of the second set of stepwise multiple regressions provided support for the supposition that significant differences were obscured when factor scores were combined to form construct scores. When uncombined factor scores were entered into the regression, several significant relationships emerged. Infant Development Knowledge was significantly related to amount, quality, and appropriateness of fathers' interactions with their infants, accounting for 12%, 9.1%, and 21.2% of the variance, respectively. Infant Activity/Reactivity was significantly related to appropriateness of fathers' interaction. Infant Awareness/Predictability was significantly related to appropriateness of interaction.

Overall impression of interaction. As well as ratings of amount, quality and appropriateness of interaction, the PCIS provides for a rating of overall impression of a father's interaction with his infant. When impression scores were regressed on the factors, statistically significant relationships were found for factors representative of each of the three constructs. Infant Development Knowledge (a personal psychological resource) was the most important factor, accounting for 16.1% of the variance in overall interaction (adjusted R-squared=.1606, p=.003).

Activity/Reactivity-F (an infant behavioral characteristics) was second most important (adjusted R-squared = .2100; $p=.001$). The third most important variable associated with overall impression of fathers' interactions was Nurturance (a social contextual sources of support/stress) (adjusted R-squared = .2717; $p=.0002$). Thus, the set of factors explained 27.2% of the variance in overall impression of fathers' interactions with their infants. Fathers who (a) were knowledgeable of infant developmental milestones and believed it important to talk and read to infants, (b) had infants that were less active and less intense in their reactions, and (c) perceived greater spousal support and had perceptions of their paternal role close to their spouses' perceptions had interactions with their infants that reflected attention and responsiveness, acceptance and approval, delight and enjoyment, a harmonious atmosphere, and the provision of a learning environment.

CHAPTER V

DISCUSSION

The primary purpose of this study was to evaluate factors thought to be salient to competent parental functioning by fathers with young infants. Belsky's (1984) general process model of competent parental functioning was used as the conceptual framework to guide the study. According to the model, competent parenting is multiply determined by three sources of influence: personal psychological resources of the father, behavioral characteristics of the infant, and social contextual sources of support/stress for the father. Multiple measures of each source-of-influence construct were assessed to determine their individual and collective contributions to the constructs. The constructs were then examined to determine their individual and collective contributions to competent parental functioning by fathers of young infants.

Personal Psychological Resources

Belsky's model of competent parental functioning specifies that the three sources of influence on parenting are not equally influential. Of the three, personal psychological resources has the most important influence.

Personal psychological resources proved to be the most influential in this study. Infant Development Knowledge

(knowledge of infant development coupled with the incorporation of such knowledge into a belief in the importance of talking and reading to infants) was the only factor significantly associated with amount and quality of fathers' interactions with their infants, accounting for 12.1% and 9.1% of the variance, respectively. Of the factors associated with appropriateness of fathers' interactions, Infant Development Knowledge demonstrated the strongest association, 21.2% of the variance being explained. Infant Development Knowledge was also significantly related to overall interaction impression, explaining 16.1% of the variance. Fathers who were knowledgeable of infant developmental milestones and believed it important to talk and read to infants interacted with their infants more and in a more qualitative and appropriate manner. Given that the measures of appropriateness of interaction and general impression focus on how well fathers take into account their infants' developmental capabilities and interests, it is not surprising that the factor Infant Development Knowledge was significantly associated with appropriateness of interaction and general impression. These findings extend those of Stevens (1984) who demonstrated an association between mothers' knowledge of infant development and skill in providing supportive learning environments and being sensitively responsive. Such knowledge and skill increases parental self-confidence which thereby increases the likelihood that fathers will interact with their infants in a

more competent manner. Competent parental involvement can foster infant development.

The finding that knowledge of infant development and belief in the importance of talking and reading to infants emerged together as a significant influence on paternal competence has implications for parenting intervention programs. Previous studies have demonstrated the successful use of videos about infant cognitive and social capabilities and early infant care and stimulation, as well as direct parent teaching methods such as active exposure to newborn assessments (Arbuckle, 1983; Beal, 1986; Brazelton, 1984; Myers, 1982; Parke & Bizel, 1986; Perry, 1983; Whitt & Casey, 1982). After receiving interventions geared toward increasing knowledge of infant development, fathers and mothers demonstrated a greater understanding of infant development, believed more in the importance of providing affection and stimulation for infants, and were more responsive to their infants during feeding and play when compared to parents not receiving such interventions. That increased knowledge of infant development and belief in the importance of talking and reading to infants positively impacts competent father-infant interaction supports the development and provision of preparenting and early intervention programs for fathers. Men entering parenthood equipped with knowledge and realistic expectations of infant capabilities would be able to cope more successfully with the

demands of a young infant and to develop nurturing relationships with their infants. Considering today's economy, dissemination of information can be a highly cost-effective human service that can strengthen parents' mental health and, therefore, the mental health of their children.

Examination of the Pearson product-moment correlations for the parental belief variables offers further support for the finding that Infant Development Knowledge was significantly associated with fathers' parental competence. Belief in the importance of talking and reading to infants was moderately related to knowledge of infant development ($r = -.468$). Fathers who believed it important were more knowledgeable (that is, their answers deviated less from the correct answers). A moderate correlation was found between belief in the importance of talking and reading to infants and appropriateness of father interaction ($r = .484$). Belief in talking and reading to infants had a modest correlation with quality ($r = .304$) and amount ($r = .287$) of interaction. Parents' beliefs about infant capacities at a certain age and their attitudes about the kinds of activities appropriate for infants at certain ages influence parents' actual behavior with infants (Ninio & Rinott, 1988). For example, parents who believe it expedient to read and show pictures to infants will engage in such behavior. In doing so, those parents will expose their infants to a cognitively richer diet of experiences that will likely enhance the infants' developmental status.

The personal psychological resource factor, Control Beliefs, reflecting beliefs about spoiling an infant with attention and affection, about floor freedom for infants, and about the emphasis of discipline for infants was not significantly related to competent parental functioning by fathers. However, the correlation of the spoiling belief variable with parental involvement ($r=.242$) was in the direction as that found by Luster, Rhoades, and Haas (1989) in their study of mothers and infants. Fathers who believed that infants could not be spoiled through attention and affection interacted with their infants in more appropriate ways. Attention and affection are some of the components of competent parental functioning. Fathers who believe that they cannot spoil their infants by being attentive and affectionate are more likely to be attentive and affectionate. The correlations of the factor with amount, quality, appropriateness, and general impression of paternal involvement were small, but in the expected direction.

Locus of control and value of parenthood, two measures of personal psychological resources, emerged together as a factor during the factor analyses. However, the factor did not prove to be associated significantly with competent parental functioning by fathers. The Pearson product-moment correlations of locus of control and father interaction (amount, quality, appropriateness, and general impression) did suggest that the influence of locus of control was in the

same direction as demonstrated by previous studies on mothers and infants (Huntington, 1985; Maisto & German, 1981; Stevens, 1988) and on fathers and infants (Galejs & Pease, 1986). The degree to which mothers perceive that they have control over their general environment is closely related to mothers' beliefs that they have control over the development of their children. Mothers' perceptions of control have been found to be associated with infant developmental progress following an early intervention program.

In the present study, a more internal locus of control (lower score) was related to fathers' competent parental functioning, especially appropriateness of interaction ($r = -.39$). Appropriate parental behavior takes into account the infant's developmental level and abilities and reflects parental attempts to challenge the infant's development. Fathers who perceive that they have more control over event outcomes would believe that they could influence their infants' development. Such fathers would try to structure an appropriate environment and provide personal involvement that would aid infant development. Correlations also indicate that an internal locus of control is associated with belief in the importance of showing affection and being responsive ($r = .261$) and of talking and reading to infants ($r = .329$).

The results related to value of parenthood were puzzling. Value of parenthood emerged on a factor with locus of control, a high factor score indicating an internal locus of control orientation and high value of parenthood.

According to the literature, internal locus of control and placing high value on parenthood should correlate positively with competent parenting. However, the factor was not significantly related to fathers' interactions with their infants. Correlations of the factor (i.e., internal locus/high value) were inconsistent in direction of relationship with amount ($r=.030$), quality ($r= -.084$), and appropriateness ($r= -.009$) of interaction. Using an overall impression score of father interaction, the factor had a positive correlation ($r=.149$), which supports the direction of relationship indicated by the literature.

The fact that no significant relationship emerged for value of parenting is open to a variety of interpretations. Previous studies offer some evidence that wealthier, more educated men (Russell, 1982) and men in higher status careers (Grossman, Pollack, & Golding, 1988) find other ways to self-actualize than through parenthood, and thus value parenthood less. Fathers in this study were generally well-educated (18% held graduate/professional degrees, 36.7% had a standard college degree, and 30% had a partial college education or specialized training) and were employed in some of the better-paying jobs (18.5% major professionals, 13.3% administrators, lesser professionals, and 40% managers, minor professionals). Sixty percent of the fathers designated 120 degrees or less of the value pie for value of parent role. It may be that fathers in this study responded in ways

similar to those of fathers in the above mentioned studies.

Jordan (1990) describes the essence of expectant and new fatherhood as laboring for relevance. The last component of laboring for relevance is plugging away at the role-making of involved fatherhood, the focal process being the man's movement toward becoming an involved parent. This rolemaking process is developmental and evolves as the father incorporates successive roles into his person. Actualization of involved fatherhood is achieved when the father integrates the infant as part of himself, incorporating the parent role into his multiple role identity. Only when the infant becomes part of the "me" of the father does "parent" become an important and integral part of the father's sense of self. Jordan has found that not all men reach this developmental stage. Some of those who do reach it cannot maintain the great commitment and perseverance involved parenthood requires and thus return to a preceding stage such as worker, mate, or spectator. Perhaps Jordan's process of attaining the paternal role provides an explanation of what was happening with the fathers in the present study.

Another explanation for the perplexing results related to value of parenthood is that the measure of value of parenthood (Value Pie) did not adequately measure fathers' value of parenthood. Grossman and colleagues (1988) measured men's autonomy and affiliation. Autonomy is defined as a sense of valuing the individual and "separate" part of self as important to one's development. Affiliation refers to a

sense of valuing the "related" part of self, viewing self as connected to others in an important way and participating in and enjoying empathetic, responsive relationships. If "parent" must be integrated by the father as an important and integral part of the self (Jordan, 1990) and if affiliation defines the valuing of the part of self that is connected to other persons (Grossman et al., 1988), a measure of affiliation might prove to be a better measure. Perhaps affiliation would reflect fathers' valuing of the important relationship with their infants. Determining the relationship of value of parenthood (via the Value Pie) and affiliation might provide additional insight into the validity of the Value Pie.

Infant Behavioral Characteristics

Second in influence in this study was infant behavioral characteristics. The factor Activity/Reactivity was associated significantly with appropriateness and general impression of fathers' interactions with their infants, explaining an extra 7.3% of variance in appropriateness and an extra 4.9% of variance in general impression. Fathers with infants that were less active and less intense in their reactions interacted with their infants in significantly more appropriate ways. Lower infant activity/intensity has been associated with higher amounts and quality of maternal physical contact with 4-month-old infants (Bohlin, Hagekull, Gerner, Andersson, & Lindberg, 1989).

These results extend the findings reported in the

literature regarding the relationship of infant temperament and mothers' behaviors, in that more difficult infant temperament is related to lower levels of involvement and responsiveness (Crockenburg & Smith, 1982; Hagekull & Bohlin, 1986). The present results are contrary to those of Kellar, Hilderbrandt, and Richards (1985) who found temperament not to be significantly related to paternal behavior.

Jones and Parks (1983) found that fathers were more sensitive to the physical activity dimension of infant temperament. That Activity/Reactivity reflects the physical dimension of infant temperament and was associated with fathers' behavior in the current study provides further evidence of the sensitivity of fathers to that dimension of infant temperament. An infant rated as very active and reactive is characterized by much kicking and squirming during diapering, dressing, and bathing, lots of movement during play, not staying put when lying in the crib or on the floor, intense reactions (loud and strong laughing or crying), and startling and crying in reaction to sudden sensory stimulation (eg., bright lights, loud noises, or rapid movements of someone nearby). Such an infant would be more difficult to handle than an infant who kept still for diapering, dressing, and bathing and who did not move around so much. A highly active/reactive infant could be perceived as over-reactive and, thus, as more difficult. Over time, fathers might decrease their interactions with such an infant.

The fact that this study extends the findings of Jones and Park that fathers are sensitive to the physical dimension of infant temperament parallels what we know about fathers' play with infants and young children. Previous research has demonstrated a reasonably consistent pattern: fathers are tactile and physical in their play (MacDonald & Parke, 1986; Parke & Tinsley, 1987). Fathers' distinctive role in physical play has been associated with social competence in preschoolers. It may be that children who interact with fathers who are physically playful, elicit lots of positive affect, and allow the children to set the pace and tempo of the interaction, learn to recognize and send emotional signals during other social interaction (MacDonald and Parke, 1984). That fathers key into the physical activity/intensity dimension of temperament and prefer tactile, physical play appears to provide infants with a distinct type of relationship that can foster the development of social competence.

The factor Awareness/Predictability also was significantly related to appropriateness of interaction, adding 3.9% of explained variance. Fathers demonstrated more appropriate interaction with their infants if the infants (a) were more aware of their environment, (b) interacted readily with their environment, and (c) were more predictable. Infants who are aware and predictable send clearer behavioral cues to their fathers and are more likely to notice and respond to their fathers' presence earlier than less aware and unpredictable

infants. Jordan (1990) found that the infant was a key recognition provider for the father as he struggled for recognition as a parent. The ability of the infant to communicate to the father that he was a special person, for example smiling or turning to the father's voice, was powerfully supportive, making the father feel important and competent. Given that the infant interacts with the father directly, it makes sense that behavioral characteristics of the infant, i.e., temperament dimensions, directly influence the interactions that the father has with the infant.

The above findings that infant temperament is significantly related to competent parental functioning is consistent with Belsky's model. Behavioral style of the infant directly affects parenting, which in turn will affect child development. An area of study in which the influence of behavioral characteristics of the infant needs to be given more consideration is infant-parent attachment. According to attachment theory, attachment classifications are associated with certain types of parenting, the security of attachment stemming from the degree of sensitivity, warmth, and responsiveness of the parent. Where the theory falls short is in its unidirectional approach in explaining attachment, ignoring child characteristics. Consequently, attachment classifications have not been as predictive of developmental outcomes in children as desired.

The concept of individual behavioral differences in infants offers an added dimension for attachment theory. For

example, an infant classified as avoidant appears independent, explores his environment without using his mother as a base, turning to see if she is still there, is not upset on separation, and appears to ignore her when she returns. It may not necessarily be the case that this infant is indifferent to his mother because she has been rejecting of him during their interactions. This infant may be temperamentally less fearful, scoring high on approachability, and thus better able to handle the strange situation. Suomi (1990; cited in Karen, 1990) has found evidence in his research on temperament and attachment in primates to suggest that heredity influences sociability. There appear to be infants that are socially "laid back" and those that are socially "uptight." Excessive timidity in and of itself could lead to problematic relationships.

Reasoning within the attachment tradition indicates that infant characteristics are subsumed into the caregiver-infant relationship in the sense that a sensitive caregiver adjusts to individual characteristics of the infant (Sroufe, 1985). This reasoning is not adequate, however, in that behavioral characteristics of the infant and the effect of those characteristics on the parent are not directly assessed.

Results of the present study demonstrate the influence of infant temperament on paternal parenting behavior. Other research has demonstrated that the interaction between infant temperament (intensity/activity) and caregiver behavior

(quantity and quality of physical contact) is significantly predictive of attachment (avoidant) (Bohlin et al., 1989). Evidence of the impact of infant temperament on parental behavior and of the interaction of these on infant attachment exists. Attachment theorists now need to use the evidence of the reciprocal nature of the parent-infant relationship and incorporate the influence of individual differences of infants into the attachment classifications.

In the present study, the infant behavioral factor Manageability-M was not related significantly to competent parenting by fathers. A low factor score reflects high manageability as rated by mothers and fathers and low intensity/activity/sensory sensitivity as rated by the mother. The correlations of Manageability-M to amount, quality, and appropriateness of paternal involvement were positive, indicating that high activity/intensity/ sensory sensitivity and low manageability were related to competent parenting. This is opposite the direction of effect found for Activity/Reactivity-F (rating by the father). The factor loading for mothers' rating of activity/intensity/sensory sensitivity was .83, whereas the factor loadings for mothers' and fathers' ratings of manageability were both approximately .50. It appears that the factor is disproportionately weighted by the mothers' rating of the physical activity and sensory sensitivity dimensions of temperament.

The fact that Manageability-M was not associated with fathers' involvement and that Activity/Reactivity was

associated may reflect the influence of fathers' perceptions of their infants' temperament on the fathers' interactions with the infants. The issue of validity of parents' ratings of infant temperament is thus raised. Studies offer evidence to support (Rothbart, 1986; Worobey, 1986) and to refute (Vaughn, Taraldson, Crichton, & Egeland, 1981) the assumption that parental ratings are valid measures of infant temperament. Authors of the Baby Behavior Questionnaire (Hagekull, Bohlin, and Lindhagen, 1984) have demonstrated in numerous studies that parental ratings are significantly correlated with direct observations of infant behavior. In the present study, moderate correlations were observed between fathers' and mothers' ratings of manageability (.408) and of intensity/activity (.374). Moderate correlation also indicated that when fathers and mothers rated infants as very active and intense, they rated the infants less manageable as well. Although these findings do not directly answer the question of validity of parental ratings of temperament, they do offer some support that fathers and mothers were rating infant temperament similarly.

Bates (1987) suggests that infant activity level influences the amount of caregiver involvement. Higher activity may attract greater attention and social interaction. Recent research findings are inconsistent, however. Quality of mother-infant interactions has been found to be positively (Hahn, 1989) and negatively (Bohlin et al., 1989)

related to high infant activity and intensity. Further research is needed to determine the effect of the activity and manageability dimensions of temperament on parental involvement with infants.

The factor Approachability, reflecting mothers' and fathers' ratings of approach/withdrawal, was not significantly related to competent parental functioning by fathers. However, correlations of the factor with all four measures of competent parental functioning were in the expected direction. Infant temperament characterized by quick adjustment to new situations and positive reactions to adult strangers was related to higher amount, quality, appropriateness, and general impression of fathers' involvement with their infants. Infants who adapt easily and are usually in a positive mood could be considered more sociable infants. Fathers would find such infants easier to interact with than infants who tended to withdraw and not adjust quickly.

Social Contextual Sources of Support/Stress

As a construct in the regression analyses, social contextual sources of support/stress was the only one of the three constructs significant enough to enter the equation. It explained 7.6% of the variance in amount of fathers' interactions with their infants ($p=.039$). Fathers perceiving more support from their spouses and agreeing more with their wives about their paternal role interacted significantly more with their infants than fathers who did not perceive support and did not agree with their wives about their paternal role.

These results offer further evidence of the link between the marital relationship and the father-child relationship (Dickstein & Parke, 1988; Fein, 1976; Fishbein, 1984; Lamb & Elster, 1985).

When the factors composing social contextual sources of support/stress were entered, a statistically significant relationship was found for the factor Nurturance and general impression of fathers' interaction with their infants, explaining an additional 6.2% of the variance ($p=.020$). The factor Nurturance reflects the father's perception of fulfillment of his emotional and interactional needs by his spouse and the amount of divergence in spouses' perceptions of the father's participation in infant care activities that provide for the infant's interactional and emotional needs. Fathers who perceived support from their spouses and agreed with their spouses about participation in nurturing infant care activities had interactions with their infants which reflected attention and responsiveness, acceptance and approval, delight and enjoyment, harmony, and the provision of a learning environment. Though not a compelling influence, the finding that a supportive marital relationship (as part of the construct) was associated with an overall impression of fathers' interactions with their infants is consistent with the literature.

The present study particularly extends the findings of Tomlinson (1987 a & b) who demonstrated that father

involvement with young infants is positively associated with satisfaction with the marriage relationship, especially in regard to expression of affection and cohesion. Positive communication between husband and wife can promote stimulating, responsive, and positively affectionate involvement with infants by fathers (Belsky & Volling, 1986). Emotional support (i.e., affection, respect, and satisfaction with the marital relationship) and cognitive support (husband-wife agreement about childcare) have been positively related to parental competence (Dickie & Matheson, cited in Parke & Tinsley, 1987). Spousal support positively impacts the social context in which the father-infant relationship is embedded. Support from a wife can foster competent involvement of the father with his infant. Gratification from pleasant and competent interactions with the infant can enhance a father's self-esteem which can positively impact both the father-infant relationship and the husband-wife relationship. Spousal support can result in mutual benefit for father, infant, and wife.

Together these findings indicate that successful parenting by fathers is influenced, in part, by a supportive marital relationship. A number of factors may help to explain this relationship. First, despite social changes in recent years regarding attitudes toward increased parental involvement by fathers, the paternal role remains less well defined and articulated than the maternal role. Spousal support may help to make the boundaries of appropriate

paternal role behavior clearer. Second, males continue to be deprived of socialization for parenthood, having fewer opportunities to learn about infants and children and to practice caregiving skills; therefore, men may benefit from spousal support, especially praise, affection, and agreement on and encouragement of participation in childcare activities.

Conclusion

The findings discussed above demonstrate that, for the mostly white, middle/upper-middle-class fathers in this study, competent parental functioning by fathers with young infants is associated with factors from the three constructs specified in the Belsky model: fathers' personal psychological resources, infant behavioral characteristics, and social contextual sources of support/stress. The tenet that fathers' personal psychological resources should be more influential on parental functioning than the other two sources of influence was supported. Infant Development Knowledge, an indicator of the construct fathers' personal psychological resources, explained more of the variance in competent parental functioning than did indicators of infant behavioral characteristics or contextual sources of support/stress. As much as 21% of the variance in fathers' play interactions with their infants was accounted for by Infant Development Knowledge. Statistically significant relationships were demonstrated for Infant Development Knowledge and amount, quality, appropriateness, and general impression of

paternal behavior assessed during play interactions.

Although personal psychological resources had the strongest, most consistent association with competent parental functioning during play by the fathers in this study, a large portion of the variance in parental functioning remains unexplained. Although these results support Belsky's suggested ranking of fathers' personal psychological resources as first in influence, further study is needed before conclusive statements can be made regarding the amount of influence. Also, other studies are needed to demonstrate which personal psychological resources have the most impact.

Second in importance as a factor associated with competent parental functioning by fathers in this study was Activity/Reactivity, an indicator of the construct infant behavioral characteristics. This measure of infant temperament was significantly related to appropriateness and general impression of paternal behavior. Activity/Reactivity explained 7.4% of the variance in appropriateness and 5% of the variability in general impression of fathers' play interactions with their infants. That physical activity emerged as the dimension of infant temperament associated with competent paternal behavior during play interactions with young infants parallels what is already known regarding fathers' preference for tactile and physical play. Awareness/Predictability, another indicator for the construct infant behavioral characteristics, was related significantly to appropriateness of paternal behavior, explaining an

additional 4% of variance. Although significant associations were found between infant temperament and competent paternal behavior with infants during play, it must be noted that only 11.4% of the variance in appropriateness and 5% of the variance in general impression was accounted for. As with personal psychological resources, a large amount of variance remains to be explained.

The construct infant behavioral characteristics is the sole construct for which more than one indicator was associated significantly with competent parental functioning. This finding supports further the salience of the infant's influence on the caregiver. Perhaps it is expedient to note that at the time Belsky developed his model of competent parental functioning, prominent scholars were taking a unidirectional approach in explaining child development outcomes: parent characteristics influenced parent-child interactions which influenced child development. In this light, Belsky can be seen as a "ground breaker," for he included in his model of competent parenting the influence of characteristics of the child.

The third most important factor in this study associated with competent parental functioning by fathers during play interactions with young infants was an indicator of the construct social contextual sources of support/stress. The factor Support reflects spousal support within the marital relationship and divergence of spouses' perceptions of the

father's role via participation in mutual companionship with the infant (teaching new skills, showing affection, talking, and reading). A statistically significant relationship was found between Support and general impression of paternal behavior. Support explained 6.2% of the variance of overall competent parental functioning by fathers with young infants. Again, it must be noted that only a small amount of the variance in general impression of fathers' play interactions has been explained by Support.

To summarize the association of the various factors with each of the measures of competent parental functioning, percents of explained variance can be compared. For Amount of fathers' interaction, 12.1% of the variation was accounted for by Infant Development Knowledge. Approximately 9% of the variation in Quality of interaction was explained by Infant Development Knowledge. Thirty-two and one-half percent of the variance in Appropriateness of interaction was accounted for collectively by Infant Development Knowledge, Activity/Reactivity, and Awareness/Predictability. For General Impression of fathers' play interactions with their young infants, 27.2% of the variance was explained by Infant Development Knowledge, Activity/Reactivity, and Nurturance, collectively. It appears that, for the fathers in this study, the indicators representing the three sources of influence on parenting were more effective in explaining the variability in Appropriateness and General Impression than the variability in Amount and Quality. Still, a large

portion of variance continues to be unexplained. Replications of this study are needed to examine the impact of these and additional indicators of personal psychological resources, infant behavioral characteristics, and social contextual sources of support/stress.

On examination of the factors associated with overall general impression of fathers' play interactions with their infants, factors from each of the three sources of influence specified in Belsky's model proved to be significant. The three factors were Infant Development Knowledge, Activity/Reactivity, and Nurturance. Together they explained 27.2% the variance in general impression of fathers' interactions. Of the three sources, fathers' personal psychological resources continued to exert the strongest influence. These findings offer support for Belsky's model of competent parental functioning which takes into account the influences of characteristics of the father, the infant, and the social context in which the father-infant relationship is embedded.

Although the pictorial representation of the study model suggests unidirectional influence of the three constructs on competent parental functioning, the intent was not to ignore the reciprocal nature of the relationships between each of the three sources of influence and competent parental functioning by fathers. The study model only reflects the focus of this particular research project: the association of various paternal, infant, and social contextual

characteristics with fathers' competent parental functioning with infants during play.

In conclusion, three caveats are presented. First, caution is advised regarding the generalization of the results of this study to all parenting behaviors exhibited by fathers. Fathers' interactions with their infants were assessed in a limited context, i.e., a free-play situation in the home. Therefore, results of the study are based on a restricted range of parenting behaviors. Fathers' behaviors during play with infants represents only part of the total repertoire of fathers' parenting behaviors. Second, fathers in this study basically represented white, middle/upper middle class fathers in a Western culture. Generalization beyond such fathers would be in error. Third, fathers' behaviors during play interactions with their infants were observed at only one session per father-infant pair and that session lasted 30-40 minutes. This sampling of fathers' behaviors provided limited data upon which to base an evaluation of parental competence.

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APPENDIX A

**Explanation to parents contacted in pediatricians' offices,
family practice clinic, and well baby clinics of the health
department:**

Hello! My name is Lienne Edwards. I am a graduate student in the doctoral program of Child Development and Family Relations at the University of North Carolina at Greensboro. For my dissertation research, I am interested in carrying out a project about fathers and their relationships with their babies. Although a lot is known about mothers' relationships with their infants, little research has been done on fathers as parents, especially fathers with young infants. Little is known about the factors that influence a father to be the kind of parent he is. By studying characteristics of fathers, of their infants, and of the parenting and marital roles assumed by the fathers and their wives, I hope to get information that will help professionals understand what being a father of a young infant is all about. Such information can assist professionals who work with expectant and new parents to meet the needs of fathers more effectively.

Taking part in the study will involve two sessions at your home with me or my research assistant. We will set up an appointment time convenient with you and call you 2 days before the session as a reminder.

The first session will be when your baby is about 3 months old. During that session, both parents will fill out several written questionnaires. Directions will be explained right before you start each questionnaire. The first session

should take approximately 1 1/2 hours.

The second session will be when your baby is about 5-6 months old and will involve the father and baby playing together for about 20 minutes as I (or my research assistant) observe. Mothers will be asked not to be in the room during the time fathers and infants play. At the end of the play time, I (or my research assistant) will complete a questionnaire about the nature of the play between baby and father. The second session should take about 1 hour.

All information that you provide on the questionnaires will be confidential. The results of the study will be reported as group data; no individual father or mother will be identified. You have the right to withdraw from the study at any time during the progress of the study. If you have any questions during the progress of the study; I will be happy to answer them. You may call me at 549-9581.

The information that you can provide is very important. I would appreciate your participation so much. Thank you.

APPENDIX B

Father-Infant Project

Conducted by: Lienne D. Edwards, R.N.
Doctoral Candidate
Dept. of Child Development and Family Relations
University of N.C. at Greensboro

Why is this study needed? Although a lot is known about mothers as parents and about their relationships with their infants, little research has been done about fathers as parents, especially fathers with young infants. Not much is known about the factors that influence fathers to be the kind of parents that they are. By studying characteristics of fathers, of their infants, and of the parenting and marital roles assumed by fathers and their wives, I hope to get information that will help professionals who work with expectant and new parents to meet the needs of fathers more effectively. With the cooperation of fathers and mothers like yourselves who are in the midst of early parenthood, professionals can better understand fathers' day-to-day experiences and involvement with their infants.

What will taking part in this study involve? Being a participant in this study will involve 2 sessions at your home with me or my research assistant. We will set up appointment times convenient with you and call you 2 days before each session as a reminder.

The first session will be when your baby is about 3 months old. During that session, both parents will fill out several written questionnaires. Fathers and mothers will complete questionnaires about characteristics of their infant and of the parenthood role. In addition, fathers will fill out questionnaires that ask about personal characteristics and opinions. Directions for completing the questionnaires will be explained right before you start each one. The first session should take approximately 1 hour.

The second session will be when your baby is about 5 months old and will involve the father and baby playing together for about 20 minutes as I or my research assistant observe. Mothers will be asked not to be in the room during the time fathers and infants play together (so that baby will focus on dad and not be distracted by mom). At the end of the play time, I or my research assistant will complete a questionnaire about the nature of the play between the infant and father. The second session should take about 1/2 hour.

Will others be able to identify me and my responses when the results of the study are written up? No. All information that you provide will be kept confidential. An identification number, not your name, will be on the questionnaires. The results of the study will be reported as group data, so that no individual father or mother will be identified.

What if I have questions? If you have any questions at any time during the progress of the study, I will be happy to answer them. Please call me at 549-9581. Your participation is voluntary and you have the right to stop participating, without prejudice to you, at any time during the progress of the study.

A "thank you" for your participation: The information that you will provide during this study is very important and your cooperation is greatly appreciated. As a "thank you" for taking part in this study, you will receive a formula gift pack (donated by Ross Laboratories) at the end of the second session.

If you have questions, you may call me at 549-9581.

APPENDIX C

Informed Consent to Participate

The father-infant study has been explained to me and I have read the written description. I understand what taking part in this study will involve. I also understand that:

(a) the information I provide will be confidential and that others will not be able to identify me when the results of the study are written;

(b) my name will not appear on any of the questionnaires; instead, an identification number will be used;

(c) results of the study will be reported as group data so that no individual father or mother can be identified;

(d) my participation is voluntary and I have the right to withdraw at any time during the progress of the study without prejudice to me.

Signed: _____

Date: _____

----- I would like to get a group summary report of the findings of this study when it is completed.

APPENDIX D

ID# _____
(ANSIE)**PERSONAL OPINIONS SURVEY****Instructions:**

I am trying to find out what men your age think about certain things. I want you to answer the following questions the way you feel. There are no right or wrong answers. Simply circle "yes" or "no" according to the way you feel.

Some people find that they can answer "yes" and "no" to a particular question. This is not unusual. Should this happen for you, circle "yes" if your answer is a little more yes than no; circle "no" if it is a little more no than yes. Don't take too much time answering any one question.

Please, answer every question.

Thank you.

- Yes No 1. Do you believe that most problems will solve themselves if you just don't fool with them?
- Yes No 2. Do you believe that you can stop yourself from catching a cold?
- Yes No 3. Are some people just born lucky?
- Yes No 4. Most of the time do you feel that getting good grades meant a great deal to you?
- Yes No 5. Are you often blamed for things that just aren't your fault?
- Yes No 6. Do you believe that if somebody studies hard enough he or she can pass any subject?
- Yes No 7. Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway?
- Yes No 8. Do you feel that if things start out well in the morning that it's going to be a good day no matter what you do?
- Yes No 9. Do you feel that most of the time parents listen to what their children have to say?
- Yes No 10. Do you believe that wishing can make good things happen?
- Yes No 11. When you get punished does it usually seem its for no good reason at all?
- Yes No 12. Most of the time do you find it hard to change a friend's (mind) opinion ?
- Yes No 13. Do you think that cheering more than luck helps a team to win?
- Yes No 14. Did you feel that it's nearly impossible to change your parent's mind about anything?
- Yes No 15. Do you believe that parents should allow children to make the most of their own decisions?
- Yes No 16. Do you feel that when you do something wrong there's very little you can do to make it right?
- Yes No 17. Do you believe that most people are just born good at sports?
- Yes No 18. Are most of the other people your age stronger than you are?
- Yes No 19. Do you feel that one of the best ways to handle most problems is just not to think about them?
- Yes No 20. Do you feel that you have a lot of choice in deciding whom your friends are?

- Yes No 21. If you find a four leaf clover, do you believe that it might bring you good luck?
- Yes No 22. Did you often feel that whether you did your homework has much to do with what kind of grades you got?
- Yes No 23. Do you feel that when a person your age decides to hit you, there's little you can do to stop him or her?
- Yes No 24. Have you ever had a good luck charm?
- Yes No 25. Do you believe that whether or not people like you depends on how you act?
- Yes No 26. Did your parents usually help if you asked them to?
- Yes No 27. Have you felt that when people were angry to you, it was usually for no reason at all?
- Yes No 28. Most of the time, do you feel that you can change what might happen tomorrow by what you do today?
- Yes No 29. Do you believe that when bad things are going to happen, they just are going to happen no matter what you try to do to stop them?
- Yes No 30. Do you think that people can get their own way if they just keep trying?
- Yes No 31. Most of the time, do you find it useless to try to get your own way at home?
- Yes No 32. Do you feel that when good things happen, they happen because of hard work?
- Yes No 33. Do you feel that when somebody your age wants to be your enemy, there's little you can do to change matters?
- Yes No 34. Do you feel that it's easy to get friends to do what you want then to?
- Yes No 35. Do you usually feel that you have little to say about what you get to eat at home?
- Yes No 36. Do you feel that when someone doesn't like you, there's little you can do about it?
- Yes No 37. Did you usually feel that it was almost useless to try in school because most other children were just plain smarter than you were?
- Yes No 38. Are you the kind of person who believes that planning ahead makes things turn out better?
- Yes No 39. Most of the time, do you feel that you have little to say about what your family decides to do?
- Yes No 40. Do you think it's better to be smart than to be lucky?

APPENDIX E

PARENTAL BELIEF SURVEY

Instructions:

The following statements are commonly held opinions. There are no right or wrong answers. I would appreciate your honest opinions as a parent on these matters. Your insights as a parent will be very helpful to me.

Read each statement carefully. Indicate the extent to which you agree or disagree with the statement by circling one of the possible answers listed below the statement.

First impressions are usually best. Read each statement, decide if you agree or disagree and the strength of your opinion, and then circle the appropriate response. Responses range from "strongly disagree" to "strongly agree."

Please, give you opinion on every statement.

If you find that the responses to be used in answering do not adequately reflect your own opinion, select the one closest to the way you feel.

Thank you.

1. It is likely that you will spoil your baby if you respond to most of his/her cries.

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
----------------------	----------------------	----------------------	-------------------	-------------------	-------------------

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

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
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3. Parents should be strict with their year old babies or they will be difficult to manage later on.

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
-------------------	-------------------	-------------------	----------------	----------------	----------------

4. A father can spoil his baby by giving him/her a great deal of attention.

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
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5. As long as the infant is safe and the object will not be damaged, he/she should be allowed to play with almost any object in the home that interests him/her.

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
-------------------	-------------------	-------------------	----------------	----------------	----------------

6. The important task of parenting is disciplining the child.

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
-------------------	-------------------	-------------------	----------------	----------------	----------------

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

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
-------------------	-------------------	-------------------	----------------	----------------	----------------

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

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
-------------------	-------------------	-------------------	----------------	----------------	----------------

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

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
-------------------	-------------------	-------------------	----------------	----------------	----------------

10. One of the best ways to prepare a preschool child to be a good student is to teach him/her to be obedient.

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
-------------------	-------------------	-------------------	----------------	----------------	----------------

11. I worry about spoiling my child by being an overly attentive father.

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
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12. Children should learn as infants that a parent's desire to have a neat and orderly house must be respected.

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
-------------------	-------------------	-------------------	----------------	----------------	----------------

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

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
-------------------	-------------------	-------------------	----------------	----------------	----------------

14. Since children cannot be trusted to do the right thing, their chances to misbehave must be limited.

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
-------------------	-------------------	-------------------	----------------	----------------	----------------

15. I believe that it is important to spend a lot of time talking to my children even before they can understand whatever it is I am saying.

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
-------------------	-------------------	-------------------	----------------	----------------	----------------

16. Children who are held to firm rules grow up to be the best adults.

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
-------------------	-------------------	-------------------	----------------	----------------	----------------

17. Talking to a baby who can't talk may keep the parent occupied but it probably has no effect on the baby.

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
-------------------	-------------------	-------------------	----------------	----------------	----------------

18. Fathers who are very affectionate toward their babies are likely to have children who grow up being overly dependent on the father.

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
-------------------	-------------------	-------------------	----------------	----------------	----------------

19. Reading to a child before the child is two years old probably has little effect on the child.

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
-------------------	-------------------	-------------------	----------------	----------------	----------------

20. Parents should limit how much they express the affection they feel towards their baby by limiting the amount of rocking, cuddling, and holding they do.

strongly disagree	disagree somewhat	slightly disagree	slightly agree	agree somewhat	strongly agree
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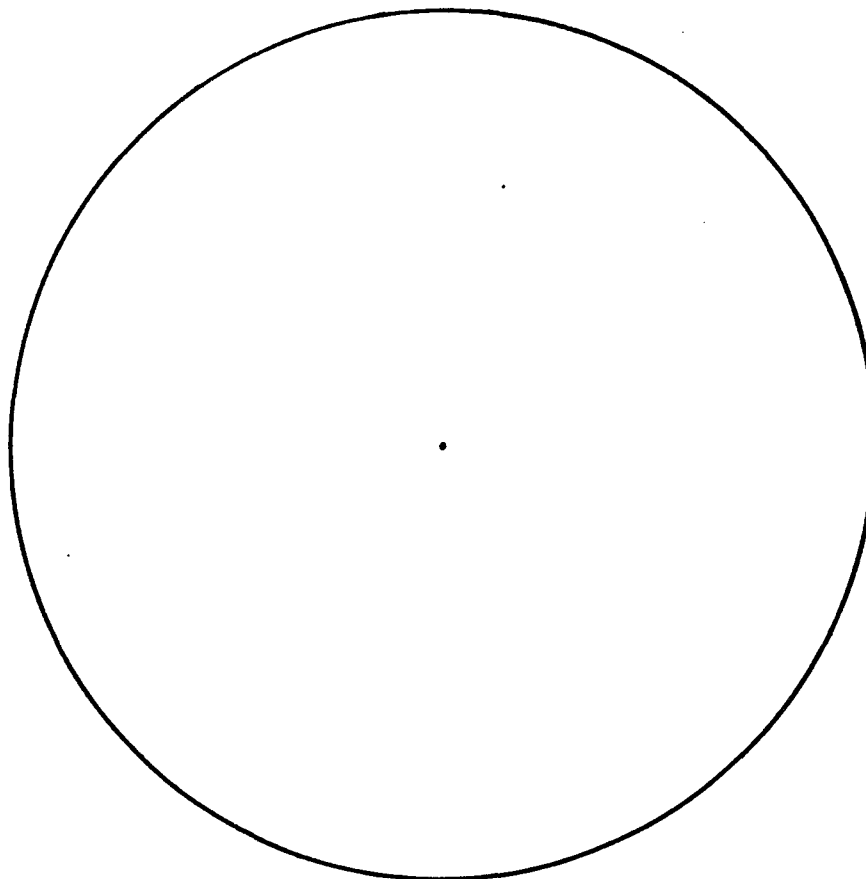
APPENDIX F

ID# _____

The Value Pie

Most men will play several different roles in their lives. For example, being a parent is a role you now have. Think, for a minute, about all the roles you play, then list them here:

The importance that any one role, as opposed to the other roles, has for a man may vary from time to time. The "pie" below represents the total amount of value that you have for all the roles that you play. Using the ruler provided, divide the pie into pieces that represent the roles which you have just listed. The size of each piece should represent how much, at this time in your life, you value the role as opposed to the other roles. A role that you value a lot right now would be given a larger piece of the pie than a role that you do not value so much right now. Please write the name of the role that each piece represents inside that piece. Remember, there are no right or wrong ways to divide the pie.



APPENDIX G

ID# _____

Infant Development Questionnaire

We want to hear your opinion on the age at which an average baby starts to do certain things. Please answer the following questions by indicating the age, in months, at which you think an average baby would start to do the specified behavior. Remember, we want you to give your opinion about infants in general, not your own baby.

In your opinion, at what age do babies begin:

1. to see? _____
2. to hold their head up? _____
3. to hear? _____
4. to recognize their mother's voice? _____
5. to imitate an adult? _____
6. to sit alone? _____
7. to recognize their mother or father as different from a stranger? _____
8. to understand words? _____
9. to miss their mother or father when they aren't there and want them to come back? _____
10. to babble? _____
11. to recognize their father's face? _____
12. to smile? _____
13. to understand when they are told "No!" ? _____
14. to say their first word? _____
15. to crawl? _____
16. to understand a request? _____
17. to get an object? _____
18. to pull up to stand? _____
19. to walk alone? _____
20. to reach out? _____

APPENDIX H

BABY BEHAVIOR QUESTIONNAIRE

Instructions: The purpose of this questionnaire is to get a picture of your infant's everyday behavior, as he or she typically has been for the last two weeks. As you know, all babies differ from each other; therefore, no answer is "right" or "wrong." A good answer describes your baby.

This is an example of the type of question, and how to answer it:

Sucks vigorously
when eating.

Sucks weakly and with
interruptions.

This is your answer if your baby always sucks vigorously:

X				
---	--	--	--	--

If your baby always sucks weakly and with many interruptions:

				X
--	--	--	--	---

If your baby's sucking is rather weak and she/he has a few interruptions:

		X		
--	--	---	--	--

If your baby sometimes sucks vigorously and sometimes weakly or if his/her sucking strength is intermediate:

		X		
--	--	---	--	--

Please be sure to answer every item. Thank you.

SLEEP

- | | | | | | | | |
|---|--|--|--|--|--|--|--|
| <p>1. Goes to sleep at about the same time (within half an hour) both night and naps.</p> | <table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> | | | | | | <p>Goes to sleep at different hours (varies 1-2 hours or more).</p> |
| | | | | | | | |
| <p>2. Wakes up at about the same time (within half an hour) both morning and naps.</p> | <table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> | | | | | | <p>Wakes up at different hours (varies 1-2 hours or more).</p> |
| | | | | | | | |
| <p>3. Adjusts falling asleep routines easily in new environments. After 24 hours, normal sleeping habits have been established.</p> | <table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> | | | | | | <p>Sleeping routines are disturbed in new environments. It takes more than 3 days to readjust sleeping habits.</p> |
| | | | | | | | |

FEEDING

4. Clearly notices feeding preparations (mother gets ready for breastfeeding, prepares bottle, etc.). Does not notice preparations for feeding.
5. Wants to be fed every day at about the same time (not more than 1 hour variation). Gets hungry at varying hours on different days.
6. Takes about the same amount of milk or formula each meal or takes about the same amount each morning feeding, afternoon feeding, etc. Bottle feeding: difference not more than 2 ounces. Breastfeeding: sucks the same length of time each feeding or each morning, etc. Does not eat the same amount at each meal.
7. Initial reaction to new food is strong whether (smack lips, laughs, etc.) or negative (cries). Initial reaction is weak, whether positive or negative (smiles, makes face or shows no reaction).

DIAPERING, DRESSING, BATHING

8. Much kicking and squirming when diapered and dressed. Lies still during diapering and dressing.
9. Is in a good mood (smiles, laughs, etc.) when diapered and dressed. Fusses and cries during diapering and dressing.
10. Expresses strong positive or negative feelings when being diapered and dressed (laughs or cries loudly). Does not show a strong reaction (smiles or whimpers a little or shows no reaction).
11. Has a regular bowel movement schedule, for instance the same time each day, or bowel movements every 2nd day, or once a week. Has no regular bowel movement.
12. Kicks, splashes, or wiggles when being bathed. Lies quietly during bath.
13. Shows strongly her/his like or dislike of the bath (laughs, cries). Does not show her/his like or dislike strongly (smiles or whimpers a little or shows no reaction).

NEW SITUATIONS AND PLACES

14. Adjusts after a short while (a few minutes) in new places or situations.

Does not adjust after half an hour (cries, whimpers, clings, etc.).

SENSORY IMPRESSIONS

15. Reacts strongly (cries, startles) to loud sounds (telephone ringing, a slamming door, etc.).

Does not react to loud sounds.

16. Reacts strongly (cries, startles, to a bright light (turning on lights in a dark room, flash-bulb, etc.).

Does not react to bright light.

17. Reacts strongly (cries, startles) to rapid movements of a person nearby.

Does not react to rapid movements.

18. Reacts differently to different voices, for instance, distinguishes between children's voices and voices of adults.

Shows the same reactions to different voices.

PEOPLE

19. Show strong reactions (laughs, cries) towards familiar persons.

The reaction is not strong (smiles, whimpers, or shows no reaction).

20. First reaction when meeting an adult stranger is positive (laughs, smiles).

First reaction to an adult stranger is negative (cries, whimpers).

21. First reaction to an adult stranger is strong (laughs, cries).

First reaction to an adult stranger is not strong (smiles, whimpers a little, or shows no reaction).

22. Reacts differently when meeting adults as compared to meeting children.

Shows similar reactions to when meeting adults and children.

23. Definitely notices and reacts to physical differences in adult persons, for instance hairstyles, beards, glasses.

Shows similar reactions to all adults.

24. Generally in a positive mood (laughs, smiles) when held or carried by a stranger.

--	--	--	--	--	--

Cries or whimpers when held or carried by a stranger.

PLAY

25. Can amuse self for half an hour or more in the crib or on floor, looking at or playing with toy, hand, etc.

--	--	--	--	--	--

Wants attention or new occupation after a few minutes.

26. When given a new toy, starts immediately to look at or play with it.

--	--	--	--	--	--

It takes a while (several minutes) before she/he starts looking at or playing with a new toy.

27. When given a toy, she/he looks at/plays with it for a long time (several minutes).

--	--	--	--	--	--

Looks at/plays with a toy only for short time (1-2 minutes).

28. Usually laughs or smiles during play.

--	--	--	--	--	--

Usually does not laugh or smile when playing.

29. Moves a lot during play.

--	--	--	--	--	--

Does not move much when playing.

30. When placed on floor or bed, she/he often moves 3 feet or more.

--	--	--	--	--	--

Stays in the same place where she/he was put down.

31. Has her/his most awake and active hours at about the same time every day.

--	--	--	--	--	--

Has different hours of being awake and active each day.

APPENDIX I

SPOUSAL SUPPORT MEASURE

ID: _____

Each of the sentences below describes a feeling. Please use the rating scale next to each sentence to describe your feeling AT THIS MOMENT.

EXAMPLES:

- | | | | | | |
|---|---------------|-----|-----|------|--|
| I can share my feelings freely with my wife | XX | X | ? | no | If you circle the double check (XX) it means that you <u>definitely feel</u> this <u>at the moment</u> . |
| I can share my feelings freely with my wife | XX | (X) | ? | no | If you circle the single check (X) it means that you <u>feel slightly</u> this way <u>at the moment</u> . |
| I can share my feelings freely with my wife | XX | X | (?) | no | If you circle the question mark it means that this does not apply or you <u>cannot decide</u> if this is true <u>at the moment</u> . |
| I can share my feelings freely with my wife | XX | X | ? | (no) | If you circle the no it means that you <u>definitely do not feel</u> this way <u>at the moment</u> . |

Please mark all the items. Your first reaction is best.

- | | | | | |
|--|----|---|---|----|
| 1. My wife and I think alike on most things | XX | X | ? | no |
| 2. My mate cannot accept criticism of her opinions and so we argue | XX | X | ? | no |
| 3. I cannot please my wife | XX | X | ? | no |
| 4. My spouse has little insight into my feelings | XX | X | ? | no |
| 5. My wife enjoys doing many things that I enjoy | XX | X | ? | no |
| 6. My wife notices the things I do for her | XX | X | ? | no |
| 7. I am certain that my spouse loves me as much as she used to | XX | X | ? | no |
| 8. My wife is content with me as her partner | XX | X | ? | no |
| 9. I cannot confide in my wife | XX | X | ? | no |
| 10. We do not think alike on many things | XX | X | ? | no |
| 11. My wife holds to her opinion even when we disagree | XX | X | ? | no |
| 12. My mate doesn't listen to my opinions | XX | X | ? | no |
| 13. My wife and I share most of the day's events | XX | X | ? | no |
| 14. My wife and I disagree on many issues | XX | X | ? | no |
| 15. I can share my feelings freely with my wife | XX | X | ? | no |
| 16. My mate tries to please me | XX | X | ? | no |

17.	My wife and I talk very little about the day's occurrences	XX	X	?	no
18.	There are long periods when we do not speak	XX	X	?	no
19.	My spouse is not open to suggestions	XX	X	?	no
20.	My wife's views do not agree with mine in many areas	XX	X	?	no
21.	I need my wife to give more recognition to my contributions in the home	XX	X	?	no
22.	My mate magnifies my faults	XX	X	?	no
23.	I often feel unloved	XX	X	?	no
24.	I often feel reluctant to discuss feelings and problems with my wife	XX	X	?	no
25.	My wife is considerate of my feelings	XX	X	?	no
26.	I am satisfied with the amount of affection my wife gives me	XX	X	?	no
27.	My wife's affection for me has decreased	XX	X	?	no
28.	I long for more warmth and love from my wife	XX	X	?	no
29.	I know very little about my wife's activities during the day	XX	X	?	no
30.	My wife's expectations of me are reasonable	XX	X	?	no
31.	My spouse expresses her feelings of love and closeness	XX	X	?	no
32.	My wife's love for me has not changed	XX	X	?	no
33.	My spouse and I like to be together	XX	X	?	no
34.	My wife shows interest in my opinions	XX	X	?	no
35.	My mate takes me for granted	XX	X	?	no
36.	My wife does not understand why some things are important to me	XX	X	?	no
37.	My wife usually tells me how she feels about things	XX	X	?	no
38.	I feel free to discuss anything with my wife	XX	X	?	no
39.	I know little about my wife's feelings	XX	X	?	no
40.	My wife prefers not to argue	XX	X	?	no
41.	My wife explains her opinions and reasoning to me	XX	X	?	no
42.	I feel that I am loved by my spouse	XX	X	?	no
43.	My wife fails to notice my efforts	XX	X	?	no
44.	My mate does not care for me as much as before our marriage	XX	X	?	no
45.	My spouse and I care for each other as much as we did when we were married	XX	X	?	no

APPENDIX J

Father Participation Measure

The following is a list of behaviors. For each one, rate how frequently you perform [your husband performs] these particular duties. Circle:

- 1 if you never perform the duty
- 2 if you rarely perform the duty
- 3 if you occasionally perform the duty
- 4 if you frequently perform the duty
- 5 if you usually perform the duty
- NA if the statement does not apply to your household

Please be sure to answer every item.

Deciding when to give a snack to the baby.	1....2....3....4....5....NA
Preparing bottles.	1....2....3....4....5....NA
Teaching baby new skills	1....2....3....4....5....NA
Giving baby a bath.	1....2....3....4....5....NA
Deciding what to feed the baby.	1....2....3....4....5....NA
Feeding the baby.	1....2....3....4....5....NA
Calling for a babysitter.	1....2....3....4....5....NA
Buying baby's needs (diapers, shampoo, etc.)	1....2....3....4....5....NA
Reading baby stories.	1....2....3....4....5....NA
Changing baby's clothes.	1....2....3....4....5....NA
Giving babysitter instructions.	1....2....3....4....5....NA
Rocking baby to sleep.	1....2....3....4....5....NA
Calling doctor when baby is sick.	1....2....3....4....5....NA
Shopping for baby's clothes.	1....2....3....4....5....NA
Talking to baby.	1....2....3....4....5....NA
Cleaning bottles (or nipples if using bottle like Playtex nurser).	1....2....3....4....5....NA
Putting baby to bed.	1....2....3....4....5....NA
Washing baby's hair.	1....2....3....4....5....NA
Deciding when to feed baby.	1....2....3....4....5....NA
Showing affection towards baby (kiss, hug, etc).	1....2....3....4....5....NA
Deciding when to give baby a bath.	1....2....3....4....5....NA
Preparing baby's meals.	1....2....3....4....5....NA
Playing games with baby.	1....2....3....4....5....NA
Cutting baby's toe nails and finger nails.	1....2....3....4....5....NA
Deciding what to dress baby in.	1....2....3....4....5....NA
Making doctor's appointments.	1....2....3....4....5....NA

APPENDIX K

General Information

Father

Mother

Age _____.

Age _____.

Education, years completed:

Education, years completed:

- a. less than 7th grade.
- b. junior high (9th grade).
- c. partial high school (10th or 11th grade).
- d. graduated high school.
- e. partial college (at least one year) or specialized training.
- f. standard college or university graduation.
- g. professional degree/graduate professional training.

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- b. junior high (9th grade).
- c. partial high school (10th or 11th grade).
- d. graduated high school.
- e. partial college (at least one year) or specialized training.
- f. standard college or university graduation.
- g. professional degree/graduate professional training.

Occupation (be specific on what your job involves ex: own small business valued at \$40,000, or house painter).

Occupation (be specific on what your job involves ex: own small business valued at \$40,000, or house painter).

Ethnic background/race:

Ethnic background/race:

- a. White, Caucasian
- b. Black, Negro
- c. Native American, Indian
- d. Mexican American, Spanish, Puerto Rican, Chicano
- e. Oriental American, Asian, Viet Nameese
- f. Other _____.

- a. White, Caucasian
- b. Black, Negro
- c. Native American, Indian
- d. Mexican American, Spanish, Puerto Rican, Chicano
- e. Oriental American, Asian, Viet Nameese
- f. Other _____.

What number child is this baby for you? (first, second, etc.?) _____

Is this baby bottle fed or breastfed or both? (circle one)

APPENDIX L

PARENT/CAREGIVER INVOLVEMENT SCALE (Farran, Kasari, Comfort, and Jay, 1986)

Caregiver's Name/ID _____ Today's Date / /
MO Day Year

Child's Name/ID _____

This scale is designed to assess the behavior of a caregiver during play interactions with his/her child in home or laboratory settings. Play interactions should be observed for 20-30 minutes before scoring. Each item has behavioral descriptors at odd intervals along the 5-point scale. Please read the descriptors and the conventions in the manual for each item then write the number that best describes the observed caregiver behavior. If a behavioral item is not observed, please score 1 for Amount and NA for Quality and Appropriateness.

	Amount	Quality	Appropriateness
A. Physical Involvement	___	___	___
B. Verbal Involvement	___	___	___
C. Responsiveness of Caregiver to Child	___	___	___
D. Play Interaction	___	___	___
E. Teaching Behavior	___	___	___
F. Control of Activities	___	___	___
G. Directives, Demands	___	___	___
H. Relationship among Activities	___	___	___
I. Positive Statements, Regard	___	___	___
J. Negative Statements, Regard	___	___	___
K. Goal Setting	___	___	___
A Q A Subscale Totals:	___	___	___
A Q A MEANS	<input type="text"/>	<input type="text"/>	<input type="text"/>
L. Impression of Parent-Child Interaction:			
Availability	___	Acceptance	___
Atmosphere	___	Enjoyment	___
Learning Environment	___		___

Impression Total _____ IMPRESSION MEAN