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THE RELATIONSHIP
BETWEEN
PARENTAL RECALL OF ACCEPTANCE EXPERIENCED IN CHILDHOOD,
MARITAL QUALITY
AND
CURRENT PARENT-INFANT INTERACTIONS

BY

JUDEE E. ONYSKIW

A THESIS SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled **THE RELATIONSHIP BETWEEN PARENTAL RECALL OF ACCEPTANCE EXPERIENCED IN CHILDHOOD, MARITAL QUALITY AND CURRENT PARENT-INFANT INTERACTIONS** submitted by **JUDEE E. ONYSKIW** in partial fulfilment of the requirements for the degree of **MASTER OF NURSING**.

Dr. Margaret J. Harrison, Supervisor

Dr. Linda Reutter

Dr. Joyce Magill-Evans

Dr. Steve Hunka

Date: March 25, 1994

DEDICATION

To my husband, **John**, who provided me with his love, patience, encouragement and support throughout my Master of Nursing education and the completion of this thesis.

To my children, **Jason, Robyn** and **Lara**, who [illegible] usy" mother and had less than optimal parenting so th[illegible] predictors of optimal parenting!

Abstract

Warm, sensitive parenting has been related to optimal child development. An important contributor believed to influence parenting style is the parent's own childrearing history in the family of origin. Most past research on the intergenerational transmission of parenting used samples of abusing parents and found support for the generational hypothesis. Other studies have shown the generational process to vary as a function of marital quality.

The purpose of this study was to examine the relationship between childrearing history, marital quality and current parenting style in a nonclinical sample of parents of preterm and term infants. Parent-infant interactions are altered in the preterm parent-infant dyad which adds stress to parenting. This may potentially cause parents to be more affected by their past childrearing experiences.

The sample included 35 mothers of preterm infants, 37 mothers of term infants, 32 fathers of preterm infants, and 34 fathers of term infants. Parent-infant interactions were observed during home visits using Barnard's Nursing Child Assessment Teaching Scale. Parents also completed Spanier's Dyadic Adjustment Scale and Rohner's Parental Acceptance-Rejection Questionnaire.

Data were analyzed separately for mothers and fathers using descriptive and multivariate statistics. Results showed that childrearing history was not predictive of mothers' parenting. Childrearing history was only found to significantly predict fathers' parenting when there was also lower marital quality. The results of these analyses revealed conditional support for the hypothesis that childrearing experiences in the family of origin influence current parenting style.

Socioeconomic status was the only significant predictor of mothers' parenting. Higher socioeconomic status was associated with more optimal parenting. This variable consistently predicted mothers' parenting even under varying conditions of lower and higher marital quality. For

fathers, group membership (i.e., whether the father had a preterm or term infant) and marital quality were significant predictors of parenting. Fathers of term infants were predicted to have higher parenting scores on the NCATS than fathers of preterm infants. An unanticipated finding was the inverse relationship between marital quality and fathers' parenting. Fathers with lower marital quality had more optimal parenting. Results of this study suggest that there are important gender differences in predictors of parenting for mothers and fathers.

This information will add to the acquisition of knowledge in parent and child/family health about the relationship between parents' childrearing experiences, marital quality and current parenting interactions. This may prove useful to practitioners in a variety of health-related settings who have the opportunity to interact with parents to enhance parent-child interactions and promote healthy outcomes of parenting.

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Chapter 1

Introduction

Warm, sensitive, nurturing parenting has been positively linked to both secure attachment of the child to the major caregivers (Ainsworth, 1982; Belsky, Rovine, & Taylor, 1984) and optimal social-emotional development (Campos, Barrett, Lamb, Goldsmith, & Stenberg, 1983; Lewis, 1993), and it has been shown to predict cognitive and linguistic competence in children (Barnard et al., 1989; Bee et al., 1982; Coates & Lewis, 1984). Since these studies demonstrate that there are important links between aspects of parent-infant interactions and children's later skills, it is important to understand factors that contribute to effective parenting.

One of the models of parenting influences that is widely cited is Belsky's (1984) determinants of parenting model. Belsky (1984) maintains that parental functioning is multiply determined. Characteristics of the parent and child, as well as the broader social context in which the parent-child relationship is embedded, all affect parenting. This ecological perspective recognizes the importance of the social context of parenting. Parents' marital relationships, occupational experiences, and the amount of social support they receive, all influence their parenting.

Belsky's model of the determinants of parenting (1984) also presumes that an important contributor of parent characteristics is the adult's developmental history. This contribution of past childhood experiences in the family of origin to the adult's own parenting style has been corroborated by other researchers (Cowan & Cowan, 1992; Cox et al., 1985; Hamner & Turner, 1990; M. H. Ricks, 1985; Rohner, 1986).

The assumption that there is an intergenerational transmission of parenting style is intuitively appealing despite the dearth of empirical evidence (Belsky, Youngblade, & Pensky, 1989; Cox et al., 1985). In fact, most knowledge concerning the intergenerational transmission has

been derived from studies that use parents who neglect or abuse their children (Belsky, 1984; Belsky et al., 1989). Even Belsky's (1984) conceptual model has been largely based on research concerning the etiology of child maltreatment.

In studies that used clinical populations, a history of maladaptive parenting did increase the risk of maladaptive parenting in the next generation (Altemeier, O'Connor, Sherrod, & Tucker, 1986; Cappell, & Heiner, 1990; Egeland, 1988; Hamner & Turner, 1990; Joy, 1986; Kaufman & Zigler, 1987; Rutter, Quinton & Liddle, 1983). There are relatively few studies that have examined the relationship between generations on parenting style in families that function within the normal range of parental behaviour (Martin, Halverson, Wampler, & Hollett-Wright, 1991). It is possible that the transmission of parenting style is the same for maladaptive and normal parenting, but there is a lack of empirical evidence.

By studying two groups of individuals; those who demonstrate adaptive parenting skills but were exposed to maladaptive parenting as children and those who demonstrate maladaptive parenting skills but had adaptive parenting as children, it has been recognized that other risk factors must co-exist in order to increase the likelihood of poor parenting. Some protective factors that can ameliorate the effects of negative childhood experiences have also been identified. Emotional support received in childhood from either a relative, friend or therapist have helped individuals break the cycle of transmission (Egeland, 1988; Egeland, Jacobvitz, & Sroufe, 1988; Rutter et al., 1983). Emotional support from spouses has also been shown to be an important buffering mechanism (Crockenberg, 1987; Egeland, 1988; Egeland et al., 1988; Rutter et al., 1983). Consequently, nurturance and support received from some other relationship can serve to mitigate or even interrupt the effects of a problematic childrearing history (Crockenberg, 1987; Egeland, 1988; Rutter et al., 1983).

It still remains to be determined whether the processes identified as exerting an influence in clinical populations of parents also function in nonclinical populations. Studying the transmission of parenting style and the role of the marital relationship in nonclinical populations would add to the acquisition of knowledge of the intergenerational transmission of parenting style.

Identification of variables associated with maladaptive parenting would assist nurses to more effectively identify parents who would benefit most from early intervention. This would also help health care professionals design interventions to enhance parent-child interactions and promote healthy outcomes of parenting.

Statement of the Problem

There is a paucity of research that examines the relationship between childrearing history and current parenting style in nonclinical populations. Most past research on the generational transmission of parenting style used samples of abusing parents and found support for the generational hypothesis. These studies have increased our understanding of the transmission process, but Rutter (1987) warns that caution is always warranted when extrapolating from the abnormal to understand the normal. The processes could potentially be the same but it is not necessarily always so.

Studies using high-risk populations of mothers have shown that a supportive marital relationship can buffer the effect of a negative childrearing history. It would be important to determine if this relationship was also valid in a nonclinical population.

Most past research on parenting and the intergenerational transmission of parenting styles has been limited to describing mothers; far less is known about fathers (Campos et al., 1983; Walker, 1992). Studies have demonstrated that although there are similarities between mother and father-infant interactions, there are some important differences (Belsky, Gilstrap, & Rovine, 1984; Bridges, Connell, &

Belsky, 1988; Cowan & Cowan, 1992; S. S. Ricks, 1985). It is quite conceivable that the relationship between childrearing history, marital quality, and parenting interactions may differ for fathers. Since supportive spousal relationships have been noted to buffer the effects of a negative childrearing history for high-risk mothers, it is important to determine if this is valid for fathers.

This study will also examine the difference in these relationships for parents of preterm infants versus parents of term infants. There is more worry and stress over the birth of a preterm infant (Brooten et al., 1988) and this stress continues even after the infancy period (Macey, Harmon, & Easterbrooks, 1987). Parent interactions are altered when infants are born prematurely. Preterm infants are less responsive than full-term infants shifting some of the interactive burden to parents (Bakeman & Brown, 1980; Barnard, Bee, & Hammond, 1984; Barnard et al., 1989). The added demands on the parent may result in more stress. The additional stress potentially increases the likelihood that parents of preterm infants will repeat the parenting practices they received. For this reason, it is important to determine if the relationship between childrearing history and parenting is different for parents of preterm infants.

In conclusion, more information is needed on the relationship between childrearing history, marital quality and parenting in a sample of parents who had not been identified clinically as exhibiting maladaptive parenting. The clear identification of variables related to more effective parenting could help nurses and other clinicians plan interventions to promote the health and well-being of parents and their infants.

Purpose of the Study

The purpose of this descriptive correlational study was to explore the relationship between parent's retrospectively reported childrearing history in their family of origin, their present reported level of

marital quality and their current parent-infant interactions. Parent-infant interactions were observed during home visits when the infants had been home from hospital for 12 months.

It was hypothesized that the relationship between childrearing history and parenting style would vary as a function of marital quality. Specifically, it was hypothesized that a negative childrearing history would result in better parenting when marital quality was more optimal. Alternately, a negative childrearing history would result in less optimal parenting when marital quality was also poor.

Research Questions

The following research questions guided this study:

1. What is the relationship between childrearing history and current parenting style?
2. Does the relationship between childrearing history and parenting style vary as a function of marital quality?
3. Is there a difference in these relationships for parents of preterm infants versus parents of term infants?
4. Is there a difference in these relationships for mothers versus fathers?

Definition of Terms

Childrearing History

Childrearing history refers to the amount of parental acceptance perceived in childhood in the family of origin. Parental acceptance refers to the warmth, affection and love that parents give to their children (Rohner, 1986). This can be expressed either physically or verbally. Parental warmth is construed as a bipolar dimension where parental warmth or acceptance is at one end of the continuum and parental rejection or the absence of warmth is at the other extreme of the continuum (Rohner, 1986). Parental acceptance was measured retrospectively by the scores obtained on the adult version of the Parental Acceptance-Rejection Questionnaire (PARQ) developed by Rohner

(1978).

Marital Quality

Marital quality refers to the perception of overall satisfaction in an intimate dyadic relationship (Spanier, 1976). Marital quality was measured by the scores obtained on the Dyadic Adjustment Scale (DAS) developed by Spanier (1976). Although the term marital quality denotes marriage, the tool was developed to be used with cohabiting couples as well.

Parent-Infant Interactions

Parent-infant interactions refer to parent and infant behaviours which facilitate synchrony and adaptation of the parent-infant dyad (Barnard, 1978). Both members of the dyad contribute to the interaction. The parent needs to be sensitive to the infant's cues, respond to the infant's distress, and to provide activities that foster the infant's social-emotional and cognitive growth. The infant contributes by providing clear cues and by responding to the parent. Parent-infant interactions were measured during home observations of parent-infant interactions using scores obtained on the Nursing Child Assessment Teaching Scale (NCATS) developed by Barnard (1978).

Preterm Infants

Preterm infants are born before completion of 37 weeks gestation, regardless of birth weight (Whaley & Wong, 1987).

Term Infants

Term infants are born between the beginning of the 38th week and the completion of 42 weeks of gestation, regardless of birth weight (Whaley & Wong, 1987).

Chapter 2

A Review of the Literature

Literature reviewed on the intergenerational transmission of parenting style included nursing, medical, psychology and sociology literature from the 1970s to present using CINAHL, Medline, PsycLIT and Sociofile data bases as well as manual searches. Pertinent literature was also reviewed on father-infant interactions and how interactions are different when babies are born prematurely.

The following literature is presented in three sections. First, the intergenerational transmission of parenting is discussed. This section is subdivided into a discussion of intergenerational studies using clinical samples and studies using nonclinical samples. Next, pertinent literature on fathers' interactions with infants is reviewed, followed by a discussion of selected literature on parents' interactions with preterm infants.

Intergenerational Transmission of Parenting: Studies using Clinical Samples

Most past research examining the transmission of parenting style across generations has done so retrospectively using populations of parents already showing extreme forms of maladaptive parenting (Kempe, Silverman, Steele, Droegemueller, & Silver, 1962; Meier, 1985; Steele & Pollack, 1974). Many early studies consisted of case histories and anecdotal reports from identified samples of abusing parents. These studies indicated that parenting behaviours were transmitted from one generation to the next (Kempe et al., 1962; Meier, 1985; Steele & Pollack, 1974). Because they employed clinical samples without control or comparison groups, they lacked internal validity and have been criticized for their failure to employ rigorous techniques (Joy, 1986; Cappell & Heiner, 1990; Kaufman & Zigler, 1987; Widom, 1989). Because the only subjects used were those known to be already maltreating their children, they tended to overestimate the incidence of transmission and

did little to highlight the mechanism of transmission (Herrenkohl, Herrenkohl & Toedter, 1983; Joy, 1986; Kaufman & Zigler, 1987).

Recent studies designed to address these methodological problems have failed to provide consistent results. Some studies supported the hypothesis that parenting skills are passed through the generations (Caplan, Watters, White, Parry & Bates, 1984; Ney, 1987; Rutter et al., 1983). Other researchers concluded only that there is an increased risk of a generational transmission of maladaptive parenting in individuals with a negative past childrearing history but that it is not inevitable that the cycle will be repeated (Cappell & Heiner, 1990, Joy, 1986; Kaufman & Zigler, 1987; White-MacDonald, 1990; Widom, 1989). Other risk factors must co-exist.

There is less acceptance of the generational hypothesis within the scholarly community today and concern that its unqualified acceptance can be potentially detrimental (Cappell & Heiner, 1990, Joy, 1986; Kaufman & Zigler, 1987; Widom, 1989). Parents with a poor childrearing history feel doomed by their past. It is quite possible that it is a self-fulfilling prophecy that they become poor parents.

Mechanism of transmission

Even if one accepts that parenting is influenced by developmental experiences, it is still another matter to explain conceptually the reason for the association. It is possible that when relationship experiences in the family of origin have not been positive, the capacity to cope with the demands of parenting are altered. Some adults raised in maladaptive environments function less well psychologically. Family of origin influences are then mediated through the psychological health of the parent (M. H. Ricks, 1985; Rohner & Rohner, 1980). This has been demonstrated in investigations of depressed mothers (Colletta, 1983 cited in Belsky, 1991; Perris et al., 1986). Psychologically healthier adults are more likely to provide the type of care that is necessary to promote optimal child development (Belsky, 1991).

Another possible way that maladaptive parenting is transmitted to the next generation is by learning through observations how to relate to others. Crittenden (1984) investigated this by observing children aged 2 to 10 years interacting with their 6 to 11 month old siblings. Children interacted with their siblings in a manner similar to how their mothers interacted with them suggesting that they had learned styles of relating from their mothers. Adequately reared siblings increased in sensitivity as they grew older but maltreated siblings did not.

There is other evidence to suggest that the generational cycle starts early (George & Main, 1979, cited in Main & Goldwyn, 1984). Physically abused children matched for age, sex and race with a control group more frequently hit, slapped and kicked their peers when observed in day care. They also assaulted or threatened to assault their caregivers four times more frequently than the control group.

Another explanation is offered by Herzberger (1983). Herzberger (1983) theorizes that it is children's perception of the legitimacy of parental behaviour that determines whether the maladaptive tradition will continue. Parents are more likely to use abusive parenting practices if they had developed the impression that such treatment was appropriate under certain circumstances.

Frailberg, Adelson and Shapiro (1975) using psychoanalytic theory present yet another view based on their clinical studies with abused women. They posited that cycles are perpetuated when mothers are able to recall only the malignant experiences but not the affective components. Remembering the emotions associated with the experiences was crucial in determining whether the cycle was repeated. Acknowledging both the experience and the pain connected to it led to insightful reflection and enabled mothers to avoid repetition (Frailberg et al., 1975).

Chornesky (1991) proposed that the eventual insight gained through understanding or working through childhood experiences was an important

determinant of current parenting attitudes. In a rare study of 30 men and their 6 to 10 year old sons, Chornesky (1991) investigated the relationship between men's images of their fathers and their current parenting attitudes. Chornesky (1991) concluded that if fathers recognized that their parent's behaviour was an attribute of the parent rather than a reflection of their own behaviour, then they had significantly greater parental awareness of their own children's needs. High levels of paternal awareness occurred when fathers were able to integrate early experiences and memories with current feelings and thoughts, reworked, revised or updated over the course of their lives.

Chornesky's study used a nonclinical sample. It is included in this section because two men had fathers who had been extremely abusive during their childhoods, three men had fathers who were perceived as "emotionally unavailable" and six men had fathers who were either alcoholic or had rejected them. It must also be noted that her sample was particularly well-educated, with two thirds of the sample having graduate degrees. This sample cannot be considered representative of the general population; nevertheless, the findings merit serious attention. These reworking processes help explain why some individuals have healthy parenting skills despite having been reared in maladaptive environments. Perhaps a greater understanding of these reworking processes would prove helpful to practitioners when planning interventions for other parents reared in maladaptive environments.

There is evidence to suggest that maternal rejection underlies the transmission of maladaptive parenting (Herrenkohl, Herrenkohl, Toedter, & Yanushefski, 1984; Rohner & Rohner, 1976). Rohner and Rohner (1976) argue that it is not solely the exposure to abuse that is implicated in the transmission process but the effect that parental rejection has on later development. In evidence amassed from extensive anthropological investigations of parental rejection in 101 societies around the world, they present a convergence of findings. In all these cultures, rejected

children have more difficulty managing hostility and aggression, are overly dependent or prematurely independent and have an impaired sense of self-esteem. Rejected children are emotionally unstable and/or unresponsive and have less ability to handle stress (Rohner & Rohner, 1980). Experiences with parental rejection are particularly detrimental because of the extended period of time that children remain in the family of origin.

The effects of parental rejection can be alleviated by positive nurturing from other supportive family members allowing some children to overcome the deleterious effects (Rohner, 1986). But without experiences to compensate for early negative childhood experiences, it is likely that negative effects persist into adulthood. It may well be that individuals not having experienced acceptance and love themselves, and without positive role models to emulate, have difficulty giving love to others. Children's experience with nurturance and the subjective feeling of acceptance ultimately affect their pattern of relating to others, and may have more far reaching consequences than specific traumatic abusive events in perpetuating child maltreatment (Birtchnell, 1993; Zeanah & Anders, 1987).

The influence of nurturance on the individual's social-emotional health is well documented in parent-child literature (Barnard et al., 1989; Belsky, 1984; Campos et al., 1983; Rohner, 1980). It is a precursor for healthy social-emotional functioning of the adult's personality. A lack of experiencing nurturing behaviour as a child may impede an individual's ability to nurture. This could play a critical role in shaping the quality of later parenting ability. Rohner (1986) maintains that adults who were rejected as children are more likely to reject their own children significantly more often than parents who were accepted as children. The rejection cycle is perpetuated; the effects carried forth from one generation to the next.

Role of Marital Quality

The association between childrearing history and parenting has been shown to vary with marital quality. It is noteworthy that Straus (1983) found the highest rate of child maltreatment in a sample of women who were themselves abused. It has been shown that abused mothers who were able to break the cycle of abuse were more likely to have stable, emotionally supportive and satisfying relationships with their spouses or mates (Egeland et al., 1988). Somehow, the stress of a problematic past is buffered by supportive marital relationships. Marital relations that are a good quality can provide strong support to partners and can be an important factor that enables individuals with negative childhood experiences to provide their children with adequate care. Even teenage mothers with supportive partners had better parenting skills despite a history of childhood rejection (Crockenberg, 1987). More optimal parenting skills were also demonstrated in women who were raised in institutions as children if they had satisfying marriages (Rutter et al., 1983). Affectionate, supportive relationship experiences somehow buffer the effects of negative past experiences for individuals at risk as a result of their developmental histories. Why this is so is not entirely clear. It could be that satisfying marital relationships meet mothers' own emotional needs. It could also be because the other parent is a model of good parenting behaviour (Rutter et al., 1983).

Intergenerational Transmission of Parenting: Studies Using Nonclinical Samples

There is considerably less research on the intergenerational transmission of parenting using nonclinical samples. Furthermore, although the following studies all investigate some aspect of parenting from a generational perspective, the concepts and the operational measures differ. For instance, Hanson and Mullis (1986) and Gelso, Birk and Roberts (1978) investigated parenting attitudes; Martin, Halverson, Wampler and Hollett-Wright (1991) examined parenting styles and goals;

and Belsky and Isabella (1985) examined the relationship between the parent's childhood experiences in the family of origin and the transition to parenthood. Because of the inconsistency in concepts studied and the inconsistent use of measurement tools, it is difficult to integrate the results of these studies into a meaningful framework for understanding the generational effect. Moreover, these studies often lead to conflicting results. Still these studies are noteworthy because they represent beginning efforts to understand the generational transmission of parenting in populations of people that have not been identified clinically as exhibiting maladaptive parenting. In this sense, they are referred to as nonclinical samples.

Parenting Attitudes

Hanson and Mullis (1986) studied parenting and childrearing attitudes concerning corporal punishment, empathetic awareness, role reversal and expectations in a sample of college students and their parents. A generational effect was only found in the empathetic awareness of children's needs between mothers and their daughters. However, they identified an important cross-sex relationship between father and daughter. That is, the better the fathers understood the needs of self and others, the greater the daughter's understanding of appropriate expectations for children and the need for alternative, nonabusive means of punishment and discipline (Hanson & Mullis, 1986). Gelso et al. (1978) also identified that it is the parent of the opposite sex that most directly influences the person, a finding contrary to lay beliefs.

Parenting Styles

Martin et al. (1991) examined the generational influence in parenting styles and goals in mothers and maternal grandmothers. Both generations were similar in parenting goals, but mothers placed more importance on nurturance than grandmothers. This varied with the age of the child, with mothers of young children placing more emphasis on nurturance than mothers of older children.

In a longitudinal study of families using naturalistic observations, Cowan and Cowan (1990) found that women who recalled more positive relationships with their mothers had more positive interactions with their daughters. Yet, they found the opposite for fathers. Fathers who recalled more negative relationships with their fathers were rated as having more positive interactions with their sons. Cowan and Cowan (1990) hypothesized that compensatory mechanisms which have been noted by other researchers (Gelso, 1974; Rutter et al., 1983) and questioned by others (Volling & Belsky, 1992) could possibly be at work.

Maternal Rejection

The generational effect of maternal rejection was investigated by Main and Goldwyn (1984) utilizing the Berkley Adult Attachment Interview in a sample of nonabusive mothers who had participated in a larger study of early social development. A mother's apparent childhood rejection by her own mother was strongly related to her own infant's avoidance of her. Since avoidance of the mother is so strongly related to a mother's observed rejection of her infant, the researchers inferred that there is a strong tendency for mothers who have been rejected by their mothers to then reject their own infants. Their work illuminates several factors involved in the mechanism of transmission. Individuals who experience rejection may defensively continue to idealize and identify with the rejecting parents leading them to the same behaviour (Main & Goldwyn, 1984). Certain aspects of the mothers' failure to integrate past experiences were significantly related to the infants' avoidance. Mothers who had difficulty recalling childhood experiences or who were very incoherent in their discussions of these experiences, were more likely to have infants who avoided them. In contrast, mothers who openly expressed anger and resentment toward their mothers, who were coherent in their discussions of their past experiences and who were able to acknowledge their feelings of resentment, were not as likely to have infants who avoided them. The experience of a negative past alone

did not determine whether parents were likely to provide inadequate care of their infants. Rather, it was their repression of the experiences. Main and Goldwyn (1984) found that when people were able to remember both past negative experiences and their feelings associated with them, the cycle of transmission was altered. This finding in a nonclinical population supported Frailberg, Adelson and Shapiro's (1975) conclusion from work with abusive mothers.

Volling and Belsky (1992) examined the relationship between parental rejection and attachment behaviour in fathers of 113 first-born infants and found that fathers of securely attached infants actually recalled more rejection in childhood. This led them to speculate that fathers who experienced less than optimal childrearing may react by behaving in a more security-inducing manner with their own children providing more support for the compensatory hypothesis. However, while the infants were more securely attached, the fathers actually tended to be less responsive to their infants which is inconsistent with the compensatory hypothesis. It is possible that there are differences in the effect of childrearing history for mothers and fathers. Researchers cannot rely on mother-infant studies to explain the effect of childrearing history on father-infant relationships.

Role of Marital Quality

It is well-documented that marital quality declines during the stressful transition to parenthood (Belsky & Isabella, 1985; Belsky, Spanier & Rovine, 1983). This is a concern because good spousal relations have been shown to improve the quality of parent-infant relations (Belsky & Isabella, 1988; Belsky et al., 1983) and buffer the effects of negative childrearing histories in clinical samples (Crockenberg, 1987; Egeland et al., 1988; Rutter et al., 1983). There is evidence of this buffering effect in nonclinical samples as well. Cox, Owen, Lewis and Henderson (1989) found mothers were warmer and more sensitive and fathers held more positive attitudes toward their infants

and their roles as parents when marital quality was high. This effect remained constant even when the psychological health of the parents was statistically controlled. Belsky et al. (1989) reported higher maternal negativity in observed interactions of mothers and children related to prenatal reports of childhood rejection but only when marital quality was also poor. Thus, there is some evidence that the buffering effect of marital support seen in clinical populations may also be an influence on parenting in nonclinical populations.

Nevertheless, Belsky (1991) reports in a review of parenting literature that while the association between marital quality and parenting is positive during the infant and toddler years, this changes for older children. Poor marital quality is then related to better mothering of older children. Belsky (1991) offers two possible explanations. He speculated that women might compensate for poor marriages by becoming enmeshed in the parent-child relationship or that they might compensate for their spouse's insensitive parenting.

Cowan and Cowan (1992) also examined conflict in the family of origin and its relationship to marital satisfaction during the transition to parenthood. The association reported was an inverse linear relationship. More conflict in the family of origin was related to less satisfaction in the family of procreation. However, when parents had reported different levels of conflict in the family of origin, an intriguing finding emerged. When husbands reported high conflict and wives reported low conflict, both partners but particularly the wives reported less satisfaction in their current marriage. When wives reported high conflict and husbands reported low conflict, the decline in marital satisfaction after childbirth was only slight. This led the researchers to postulate that negative cycles were more likely to be repeated through the husband's family line. They speculated that when men from high-conflict families experienced the stress of becoming a parent, they expressed more irritability and anger toward their wives.

Wives reacted by experiencing more dissatisfaction in the marital relationship. When wives from high-conflict families married men from low-conflict families, the decline in marital satisfaction was only slight. They suggested that although wives may express irritability or anger during the transition, their husbands do not respond in kind.

Marital discord in the family of origin is a situational crisis that has been shown to compound the stress of a problematic childrearing history (Belsky & Isabella, 1985; Cowan & Cowan, 1992). More conflict in the family of origin was related to less satisfaction in the family of procreation (Cowan & Cowan, 1992). Marital quality declined during the transition to parenthood for both parents when there was both a history of childhood rejection and marital discord in the family of origin (Belsky & Isabella, 1985). It is conceivable that exposure to parent's harmonious marriage and warm parenting provides role models of better interpersonal communication which then enhances a couple's current marital relationship. Good interpersonal communication becomes more important during the stressful transition to parenthood. When an adult's childrearing experiences have not been positive, the adult's capacity to cope with this demand for communication may be limited (Belsky & Isabella, 1985).

Father-Infant Interactions

After long neglect in parent-infant studies, researchers have begun to recognize the important role of fathers in child development (Belsky, Gilstrap, & Rovine, 1984; Main & Weston, 1981). Father-infant attachment has been shown to be independent of the quality of the mother-infant relationship (Main & Weston, 1981). Furthermore, the quality of infant's attachment to the father contributes to the development of children's social functioning and exploratory competence (Kunst-Wilson & Cronenwett, 1981; Volling & Belsky, 1992).

Some important differences in mother-infant and father-infant behaviours have been noted (Bridges, Connell, & Belsky, 1988; S. S.

Ricks, 1985). Observational studies conducted in both laboratory and home indicate that fathers differ both in the amount of time they spent with their infants and the types of activities they engage in (Bridges, et al., 1988). Fathers, in general, participate less in caretaking activities and are more likely to play with their infants (Beail, 1985; S. S. Ricks, 1985). Even the play activities are qualitatively different from mothers. Father's play is more physically arousing, and less often mediated by a toy. Infants find this play more rewarding and stimulating than mother's play (Clarke-Stewart, 1978).

Fathers smile and talk less but touch their infants more (Parke, 1981; Pederson, 1982). In response to an infant's cry, fathers react by touching, whereas, mothers respond more often verbally. Fathers and mothers differ too in how much exploratory freedom they give their infants. Mothers put more limits on exploration while fathers allow more freedom (Parke, 1981; Volling & Belsky, 1992).

It has been shown that fathers interact differently depending on the infant's gender even as early as the newborn period (Parke, 1981). Fathers not only stimulate their sons more but they talk and respond more to their son's vocalizations. While father's play was generally more physical than mother's play, it was even more robust for boys (Parke, 1981).

The manner in which fathers interact or do not interact with infants may affect the experiences that mothers provide for their infants. Mothers interact less with their infants in their spouses' presence (Clarke-Stewart, 1978; Pedersen, 1982). In fact, both parents interact less with their infants when their spouses were present (S. S. Ricks, 1985). On the other hand, Pedersen (1982) found that maternal competence in feeding an infant son increased when the father was present.

Mothers and fathers contribute differently to the infant's cognitive development (Clarke-Stewart, 1988; Parke, 1981). Mothers stimulate

infant's cognitive development by talking, showing and pointing things out and through their expressions of warmth and affection, while fathers enhance cognitive development through social-physical stimulation (Clarke-Stewart, 1978, Parke, 1981).

Grossman, Pollack, and Golding (1988) studied predictors of both the quality and quantity of fathering. Several psychological characteristics of men, particularly their autonomy and job satisfaction predicted both their play time and the quality of their interactions with thoir children. In stark contrast to other researchers (Belsky, 1984; Belsky, Gilstrap, & Rovine, 1984; Cowan & Cowan, 1992), Grossman and colleagues (1988) did not find that the quality of the marital relationship had an effect on father's parenting.

In summary, it has been demonstrated that father-infant interactions differ from mother-infant interactions. Also, fathers interact differently with their child depending on the gender of the infant. Finally, mothers interact differently with infants when the father is present.

Parental Interactions with Preterm Infants

The birth of a baby earlier than expected gives the parents less time to prepare psychologically for the transition to parenthood (Goldberg, 1982). The concern and worry associated with a preterm infant's health status and survival places more stress on parents. Increased stress has been found in mothers of preterm infants at the time of birth and when they are discharged from hospital (Brooten et al., 1988). The worry about having a preterm infant does not end after the infancy period. In a follow-up study of 30 preterm infants matched with 30 term infants discharged from hospital, mothers of preterm infants reported in an interview that they felt overprotective of their children, treated them differently than if they were born at term and were less willing to leave the infants with sitters (Macey et al., 1987). McCain (1990) reported parents continued to be concerned about

the health and development of their growing preterm child over the first two to four years. Concern for the infant no doubt puts added stress on parenting.

Research has identified a more difficult transition into parenthood for these parents (Goldson, 1992). The initial physical needs of the preterm baby are greater. Even preterm babies born in good health still need to be fed more often and have more disorganized sleep patterns (Barnard et al., 1987).

According to Yogman (1987), Parke (1981) and Jones (1981), fathers of preterm babies play a greater role in caretaking activities than fathers of term babies. They tend to be more active in feeding, diapering, bathing and consoling their infants. The reason for this is not clear. Premature infants have been found to be more irritable, and Jones (1981) found fathers of irritable infants did provide more caretaking. There is some evidence that the infant's health status is related to the father's involvement in caretaking. In a small sample of 18 newborn infants with health problems matched with 18 healthy newborn infants, Brown, Rustia and Schappert (1991) found fathers of newborns with health problems performed significantly more childcare activities one month after discharge from hospital. However, no differences were reported at three months. Perhaps fathers of preterm infants assume greater roles in caretaking because the initial worry about the health of the preterm baby motivated the fathers to become more attached to their infants.

Studies of preterm infants have shown that parent-infant interactions are different. Premature infants are less alert, less active and less responsive to social stimulation than full term infants during the neonatal period and through the first months of life (Bakeman & Brown, 1980; Goldberg, 1982). Mothers compensate by taking over more of the interactive burden but this is not necessarily an effective strategy (Barnard, Bee, & Hammond, 1984). Goldberg (1982) reported that when parents were less active their babies were actually more attentive.

However, by eight months of life, mothers become less responsive while infants become more alert and responsive (Barnard et al., 1987; Magyary, 1983).

Many of the interactional differences persist across the infant's first year and some are more dramatic at 12 months than in earlier infancy (Crnic, Ragozin, Greenberg, Robinson, & Basham, 1983). Barnard, Bee and Hammond (1984) have noted these interactive differences throughout the first two years of life. Two year old preterm infants had smaller vocabularies and verbalized less than term infants. Mothers of preterm infants used less statements and more imperatives than mothers of term infants. These differences may contribute to the developmental delays noted in some preterm infants.

The interactional incongruity of the preterm-mother dyad results in interactions that are less satisfying to both partners. Since interactions are generally less positive and the parenting experience less enjoyable, there is potentially more stress in this relationship. The stress of parenting premature infants may predispose parents to be more influenced by their childhood experiences. Parents with a history of less affectionate childrearing, under stress of parenting a preterm infant, may be less responsive and less sensitive to the child.

Conclusion

Further research is needed on the intergenerational transmission of parenting for both mothers and fathers, and the role that marital quality plays in the transmission process. In particular, more information is needed about these relationships in nonclinical samples of parents to broaden knowledge in this domain.

Chapter 3

Methodology

A correlational design was used to examine the relationship between parental childrearing history, marital quality and parent-infant interactions. This design was chosen because it is useful to determine the relationships between variables and it allows researchers to predict which variable(s) best predict(s) the quality of parenting interactions. Identification of variables associated with more optimal parenting or alternately variables that predict less optimal parenting, can help health care professionals design effective interventions to promote healthy parenting.

Sample

Subjects for this study were recruited from parents who had participated in the Parent-Infant Project, a prospective longitudinal interdisciplinary study of mother and father interactions with term and preterm infants. Subjects in this study consisted of 57 families with healthy preterm infants and 57 families with healthy term infants, matched by infant gender and hospital of birth. They were recruited from the three large urban hospitals in Edmonton, Alberta at the time of the infants' births, between July, 1991 and May, 1992. Term infants serving as the comparison group were born within one week of the expected birth date of the preterm infant.

The following criteria were used for the Parent-Infant Project. Preterm infants born at 30 to 36 weeks gestation were included while term infants were those infants born at 37 to 42 weeks gestation. Very low birth weight infants (< 1500 grams) were excluded. All infants had to be healthy with no major anomalies when they were discharged from hospital. Multiple births were excluded from the sample as well as any infants born to mothers with suspected or confirmed substance abuse. Parents had to be cohabiting, though not necessarily legally married, and had to reside within an hour's drive of the University of Alberta

(Edmonton, Alberta). To be included in the sample, parents had to be able to read English at a grade seven level and had to plan to speak English to their infants.

Of the original families, ten families later were withdrawn from the study for various reasons. One infant died from Sudden Infant Death Syndrome and another infant was diagnosed with Osteogenesis Imperfecto. Two families moved out of the province. Two families decided not to participate and one father went to jail. Parents separated in three families.

After 12 months, there were 49 preterm and 54 term families remaining in the Parent-Infant Project. These parents were invited to participate in this study. Although both parents were asked to participate, if only one parent in a family wished to participate, the data were included in the study. Of these families, 72 mothers and 66 fathers agreed to participate. In the mothers' sample, 35 mothers had preterm infants and 37 mothers had term infants. In the fathers' sample, 32 fathers had preterm infants and 34 fathers had term infants.

Demographic data collected at the time of recruitment into the Parent-Infant Project was utilized in this study. Demographic data included both mother's and father's age in years, their number of years of education and their occupation. Demographic data on the infants include their number of weeks gestation, gender, weight and birth order.

Protection of Human Rights

Ethical clearance was obtained from the Ethics Review Committee, of the Faculty of Nursing, University of Alberta and the Nursing Division, University of Alberta Hospitals. Potential participants were informed about the general nature of the study (i.e., that the researcher was studying how one's childhood experiences were related to parent interactions in the next generation) in a cover letter sent by Dr. Harrison along with the questionnaire (see Appendix A - Correspondence to Parents). Consent to participate was presumed when subjects

completed and returned the questionnaire.

Anonymity of participants was protected. Only the principal and co-investigator of the Parent-Infant Project have access to identifying information. The researcher in this study does not have access to the code list; code numbers were used to link the data. This was done to ensure anonymity and confidentiality.

Data Collection

This study incorporated data already collected from the Parent-Infant Project and data collected specifically for this study. Data from the Parent-Infant Project provided a measure of marital quality and a measure of parent-infant interactions. The measure of childrearing history was collected by this researcher. This is discussed in more detail below.

Data Collected in the Parent-Infant Project

Mothers and fathers were observed separately in their homes in interaction with their child when the infant had been in the home for 3 months and then again at 12 months. The measure of parent-infant interaction was the Nursing Child Assessment Teaching Scale (NCATS) (Barnard, 1978). The 12 month observations were chosen for this study because by 12 months a child is demonstrating more independence and autonomy. As well, by 12 months the early heightened level of responsiveness in mothers' interactions with preterm infants is replaced by less responsive interactions (Barnard et al., 1984). This phenomenon of parental "burnout" coupled with a more independent child puts added stress on parenting which might cause parents to be more reliant on their past childrearing experiences.

Although a parent-infant interaction during a teaching episode is only a sample of the parent's behaviour with his/her child, it is representative of their overall behaviour (Barnard et al., 1989). The task used in the teaching interaction is one that is age-appropriate and based primarily on the mental items of the Bayley Infant Scales (Barnard

et al., 1989). At the 12 month observation, the parent was asked to teach the child to build a tower of three cubes. Because this task is usually novel to the dyad, it places some stress on the parent and infant.

The other measure that was utilized from the Parent-Infant Project was a measure of marital quality. This measure was also obtained from both parents independently at both the 3 and 12 month home visits using the Dyadic Adjustment Scale (Spanier, 1976). The data from the 12 month visit was used in this study.

Data Collected for this Study

A self-report questionnaire, the Parental Acceptance-Rejection Questionnaire (Rohner, 1976) was used to measure maternal acceptance in the family of origin. This questionnaire was mailed by Dr. Harrison, the principal investigator of the Parent-Infant Project, to all parents with accompanying cover letters from herself and this researcher. These letters discussed consent, confidentiality and directions for completing the questionnaire and the expected date they were to be returned. Phone numbers of the Parent-Infant Project and Dr. Harrison were provided. Participants were encouraged to phone with any questions or concerns. The letter also stated that though it was preferable that both parents participate, if only one parent wanted to participate they would be included in the study. Subjects were asked to return the questionnaires if they did not want to participate so that reminder letters would not be sent to those parents. Self-addressed, stamped envelopes were provided to return the questionnaires.

Parents were asked to return the questionnaires in three weeks. Forty nine of the 103 families responded. Forty-two mothers and 40 fathers agreed to participate, while 7 parents refused. A reminder letter was sent by Dr. Harrison to those families that had not returned the questionnaires. At this mailing, 20 mothers and 17 fathers returned completed questionnaires, while 3 parents returned blank questionnaires

indicating their refusal to participate. Because data collection occurred over the summer months while families are often on holidays, subjects were sent a final reminder after another three weeks. Ten mothers and nine fathers returned completed questionnaires. Two more parents refused participation. Those families who had not responded were presumed to not want to participate. The response rate for mothers was 69.9% and 64.1% for fathers. According to Jackson (1988), using a formula to calculate expected response rates based on Canadian statistics, this response rate was appropriate.

To ensure accuracy in data collection, the Parental Acceptance-Rejection Questionnaire contained the family identifying code used in the Parent-Infant Project. To further distinguish between parents, mother's forms were printed on white paper and father's forms were printed on green paper. Parents were instructed as to which form to complete. As an additional check, the parents were asked to state who completed the questionnaire at the bottom of the form. This was needed to ensure that the correct PARQ score was matched with the correct NCATS and DAS scores.

Instruments

Nursing Child Assessment Teaching Scale

The Nursing Child Assessment Teaching Scale (NCATS) is an observational measurement of a parent-infant teaching interaction that uses a standardized procedure for scoring (Barnard, 1978) (see Appendix B - Nursing Child Assessment Teaching Scale). It was designed for use with children up to 3 years old. The scale consists of 73 items organized into 6 subscales. Four subscales containing a total of 50 items describe the parent's behaviour. Parent subscales include sensitivity to cues, response to distress, social-emotional growth fostering and cognitive growth fostering. Two subscales containing 23 items describe the infant's behaviour. The infant subscales include clarity of cues and responsiveness to parent.

The scales are binary in nature. Behaviours are scored "yes" if the behaviour occurs and "no" if it does not occur. All the "yes" scores are added together to form a subscale score. Subscales pertaining to the parent's behaviour are added together to obtain a total parent score. Subscales pertaining to the infant's behaviour are added together to form a total infant score. The total parent score and the total infant score are summed to create a total NCATS score. However, since the parent was the unit of study the total parent score was used for these analyses.

Psychometric properties of the NCATS were based on a sample of data gathered at the University of Washington in 1979 using over 2000 nurses from 19 cities in the Western United States who participated in the Nursing Child Assessment Satellite Training Project (NCAST). Data obtained from observations of mother-infant interactions done to assess the nurses' reliability in using the instrument during their NCAST training were added to the database. Although this data is referred to as normative data, Barnard and colleagues (1989) suggest that this be considered "the closest approximation to a normative sample" (p. 48). Mothers observed were predominantly Caucasian, married with an average of 13 to 15 years of education (Barnard et al., 1989). Ninety-six percent of the observations were made in the home setting. Infants ranged from 1 to 36 months for the teaching observations.

Reliability

Internal consistency was reported using Cronbach's alpha coefficients. Alpha coefficients for the total parent score, the total infant score, and the total NCATS score for parents with infants aged 1 to 12 months were .83 .78 and .85 respectively (Barnard et al., 1989). There was considerable variance in the alpha coefficients for the individual subscales with the sensitivity to cues subscale the weakest (r = .44). The variance of the subscales are not provided, but it is possible that the alphas are low because there is little variance in

these scales as is typical of criterion-referenced measures. Because larger number of items are involved in the total scores on the NCATS, the internal consistencies are higher than for the subscales. Therefore, the total scores are most meaningful for research purposes (Barnard et al., 1989).

There is no test-retest reliability information, however repeated measures have been obtained with the teaching interactions on videotape. The total parent scores were stable at .85 and the total infant scores at .55 (Barnard et al., 1989).

Validity

Concurrent validity information was obtained by administering the NCATS to a sample in conjunction with a related instrument, the Home Observation for Measurement of the Environment Scale (HOME). Correlation coefficients for total parent, total infant, and total NCATS score for infants aged 1 to 12 months were .49, .28 and .44 respectively ($p < .01$.) (Barnard et al., 1989).

In a sample of 145 middle-class mothers and healthy infants, Bee et al. (1984) found the NCATS used at 12 months predicted scores on the Stanford-Binet ($r = .29$, $p < .001$) and receptive language scores ($r = .30$, $p < .001$) and expressive language scores ($r = .21$, $p < .05$) both assessed using the Sequenced Inventory of Communication Development.

Construct validity has been established through repeated use, testing and revisions of the scales. It has discriminated among subgroups that would be expected to differ in interactive skill. For example, it has been shown to differentiate between mother-infant interactions with preterm and term infants (Barnard et al., 1989; Barnard et al., 1984) and between abusing and non-abusing mothers (Barnard et al., 1989). Discrimination occurred in five of the six subscales. The response-to-distress subscale of the NCATS did not discriminate.

Reliability in this Study

Observers in the Parent-Infant Project were graduate students in

nursing who were trained using standardized training films and an accompanying manual by a certified Nursing Child Assessment Satellite Training (NCAST) instructor. Observers had to achieve a minimum inter-rater reliability of 85% on training observations. Inter-rater reliability was checked by data collectors testing volunteers prior to the study itself. Additional training was provided prior to the 12 month data collection period to ensure reliability. All three data collectors remained with the project for the duration of the study.

To reduce the possibility of observer drift, inter-rater reliability checks were conducted every tenth home visit throughout the duration of the study. A level of agreement of 86% was achieved for observations of mothers and 89% for fathers for the 12 month observations. Cohen's Kappa was also used to assess the degree of consistency between observers. This measure is a conservative measure of consistency since it corrects for chance agreements (Waltz, Strickland, & Lenz, 1991). In this study, Cohen's Kappa was .60 for both observations of mothers and fathers.

Dyadic Adjustment Scale

The Dyadic Adjustment Scale is a self-report instrument developed by Spanier (1976) to assess the process of dyadic adjustment in married or unmarried cohabiting dyads (see Appendix C - Dyadic Adjustment Scale). The instrument consists of 32 items in four interrelated dimensions thought to be indicators of dyadic adjustment which are used as subscales. These subscales are: dyadic consensus (i.e., the degree to which the couple agree on matters of importance to the relationship), dyadic cohesion (i.e., the degree to which the couple engages in activities together), dyadic satisfaction (i.e., the degree to which the couple is satisfied with the present state of the relationship and is committed to continuing the relationship) and affectional expression (i. e., the degree to which the couple is satisfied with expressions of affection and sexual relations in the relationship) (Spanier, 1976).

Scores for normal non-distressed couples can be expected to fall between 100 to 130 (Spanier, 1976).

Reliability

Cronbach's coefficient alpha was used as the reliability estimate (Spanier, 1976). Coefficient alpha for the dyadic consensus, dyadic satisfaction, dyadic cohesion and affectional expression were .90, .94, .86, and .73 respectively. Coefficient alpha for the total score was .96. Spanier (1976) reports that the subscales can be used alone but because the coefficient alpha is highest for the total score, the total score is most meaningful for research purposes. Consequently, the total score was used in this study.

Validity

Content validity was established by three expert judges who evaluated the instrument (Spanier, 1976). Construct validity was established through statistically significant correlations with a related measure, the Locke-Wallace Marital Adjustment Scale. Correlations between these scales was .86 for the married sample and .88 for the divorced sample ($p < .001$). Construct validity was further established through factor analysis which clustered items into four components which are consistent with the subscales (Spanier, 1976).

Concurrent validity was obtained by administering the scale to a sample of 218 married people and a sample of 94 divorced people. For each item in the scale as well as the total score, significant differences were found between the divorced and the married group ($p < .001$).

Parental Acceptance-Rejection Questionnaire

The Parental Acceptance-Rejection Questionnaire (PARQ) (Adult version) is a self-report instrument designed to measure individual's perceptions of parental acceptance and/or rejection (see Appendix D - Parental Acceptance-Rejection Questionnaire). This tool has been used in more than 80 studies internationally in the last decade and a half

(Rohner, 1991). The adult version is available in nine languages.

The PARQ consists of 60 statements. Subjects respond on a 4 point Likert scale in terms of how well each statement described the way their mothers treated them. The PARQ consists of four subscales. The warmth/affection subscale contains 20 items, the aggression/hostility and the neglect/indifference subscales each contain 15 items and the rejection subscale contains 10 items. A total (composite) score is obtained by summing the four subscales after reverse scoring the warmth/affection subscale score. Scores range from a possible 60 to 240. In Rohner's (1991) scoring system, a low score of 60 reveals maximum perceived acceptance or minimum rejection while a high of 240 reveals maximum perceived rejection. A score of 150 or higher reveals that the person perceives, overall, more maternal rejection than acceptance. Total scores were used in this investigation.

The questionnaire requires recall of the parent's childhood perceptions when they were between 7 and 12 years old. Rohner (1976) maintains that prior to this time children do not have clear concepts of the self as children's thinking is dominated by egocentrism. Avoiding the teenage years is also advisable since conflict between parents and children is common.

This questionnaire can be used with mothers or fathers as subjects and it can be used to assess subject's perceptions of acceptance-rejection from their mothers or fathers or their parents as a unit. In this study, parents were asked to respond to the questionnaire about how well it described their perceptions of their mothers. Although childhood experiences are affected by both parents, there is some indication that children of both sexes attribute nurturance and caring more as an attribute of mothers (Troll et al., 1979). During pretesting of the instrument, it was apparent that there was confusion when subjects were asked to recall their parents as a unit. Some statements caused respondents to recall the behaviour of their mothers

while other statements caused respondents to recall the behaviour of their fathers. To promote clarity and to ensure a minimum of confusion when subjects were completing the questionnaire, it was decided that participants would be asked to recall their perceptions of their mothers. This was needed to ensure that the instrument had validity.

Reliability

In the original validation study, data was gathered from 147 male and female college students recruited from a major university in Washington, D.C. Subjects ranged in age from 18 to 43 years with an approximate mean age of 23 years. They were evenly distributed by sex. There were no significant age or sex differences in subject's responses to the instrument (Rohner, 1991).

The principal measure of reliability was Cronbach's coefficient alpha. The coefficient alpha for the four scales on the adult PARQ was from .86 to .95 with a median reliability of .90. For a second sample of college students (N = 58), the coefficient alpha was from .83 to .96 with a median of .90. Interscale correlations were high and statistically significant ranging from -.43 to .89 suggesting that the scales assess the same construct (Rohner, 1991). The warmth/affection scale was negatively correlated with the neglect/indifference scale (r = -.71), aggression/hostility scale (r = -.45) and the rejection scale (r = -.43).

Validity

Evidence of convergent and construct validity of the PARQ (Child Version) was established through statistically significant correlations of the scales with other two other related measures, the Child's Report of Parent Behaviour Inventory (CRPBI) and Bronfenbrenner's Parental Behaviour Questionnaire (BPB). The warmth/affection, neglect/indifference and the rejection subscales of the PARQ correlated with the acceptance, hostile detachment and rejection subscales of the CRPBI. The correlation was .90, .86 and .81 respectively. The

aggression/hostility scale of the PARQ correlated with the hostile detachment scale of the BPB (r = .43). All correlations reported by Rohner (1991) were statistically significant ($p < .001$).

Construct validity has been established through repeated use, testing and revisions of the scales. Further evidence regarding the construct validity of the scales was provided by a factor analysis of the PARQ. Factor analysis revealed three factors: parental rejection, parental acceptance and physical punishment. These three factors extracted account for 75.45% of the variance. Correlation between the two primary factors (i.e., parental rejection and parental acceptance) was .55. This indicates that the two factors are not independent but may be interpreted as representing bipolar ends of a single dimension (Rohner, 1991).

In conclusion, all three instruments were developed in the 1970s and have been used in numerous studies. These instruments have been subjected to rigorous testing and have demonstrated reliability and validity. This is crucial since the strength of a correlational study hinges on the reliability and validity of the measurement tools (Brink & Wood, 1989).

Data Analysis

The unit of analysis in this study was the individual parent. A priori, it was hypothesized that the relationship between childrearing history and marital quality might affect parenting differently depending on the gender of the parent.

This study consists of two separate samples, a sample of 72 mothers and a sample of 66 fathers. In all instances, data were described and analyzed separately for mothers and fathers. A comparison of mothers and fathers was done only descriptively.

Prior to analysis, questionnaires were examined for missing responses. In both the mothers' and fathers' data, there were only a minimal number of missing responses. In the mothers' data, there were

13 missing items, out of a total of 4464 items. Eleven of the 13 missing items came from 1 individual. In the fathers' data, there were 27 missing items, out of a total of 4092 items. The majority of the missing responses (22/27) were from two individuals. There was no discernable pattern of missing responses apparent in either the mothers' or fathers' data. Missing data was replaced by the mean for that person on that specific subscale. This approach is conservative and consistent with what the person had answered in other statements in the same subscale. This does not bias the data toward the sample mean or change the shape of the distribution.

All analyses were performed using the Statistical Package for Social Sciences (SPSS) Version 6.0 for Windows. All inferential tests used a 5% level of significance.

Descriptive Statistics

Demographic Data

Demographic data obtained from the Parent-Infant Project were used to describe characteristics of both samples using descriptive statistics. Calculations include ranges, means and standard deviations of ages and years of education for both mothers and fathers of term and preterm infants. Description of infant characteristics include frequencies and percentages of the gender and birth order. Averages and standard deviations of gestational age and birthweight were also described.

Socioeconomic status was analyzed using the Four Factor Index for Social Status (Hollingshead, 1975). The Four Factor Index for Social Status is based on four factors, the gender and marital status of the individual, the years of education he/she has completed and the occupation of the individual. These factors were combined to estimate the status score for the individual. Both spouses were considered in this manner and individually assigned status scores. A family was then assigned a score for social status depending on the average of the two scores.

This method of determining socioeconomic status offers several advantages. First, it does not depend solely on occupation to determine socioeconomic status but instead takes into consideration the fact that socioeconomic status is a multidimensional concept. Second, it recognizes the contribution of both spouses in determining family socioeconomic status. Given the greater participation of women in society who are gainfully employed and the fact that many families are dependent on two incomes to remain above the poverty line (Luxton, 1988), this method of determining socioeconomic status better reflects contemporary society. Socioeconomic status was described descriptively using ranges, means and standard deviations as well as the frequency of individuals in each classification.

Independent and Dependent Variables

Results of the NCATS, DAS and the PARQ are described using descriptive statistics. Ranges, means and standard deviations were calculated for each subscale and for the total score for the PARQ and the DAS. The NCATS is described similarly except that total parent scores were used.

Inferential Statistics

Differences between the mothers (fathers) of preterm and term infants were tested using either the univariate *t*-test for independent samples or the multivariate Hotelling T^2-test. All statistical tests were two-tailed and used a 5% level of significance.

Pearson product moment correlations were used to determine the strength and the direction of the association between each independent variable (age, years of education, socioeconomic status, group membership, total DAS scores and the total PARQ scores) and the dependent variable (total parent scores on the NCATS). In addition, zero order correlations were calculated between all independent variables and the dependent variable, as above, but this time including all the subscales of each measure. Pearson product moment correlations

were also calculated between: (1) the subscales and total scores of the PARQ and the subscales and total parent scores of the NCATS, (2) the subscales and total scores of the DAS and all subscales and the total parent score of the NCATS, and (3) the subscales and total scores of the PARQ and the DAS. Scatterplots of all independent variables with the dependent variable were obtained to provide visual representation of the data to further ascertain the nature of the relationship between the variables.

Multiple regression analyses using a hierarchical model were then used to assess the simultaneous contribution of all independent variables to the prediction of the total parent score on the NCATS. A hierarchial model was chosen because this technique allows the researcher to control the order in which the independent variables are entered into the regression equation. The order was based on a theoretical model rather than allowing the computer to control the entry of variables according to the greatest amount of variance explained. Regression analyses were done to answer three of the four research questions.

<u>First Research Question: What is the Relationship Between Childrearing History and Parenting Style?</u>

The first variables entered into the regression equation were the demographic variables. They were entered separately in the following order: socioeconomic status, followed by age and education. This was followed by group membership, which was coded as a dummy variable. Preterm infants were coded 0 while term infants were coded 1. The DAS was then entered into the regression equation, and the PARQ was the last variable entered. This particular order was used to determine how much variance in parenting was accounted for by childrearing history after accounting for the variance attributed to the demographic variables, group membership and marital quality.

Second Research Question: Does the relationship between childrearing history and parenting style vary as a function of martial quality?

The order of the predictor variables entered into the regression analysis was the same as stated above. This was followed by entering the interaction of the DAS and the PARQ.

Third Research Question: Is there a difference in these relationships for parents of preterm infants versus parents of term infants?

For this regression analysis, group membership was entered in a different order. The demographic variables were entered in the same order as the two previous regression analyses, but this was followed by the DAS and the PARQ. The dummy variable for group membership was now the last variable entered. This was done to determine the variance in the NCATS scores attributed to group membership (preterm or term) after accounting for all the variance due to the other variables.

Planned Comparisons of Groups with Higher and Lower Marital Quality

Initially, regression analyses were used to predict parenting scores in the sample of mothers and fathers. Subsequently, groups of mothers and fathers were identified based on marital quality. The median score of the DAS scores was used to create one group with higher reported marital quality and one group with lower reported marital quality. The median was chosen to divide the sample because no criterion is known which divides high and low marital quality. As well, Belsky, Youngblade and Pensky (1989) used this approach in a comparable study.

Regression analyses were repeated to determine if childrearing history was a significant predictor of parenting scores in any of these groups under the varying condition of marital quality. The total parent score of the NCATS was regressed on group membership and the PARQ.

Chapter 4

Analyses of the Data

This chapter provides a description of the results of the data analyses. Findings for mothers and fathers are discussed separately. First, the characteristics of each sample are outlined, followed by the correlations between the predictor variables and the independent variable. Then, results of the regression analyses as they pertain to each research question are presented. Finally, results of the regression analyses are reported for groups with higher and lower marital quality.

Analyses of the Data from the Sample of Mothers

Demographic Variables

Demographic variables relating to the sample of mothers are presented in Table 1. Using a Hotelling T^2-test, there were no significant differences between the mothers of preterm infants and the mothers of term infants on any of the demographic variables.

Socioeconomic status was examined using the Hollingshead Four-Factor Index of Social Status (Hollingshead, 1975). As shown in Table 2, only 60% of mothers with preterm infants were in the top two socioeconomic classifications compared to 75% of mothers with term infants.

Characteristics of the Infants

As expected, the average number of weeks gestation and average birthweight were very different for the preterm and term infants in the mothers' sample. Preterm infants averaged 34.3 weeks gestation (*SD* = 1.3) and weighed an average of 2376.1 grams (*SD* = 384.5) while term infants averaged 39.7 weeks gestation (*SD* = 1.0) and weighed an average of 3619.0 grams (*SD* = 477.6).

As outlined in Table 3, there were more male infants and more first born infants in the preterm group. However, using a Chi-square test of independence, there was no significant association between group membership (preterm/term) and either infant gender or birth order.

Comparison of Scores on the Parental Acceptance-Rejection Questionnaire

Mothers of term infants were compared with mothers of preterm infants on each subscale and for the total score on the Parental Acceptance-Rejection Questionnaire. Ranges, averages and standard deviations are reported in Table 4.

In both groups of mothers, the mean scores on the PARQ were relatively low, indicating that overall these mothers perceived more acceptance than rejection in their childhoods. Mothers of preterm infants averaged 97.6 (SD = 30.5) while mothers of term infants averaged 108.7 (SD = 36.3) on the total PARQ score. A t-test for independent samples found no significant difference between the groups.

Comparison of Scores on the Dyadic Adjustment Scale

Mothers of term infants were compared with mothers of preterm infants on their scores on the Dyadic Adjustment Scale. Descriptive statistics including ranges, averages and standard deviations are displayed in Table 5.

Mothers of preterm infants scored an average of 109.3 (SD = 17.6) on the total DAS score while mothers of term infants scored an average of 112.5 (SD = 11.7). A t-test for independent samples found no significant difference between groups on the total DAS score.

There was more variability in the total DAS score for mothers of preterm infants than for mothers of term infants. However, Levene's Test for Equality of Variance revealed that this difference only approached significance (p = .056).

Comparison of Scores on the Nursing Child Assessment Teaching Scale

A comparison of the scores in the Nursing Child Assessment Teaching Scale for mothers of term infants and preterm infants is outlined in Table 6. Ranges, averages and standard deviations are reported.

The mean score on the total parent score of the NCATS for mothers of preterm infants was 38.0 (SD = 5.2) while mothers of term infants had a mean score of 39.7 (SD = 4.0). Using a t-test for independent samples,

there was no significant difference between the groups.

Correlations Between the Nursing Child Assessment Teaching Scale and all the Predictor Variables

As shown in Table 7, zero order correlations were computed between all predictor variables (i.e., socioeconomic status, age, years of education, group membership, DAS and the PARQ) and the dependent variable, the total parent score on the NCATS. This was computed using the Pearson product moment correlation procedure for the total sample of mothers. Socioeconomic status (SES) was significantly correlated with the total parent score on the NCATS. SES was also significantly correlated with the DAS, mother's age and years of education. The strong association between SES and years of education was expected since years of education were used to calculate socioeconomic status. Age was another variable that was positively and moderately related to years of education. This relationship was statistically significant.

Zero order correlations were also computed between the demographic variables, group membership and all the subscales of the DAS, the PARQ and the NCATS. Results of this analysis are contained in Appendix E.

Correlations Between the Parental Acceptance-Rejection Questionnaire and the Nursing Child Assessment Teaching Scale

Zero order correlations between the subscales and the total score of the PARQ and the subscales and the total parent score of the NCATS were calculated using Pearson product moment correlations for the total sample of mothers (see Table 8). All correlations were extremely weak ranging from -.18 to .08.

Correlations Between the Dyadic Adjustment Scale and the Nursing Child Assessment Teaching Scale

Pearson product moment correlations were also used to calculate the strength and direction of the relationship between the subscales and the total score of the DAS and the subscales and the total parent score of the NCATS (see Table 9). This was done for the total sample of mothers.

Three subscales of the DAS (i.e., affectional expression, dyadic consensus, and dyadic satisfaction) and the total DAS score were significantly correlated with the sensitivity to cues subscale on the NCATS. One other relationship proved significant. The dyadic satisfaction subscale was significantly correlated with the cognitive growth fostering subscale of the NCATS.

Correlations Between the Parental Acceptance-Rejection Questionnaire and the Dyadic Adjustment Scale

Zero order correlations between the subscales and the total score of the PARQ and the DAS were computed for the total sample. As reported in Table 10, all correlations were weak ranging from -.15 to .20 and not statistically significant.

Preliminary Regression Analyses

Prior to conducting the regression analyses, various exploratory techniques were employed to determine if the data met the assumptions of the statistical tests. Scatterplots of all predictor variables with the dependent variable were employed to assess the data. Histograms and stem-and-leaf plots of the scores on the NCATS, PARQ and DAS were also used to assess the normality of the distribution. Data from the PARQ were positively skewed while the DAS and NCATS were negatively skewed.

Multiple regression analysis using a hierarchical model was then used to assess the simultaneous contribution of all predictor variables to the prediction of the total parent score on the NCATS. The total parent score on the NCATS was regressed on the predictor variables of socioeconomic status, age, education, group membership, marital quality and childrearing history.

In the first regression analyses, none of the predictor variables explained a significant portion of the variance in the NCATS scores. A plot of the residuals beyond the boundary of ±1.96 standard deviations from the residual mean revealed four outliers. An examination of the residuals showed no particular trend, suggesting that an appropriate

model had been fitted given the predictors used.

Four observations representing outliers beyond ± 1.96 standard deviations from the residual mean were removed. This resulted in a scatterplot that showed the residuals distributed more uniformly around a mean of zero. As shown in Table 11, removing the outliers also increased the strength of several correlations between the predictor variables and the criterion variable. The correlation between NCATS and age, and between NCATS and years of education became significant. In addition, the correlation between SES and group status now showed significance.

Outliers were examined to determine the reason they did not fit the model. Of the four outliers removed, three mothers had preterm infants, one mother had a term infant. Infants were evenly divided in terms of gender. All four infants were either second or later born children in their families but not first born children. Three mothers were below average in terms of years education, while one mother was above average. Two mothers had lower than average NCATS scores, while two had above average NCATS scores. The same pattern occurred for the scores on the DAS and the PARQ. One mother did have a particularly high PARQ score which indicated that she recalled more rejection than acceptance in her childrearing history. In summary, examination of the outliers failed to provide any discernable pattern which would cause these cases to be discrepant.

Second Regression Analyses

A second regression analyses was run with the outliers removed. Results are reported below in terms of each research question.

First Research Question. As reported in Table 12, the only significant variable was socioeconomic status which accounted for 20.1% of the variance in the NCATS scores. No other variable entered after the demographic variables was a significant predictor of parenting scores.

Second Research Question. Results of this regression analysis are displayed in Table 13. Socioeconomic status continued to be the only significant predictor explaining 20.1% of the variance in the outcome measure. In this sample, the hypothesis that the relationship between childrearing history and parenting style varies as a function of marital quality was not supported.

Third Research Question. Results of this regression analysis was similar to the two previous ones (see Table 14). The demographic variable of socioeconomic status continued to be the only significant predictor explaining 20.1% of the variance in parenting scores. Group membership was not significant.

Planned Comparison of Mothers with Higher and Lower Marital Quality

To examine the influence of childrearing history under conditions of higher and lower marital quality, the sample of mothers was split into two groups based on the level of marital quality. The median of the DAS scores was used to generate one group with higher reported marital quality and one group with lower reported marital quality. All mothers with a DAS score less than or equal to 114 formed the group of mothers with lower reported marital quality. Mothers in this group had DAS scores ranging from 51 to 114 (M = 99.5, SD = 12.5). However, according to Spanier (1976) only a score of 100 or less is indicative of poor marital adjustment. Because some mothers in this group had scores over 100, these mothers are considered as having lower marital quality rather than poor marital quality. Mothers considered to have higher marital quality had DAS scores greater than 114. Their scores ranged from 115 to 131 (M = 122.4, SD = 4.8).

Two hierarchial regression analyses were run using the demographic variables, group membership and childrearing history to predict the total parent score on the NCATS (see Table 15). Three observations representing outliers beyond ± 1.96 standard deviations from the residual mean were removed. There was one outlier from the group with

higher marital quality and two outliers from the group with lower marital quality.

Consistent with the results using the total sample, socioeconomic status continued to be the only significant predictor of parenting interactions. However, in mothers with higher marital quality, socioeconomic status explained more of the variance in parenting scores. This variable accounted for 21.6% of the variance in the parenting scores, while it accounted for 13.0% of the variance in parenting scores in mothers with lower marital quality. The significance of the difference between the correlation coefficients for two independent samples was tested using a Fisher's z_r transformation. The difference did not prove significant.

Analyses of the Data from the Sample of Fathers

Demographic Variables

Descriptive statistics on the fathers' demographic variables are shown in Table 16. Fathers of preterm infants were similar in age and number of years education to fathers with term infants. Fathers of term infants had a higher mean score than fathers of preterm infants for their socioeconomic status rating using the Hollingshead Four-Factor Index of Social Status (Hollingshead, 1975). Nevertheless, the Hotelling T^2-test was nonsignificant indicating that the two groups of fathers were comparable on the demographic variables.

Seventy six percent of fathers with term infants were in the top two socioeconomic classifications while only 59% of fathers with preterm infants were in these same socioeconomic classifications. This is displayed in Table 17.

Characteristics of the Infants

Preterm infants averaged 34.3 weeks gestation (SD = 1.3) and weighed an average of 2322.0 grams (SD = 348.5). Term infants averaged 39.6 weeks gestation (SD = 1.0) and weighed an average of 3592.5 grams (SD = 444.4).

As shown in Table 18, there were more male infants in the preterm group and more infants that were first born children. Using a nonparametric test, the Chi-square test of independence, there was no significant association between group membership (preterm/term) and either infant gender or birth order.

Comparison of Scores on the Parental Acceptance-Rejection Questionnaire

The two groups of fathers' responses were compared for their scores on the Parental Acceptance-Rejection Questionnaire. Descriptive statistics including ranges, means and standard deviations are reported in Table 19.

Fathers of preterm infants scored nonsignificantly higher (M = 100.4) than fathers of term infants (M = 93.2). The average scores in both groups are low which indicates that overall these fathers perceived more acceptance in their childhoods than rejection.

Comparison of Scores on the Dyadic Adjustment Scale

Scores on the Dyadic Adjustment Scale were compared for the two groups. Ranges, means and standard deviations are displayed in Table 20. The mean scores for the total DAS were very similar in both groups.

Comparison of Scores on the Nursing Child Assessment Teaching Scale

Fathers of term infants were compared with fathers of preterm infants on their scores for all subscales and on the total parent score of the Nursing Child Assessment Teaching Scale. Descriptive statistics including ranges, means and standard deviations are reported in Table 21.

There was more variability in the total parent scores obtained from the fathers of preterm infants as measured by Levene's Test for Equality of Variance ($F(1,64) = 5.28$, $p = .03$). Fathers of preterm infants had a lower average total parent score on the NCATS than fathers of term infants. The t-test adjusting for unequal variances was used to test the mean differences in the groups. The difference only approached significance ($p = .067$).

Correlations Between the Nursing Child Assessment Teaching Scale and all Predictor Variables

Using the Pearson product moment correlation procedure, zero order correlations were computed between the dependent variable, the total parent score on the NCATS and all the predictor variables (i.e., socioeconomic status, age, years of education, group status, DAS and the PARQ). This was done using the total sample of fathers. Results are reported in Table 22.

There were no significant correlations between the NCATS and any of the predictor variables. Socioeconomic status was significantly related to father's age and to number of years of education as expected. However, an unexpected finding was that socioeconomic status was negatively related to the PARQ score.

Zero order correlations were also computed between the demographic variables, group membership and all the subscales of the DAS, the PARQ and the NCATS. Results of this analysis are outlined in Appendix E.

Correlations Between the Parental Acceptance-Rejection Questionnaire and the Nursing Child Assessment Teaching Scale

Zero order correlations between the subscales and the total score of the PARQ and the subscales and the total parent score of the NCATS were calculated using the Pearson product moment correlation procedure for the total sample of fathers. As shown in Table 23, all correlations between the PARQ and the NCATS are weak.

Correlations Between the Dyadic Adjustment Scale and the Nursing Child Assessment Teaching Scale

Zero order correlations between the subscales and the total score of the DAS and the PARQ using the Pearson product moment correlations procedure were calculated for the total sample of fathers (see Table 24). Only one relationship proved significant; the correlation between the dyadic consensus subscale on the DAS and the sensitivity to cues subscale on the NCATS.

Correlations Between the Parental Acceptance-Rejection Questionnaire and the Dyadic Adjustment Scale

Zero order correlations between the subscales and the total score of the PARQ and the DAS were computed for the total sample. All correlations were weak and nonsignificant (see Table 25).

Preliminary Regression Analyses

Various exploratory techniques were employed to determine if the data met the assumptions of the statistical tests prior to conducting the regression analyses. Scatterplots showing the relationship of all predictor variables with the dependent variable were used to assess the normality of the data. Histograms and stem-and-leaf plots of the scores in the NCATS, PARQ and DAS also allowed an assessment of the normality of the distribution. The data from fathers' PARQ were positively skewed while the data from the DAS and NCATS were negatively skewed.

Hierarchial regression analyses were used to regress the total parent score on the NCATS on all the predictor variables (i.e., demographic, group membership, DAS and PARQ). This was done to assess the simultaneous contribution of all the independent variables to the prediction of the NCATS score. Results of each series of regressions are discussed using the linear regression model.

Preliminary regression analyses were carried out to answer the same three questions as in the analyses done for mothers. Similar to the results obtained in the preliminary regression analyses using the sample of mothers, none of the predictor variables explained a significant portion of the variance in the NCATS scores. Examination of the residuals revealed five observations beyond the boundary of ±1.96 standard deviations. The residuals showed no particular trend which suggested that an appropriate model had been fitted given the predictors used.

Consequently, five observations beyond ±1.96 standard deviations from the residual mean were removed. Residuals were now distributed more

uniformly around a mean of zero. As shown in Table 26, removing the outliers also increased the strength of several correlations between the predictor variables and the criterion variable. Prior to the removal of outliers, no correlations between the NCATS and any of the predictor variables were significant. After removing the outliers, there were several significant correlations. The total parent score on the NCATS was now significantly correlated with SES, group membership and the DAS. Although the strength of the correlation between the SES and age remained the same ($r = .25$), the correlation now only approached significance ($p = .055$). One other correlation was affected. The correlation between age and the PARQ, previously nonsignificant, was now significant.

Examination of the five outliers revealed several possibilities for the reason they did not fit the model. These fathers were older ($M = 36$, $SD = 5.5$) than the average age of fathers in the total sample ($M = 32.3$, $SD = 5.7$). They also had more years of education ($M = 17$, $SD = 3.6$) than the average for the total sample of fathers ($M = 14.7$, $SD = 3.3$), and were in a higher socioeconomic status ($M = 49.5$, $SD = 6.9$) than the average for the total sample ($M = 44.6$, $SD = 10.7$). Yet, the fathers with outlying observations had lower scores on the NCATS ($M = 30.0$, $SD = 9.87$) compared to the mean for the total sample ($M = 37.8$, $SD = 5.5$). Four of the five fathers had scores below 30, while one father had a score of 36. This is interesting since past research on mothers has always found a positive relationship between education and parenting.

Examination of the infant characteristics did not reveal any additional information. Two outliers were fathers of term infants while three were fathers of preterm infants. Three infants were male and two were female. Three infants were first born children while two infants were either the second or subsequent children born in their families. In summary, examination of infant characteristics did not provide additional insight.

Secondary Regression Analyses

The regression analyses were repeated for the sample of fathers after removing the outliers. Results are reported below in terms of each research question.

First Research Question. For fathers, none of the demographic variables entered into the regression equation explained a significant portion of the variance in the NCATS scores. These variables were subsequently deleted from the regression equation. The regression analysis was repeated using only group membership, the DAS and the PARQ as predictor variables (see Table 27).

Results of this analysis showed that group membership significantly predicted fathers' parenting scores, explaining 8.2% of the variance. When marital quality was entered into the regression equation, predictive power increased. In combination, these two variables accounted for 20.4% of the variance in the total parent score on the NCATS. Childrearing history was not significant.

An unexpected finding was the negative beta weight for marital quality. For these fathers, less marital quality was associated with higher parenting scores on the NCATS.

Second Research Question. To test the hypothesis that the relationship between childrearing history and parenting style varies as a function of marital quality, the interaction of marital quality and childrearing history was entered as the last predictor variable. This failed to increase predictability. The hypothesis that the relationship between childrearing history and parenting style varies as a function of marital quality was not supported in this sample. Results of this regression analysis are shown in Table 28.

Third Research Question. To determine the variance in the NCATS scores attributed to group membership (preterm or term) after the variance due to all the other variables was accounted for, group membership was entered as the last variable. As shown in Table 29,

group membership was a significant predictor.

Planned Comparison of Fathers with Higher and Lower Marital Quality

The sample of fathers was split into two groups to examine the influence of childrearing history under conditions of higher and lower marital quality. For the purposes of these analyses, the median of the DAS scores was used to generate one group with higher reported marital quality and one group with lower reported marital quality. Fathers with a DAS score less than or equal to 113 constituted the group of fathers with lower marital quality. In this sample of fathers, the DAS scores ranged from 60 to 113 (M = 103.2, SD = 11.6). However, it must be noted that according to Spanier (1976) only a score of 100 or less is indicative of poor marital adjustment. For this reason these fathers are referred to as having lower marital quality rather than poor marital quality. Fathers with a DAS score greater than 113 are considered to have higher marital quality for the purposes of this analysis. Their scores ranged from 114 to 133 (M = 121.5, SD = 6.3).

A hierarchial regression analyses was run using group membership and childrearing history to predict the total parent score on the NCATS in each group. Two observations representing outliers ±1.96 standard deviations from the residual mean were removed for this analysis. There was one outlier in each group.

Results are reported in Table 30. For fathers with higher marital quality, neither group membership nor childrearing history entered into the regression equation to explain a significant portion of the variance in the NCATS scores. Results were different for fathers with lower marital quality. Group membership was first entered into the regression equation but this was not significant. When childrearing history was entered into the regression equation, predictability increased. In combination, these two variables accounted for 22.2% of the variance in the parenting scores. The difference in R^2 was significant ($F(1,27)$ = 6.91, $p < .05$). Less rejection in childhood was associated with higher

parenting scores on the NCATS.

Fathers with lower marital quality had higher mean scores on the NCATS (M = 39.4, SD = 4.6) than fathers with higher marital quality (M = 37.4, SD = 5.0). Using a t-test for independent samples, this difference was significant ($t(62) = 8.68$, $p < .01$).

Table 1

Maternal Age, Education in Years and Family Socioeconomic Status for Mothers of Preterm and Term Infants

	Preterm (N = 35)			Term (N = 37)		
	Range	Mean	SD	Range	Mean	SD
Maternal age	19-43	29.9	(5.3)	20-38	29.7	(5.1)
Maternal education	9-22	14.1	(3.0)	11-21	15.2	(2.8)
Hollingshead Four Factor Index of Social Status	14-65	42.0	(11.4)	32-66	46.7	(9.7)

Table 2

Frequencies of Family Socioeconomic Status for Mothers of Preterm and Term Infants

	Preterm (N = 35)		Term (N = 37)	
	Frequency	Percentage	Frequency	Percentage
Major business or professional	6	17.1%	10	27.0%
Medium business, minor professionals, technical	15	42.9%	18	48.7%
Skilled craftsmen, clerical, sales workers	9	25.7%	9	24.3%
Machine operators, semiskilled workers	4	11.4%	0	0.0%
Unskilled labourers menial service workers	1	2.9%	0	0.0%

Table 3

Gender and Birth Order of Preterm and Term Infants in Mothers' Sample

	Preterm (N = 35)		Term (N = 37)	
	Frequency	Percentage	Frequency	Percentage
Gender				
Female	12	34.3%	16	43.2%
Male	23	65.7%	21	56.8%
Birth Order				
First born	20	57.1%	20	54.1%
Later born	15	42.8%	17	45.9%

Table 4

Parental Acceptance-Rejection Questionnaire - Total and Subscores for Mothers of Preterm and Term Infants

	Preterm (N = 35)			Term (N = 37)		
	Range	Mean	SD	Range	Mean	SD
Warmth	20-67	31.8	(10.4)	20-77	35.3	(13.8)
Hostility	15-51	25.6	(9.5)	15-49	27.9	(9.8)
Indifference	15-41	23.9	(6.8)	15-58	25.8	(9.0)
Rejection	10-29	16.2	(5.4)	10-36	19.0	(7.2)
Total PARQ	62-177	97.6	(30.5)	62-216	108.7	(36.3)

Table 5

Dyadic Adjustment Scale - Total and Subscores for Mothers of Preterm and Term Infants

	Preterm (N = 35)			Term (N = 37)		
	Range	Mean	SD	Range	Mean	SD
Affection	2-12	8.9	(2.2)	2-12	8.1	(2.2)
Cohesion	5-21	14.8	(4.0)	8-23	16.1	(3.3)
Consensus	23-56	47.6	(7.1)	36-59	48.6	(5.2)
Satisfaction	21-46	38.1	(6.2)	28-47	39.6	(4.8)
Total DAS	51-129	109.3	(17.6)	92-131	112.5	(11.7)

Table 6

Nursing Child Assessment Teaching Scale - Total Parent Score and Subscores for Mothers of Preterm and Term Infants

	Preterm (N = 35)			Term (N = 37)		
	Range	Mean	SD	Range	Mean	SD
Sensitivity	7-11	9.7	(1.1)	7-11	9.8	(0.9)
Response	5-11	8.5	(1.7)	6-11	8.8	(1.6)
Socioemotional	5-11	8.5	(1.6)	6-11	8.7	(1.3)
Cognitive	6-15	11.6	(2.4)	8-17	12.7	(2.1)
Total Parent Score	25-47	38.0	(5.2)	32-48	39.7	(4.0)

Table 7

Correlations Between the Total Parent Score (NCATS) and All Predictor Variables Used in the Regression Analyses for Mothers (N = 72)

	NCATS	SES	AGE	EDUC	GROUP	DAS	PARQ
NCATS		.26[a]	.10	.18	.18	.20	-.04
SES			.40[c]	.73[c]	.22	.24[a]	.12
AGE				.51[c]	-.02	.00	.05
EDUC					.19	.13	.07
GROUP						.11	.17
DAS							.04
PARQ							

[a]p < .05; [b]p < .01; [c]p < .001

Table 8

Correlations Between the Parental Acceptance-Rejection Questionnaire and the Nursing Child Assessment Teaching Scale For Mothers (N = 72)

PARQ	NCAST				
			Growth Fostering		
(Parental Behaviour Variables)	Sensitivity to Cues	Response to Distress	Social-Emotional	Cognitive	Total Parent Score
Warmth	.07	.03	.00	-.06	.03
Hostility	.06	-.18	-.05	.00	-.04
Indifference	.02	-.06	-.08	-.10	-.08
Rejection	.07	-.16	-.08	-.02	-.06
Total PARQ	.06	-.10	-.06	-.04	-.04

Table 9

Correlations Between the Dyadic Adjustment Scale and the Nursing Child Assessment Teaching Scale For Mothers (N = 72)

DAS	NCAST				
(Parental Behaviour Variables)	Sensitivity to Cues	Response to Distress	Growth Fostering Social-Emotional	Growth Fostering Cognitive	Total Parent Score
Affection	.27[a]	.04	.12	.20	.17
Cohesion	.10	.06	.09	.09	.13
Consensus	.25[a]	-.11	.22	.06	.14
Satisfaction	.24[a]	-.06	.15	.26[a]	.18
Total DAS	.29[b]	-.04	.21	.18	.20

[a]$p < .05$; [b]$p < .01$

Table 10

Correlations Between the Parental Acceptance Questionnaire and the Dyadic Adjustment Scale For Mothers (N = 72)

PARQ	DAS				
	Affectional Expression	Dyadic Cohesion	Dyadic Consensus	Dyadic Satisfaction	Total DAS
Warmth	-.10	-.03	.20	.08	.10
Hostility	-.07	-.15	.13	.00	.00
Indifference	-.11	-.07	.16	.05	.06
Rejection	-.10	-.15	.11	-.02	-.02
Total PARQ	-.10	-.11	.16	.03	.04

Table 11

Correlations Between the Total Parent Score (NCATS) and All Predictor Variables Used in the Regression Analyses For Mothers After Removal of Outliers (N = 68)

	NCATS	SES	AGE	EDUC	GROUP	DAS	PARQ
NCATS		.45[a]	.28[a]	.31[b]	.12	.22	.01
SES			.39[c]	.72[c]	.24[a]	.25[a]	.14
AGE				.52[c]	.00	.04	.06
EDUC					.21	.13	.14
GROUP						.09	.21
DAS							.04
PARQ							

[a]$p < .05$; [b]$p < .01$; [c]$p < .001$

Table 12

Hierarchical Regression Analysis of the Total Parent Score (NCATS) on the Demographic Variables, Group Membership, Marital Quality and Childrearing History for Mothers (N = 68)

Variable Entered	Multiple R	R^2	*beta* weight*	t	p value
SES	.448	.201	.426	2.54	.014
Age	.462	.214	.164	1.24	ns
Education	.467	.219	-.101	-0.57	ns
Group	.469	.220	.043	0.36	ns
DAS	.483	.233	.120	1.03	ns
PARQ	.486	.236	-.057	-0.50	ns

*beta weight, t, and p value are calculated for the last step

Table 13

Hierarchical Regression Analysis of the Total Parent Score (NCATS) on the Demographic Variables, Group Membership, Marital Quality, Childrearing History and the Interaction of Marital Quality and Childrearing History for Mothers (N = 68)

Variable Entered	Multiple R	R^2	*beta* weight*	t	p value
SES	.448	.201	.445	2.55	.014
Age	.462	.214	.178	1.30	ns
Education	.467	.219	-.118	-0.65	ns
Group	.469	.220	.047	0.40	ns
DAS	.483	.233	-.056	-0.13	ns
PARQ	.486	.236	-.511	-0.48	ns
DAS x PARQ	.488	.238	.492	0.43	ns

*beta weight, t, and p value are calculated for the last step

Table 14

Hierarchical Regression Analysis of the Total Parent Score (NCATS) on the Demographic Variables, Marital Quality, Childrearing History and Group Membership for Mothers (N = 68)

Variable Entered	Multiple R	R^2	*beta* weight*	t	p value
SES	.448	.201	.426	2.54	.014
Age	.462	.214	.164	1.24	ns
Education	.467	.219	-.101	-0.57	ns
DAS	.482	.232	.120	1.03	ns
PARQ	.484	.235	-.057	-0.50	ns
Group	.486	.236	.043	0.36	ns

*beta weight, t, and p value are calculated for the last step

Table 15

Hierarchical Regression Analysis of the Total Parent Score (NCATS) on the Demographic Variables, Group Membership and Childrearing History for Mothers With Higher and Lower Marital Quality

Variable Entered	Multiple R	R^2	*beta* weight*	t	p value
Higher Marital Quality (N = 35)					
SES	.466	.217	.453	2.10	.045
Age	.482	.232	.150	.80	ns
Education	.482	.232	-.008	-0.03	ns
Group	.532	.283	.264	1.64	ns
PARQ	.561	.315	-.189	-1.16	ns
Lower Marital Quality (N = 34)					
SES	.360	.130	.728	2.57	.016
Age	.386	.149	.271	1.37	ns
Education	.496	.246	-.512	-1.81	ns
Group	.512	.263	-.156	-0.80	ns
PARQ	.512	.263	-.006	-0.04	ns

*beta weight, t, and p value are calculated for the last step

Table 16

Paternal Age, Education in Years and Family Socioeconomic Status For Fathers of Preterm and Term Infants

	Preterm (N = 32)			Term (N = 34)		
	Range	Mean	SD	Range	Mean	SD
Paternal Age	24-46	32.9	(6.0)	21-42	31.7	(5.4)
Paternal Education	8-24	14.2	(3.5)	10-24	15.1	(3.2)
Hollingshead Four Factor Index of Social Status	14-64.5	42.0	(11.4)	32-66	46.9	(9.6)

Table 17

Frequencies of Family Socioeconomic Status For Fathers of Preterm and Term Infants

	Preterm (N = 32)		Term (N = 34)	
	Frequency	Percentage	Frequency	Percentage
Major business or professional	6	18.8%	9	26.5%
Medium business, minor professionals Technical	13	40.6%	17	50.0%
Skilled craftsmen, clerical, sales workers	9	28.1%	8	23.5%
Machine operators, semiskilled workers	3	9.4%	0	0.0%
Unskilled labourers menial service workers	1	3.1%	0	0.0%

Table 18

Gender and Birth Order of Preterm and Term Infants in Fathers' Sample

	Preterm (N = 32)		Term (N = 34)	
	Frequency	Percentage	Frequency	Percentage
Gender				
Female	11	34.4%	15	44.1%
Male	21	65.6%	19	55.9%
Birth Order				
First born	18	56.3%	18	52.9%
Later born	14	43.7%	16	47.1%

Table 19

Parental Acceptance-Rejection Questionnaire - Total and Subscores for Fathers of Term and Preterm Infants

	Preterm (N = 32)			Term (N = 34)		
	Range	Mean	SD	Range	Mean	SD
Warmth	20-62	32.1	(10.4)	20-68	30.5	(10.6)
Hostility	17-55	25.7	(9.0)	16-60	22.8	(8.6)
Indifference	16-46	23.9	(7.1)	15-51	23.2	(7.0)
Rejection	10-36	17.8	(6.4)	10-33	16.1	(5.2)
Total PARQ	69-199	100.4	(31.0)	64-215	93.2	(28.9)

Table 20

Dyadic Adjustment Scale - Total and Subscores for Fathers of Preterm and Term Infants

	Preterm (N = 32)			Term (N = 34)		
	Range	Mean	SD	Range	Mean	SD
Affection	5 -12	8.8	(1.9)	5-11	8.7	(1.7)
Cohesion	6 -22	15.3	(3.8)	9-23	15.6	(3.5)
Consensus	29 -59	48.7	(6.5)	32-60	47.7	(5.4)
Satisfaction	17 -46	38.4	(5.9)	20-47	39.4	(5.2)
Total DAS	60-131	111.1	(14.6)	68-133	111.4	(12.0)

Table 21

Nursing Child Assessment Teaching Scale - Total Parent Score and Subscores for Fathers of Preterm and Term Infants

	Preterm (N = 32)			Term (N = 34)		
	Range	Mean	SD	Range	Mean	SD
Sensitivity	6-11	9.5	(1.2)	8-11	9.6	(1.0)
Response	3-11	7.8	(2.1)	6-11	9.0	(1.5)
Socioemotional	3-11	7.9	(2.0)	5-11	8.6	(1.4)
Cognitive	6-16	11.3	(2.9)	6-16	12.1	(2.3)
Total Parent Score	19-47	36.5	(6.4)	27-45	39.1	(4.4)

Table 22

Correlations Between the Total Parent Score (NCATS) and All Predictor Variables Used in the Regression Analyses and For Fathers (N = 66)

	NCATS	SES	AGE	EDUC	GROUP	DAS	PARQ
NCATS		.18	-.03	.13	.23	-.18	-.08
SES			.25[a]	.75[c]	.23	-.12	-.31[b]
AGE				.21	-.11	-.16	-.22
EDUC					.14	-.02	-.11
GROUP						.01	-.12
DAS							.02
PARQ							

[a]p < .05; [b]p < .01; [c]p < .001.

Table 23

Correlations Between the Parental Acceptance-Rejection Questionnaire and the Nursing Child Assessment Teaching Scale For Fathers (N = 66)

PARQ	NCAST				
			Growth Fostering		
(Parental Behaviour Variables)	Sensitivity to Cues	Response to Distress	Social-Emotional	Cognitive	Total Parent Score
Warmth	.03	-.06	.03	-.08	-.07
Hostility	.10	-.11	.13	-.15	-.05
Indifference	-.05	-.05	.06	-.15	-.10
Rejection	.03	-.02	.06	-.20	-.07
Total PARQ	.03	-.07	.08	-.16	-.08

Table 24

Correlations Between the Dyadic Adjustment Scale and the Nursing Child Assessment Teaching Scale For Fathers (N = 66)

DAS	NCAST				
(Parental Behaviour Variables)	Sensitivity to Cues	Response to Distress	Growth Fostering Social-Emotional	Growth Fostering Cognitive	Total Parent Score
Affection	-.11	.01	-.08	-.22	-.16
Cohesion	-.03	-.05	.01	.00	-.03
Consensus	-.26*	-.13	-.19	-.18	-.22
Satisfaction	-.07	-.02	-.06	-.14	-.12
Total DAS	-.17	-.08	-.12	-.17	-.18

*p < .05

Table 25

Correlations Between the Parental Acceptance-Rejection Questionnaire and the Dyadic Adjustment Scale For Fathers (N = 66)

PARQ	DAS				
	Affectional Expression	Dyadic Cohesion	Dyadic Consensus	Dyadic Satisfaction	Total DAS
Warmth	-.08	.07	.07	.07	.07
Hostility	-.07	.00	-.06	-.05	-.06
Indifference	-.07	.02	.00	-.05	-.03
Rejection	.00	.13	.09	.02	.08
Total PARQ	-.06	.06	.03	.00	.02

Table 26

Correlations Between the Total Parent Score (NCATS) and All Predictor Variables Used in the Regression Analyses For Fathers After Removal of Outliers (N = 61)

	NCATS	SES	AGE	EDUC	GROUP	DAS	PARQ
NCATS		.26[a]	.09	.22	.29[a]	-.34[b]	-.20
SES			.25	.74[c]	.27[a]	-.13	-.35[b]
AGE				.20	-.05	-.16	-.26[a]
EDUC					.19	-.03	-.16
GROUP						.03	-.12
DAS							.00
PARQ							

[a]$p < .05$; [b]$p < .01$; [c]$p < .001$

Table 27

Hierarchical Regression Analysis of the Total Parent Score (NCATS) on Group Membership, Marital Quality and Childrearing History for Fathers (N = 61)

Variable Entered	Multiple R	R^2	*beta* weight*	t	p value
Group	.286	.082	.277	2.36	.022
DAS	.452	.204	-.349	-3.01	.004
PARQ	.481	.231	-.166	-1.42	ns

*beta weight, t, and p value are calculated for the last step

Table 28

Hierarchical Regression Analysis of the Total Parent Score (NCATS) on Group Membership, Marital Quality, Childrearing History and the Interaction of Marital Quality and Childrearing History for Fathers (N = 61)

Variable Entered	Multiple R	R^2	*beta* weight*	t	p value
Group	.286	.082	.267	2.30	.025
DAS	.452	.204	-.967	-2.14	.037
PARQ	.481	.231	-1.77	-1.55	ns
DAS x PARQ	.507	.257	-1.72	1.41	ns

*beta weight, t, and p value are calculated for the last step

Table 29

Hierarchical Regression Analysis of the Total Parent Score (NCATS) on Marital Quality, Childrearing History and Group Membership for Fathers (N = 61)

Variable Entered	Multiple R	R^2	*beta* weight*	t	p value
DAS	.340	.116	-.349	-3.01	.004
PARQ	.394	.156	-.166	-1.42	ns
Group	.481	.231	.277	2.36	.022

*beta weight, t, and p value are calculated for the last step

Table 30

Hierarchical Regression Analysis of the Total Parent Score (NCATS) on Group Membership and Childrearing History for Fathers With Higher and Lower Marital Quality

Variable Entered	Multiple R	R^2	*beta* weight*	t	p value
Higher Marital Quality (N = 34)					
Group	.318	.095	.264	1.89	ns
PARQ	.324	.105	-.189	0.60	ns
Lower Marital Quality (N = 30)					
Group	.151	.023	.116	0.68	ns
PARQ	.471	.222	-.448	-2.63	.014

*beta weight, t, and p value are calculated for the last step

Chapter 5

Discussion of Findings

In this investigation, the relationship between retrospectively reported childrearing history in the family of origin, present reported level of marital quality, and current parenting style was examined using a nonclinical sample of mothers and fathers of preterm and term infants. This chapter provides a discussion of the major findings. First, the findings from the sample of mothers are presented. Next, the findings from the sample of fathers are presented, followed by a comparison of the predictors of parenting for the two groups. Then, the conclusions that may be drawn from the findings are discussed and some suggestions given for future research. As well, the limitations of the study are presented. This chapter concludes with the implications of this study for nursing practice.

Mothers' Predictors of Parenting

Although socioeconomic status, age, years of education, group membership, marital quality and childrearing history were used as predictor variables, the only significant predictor of mothers' parenting was socioeconomic status. This variable explained 20.1% of the variance in parenting scores. Findings from this sample of mothers do not support the intergenerational transmission of parenting hypothesis.

Since it has been demonstrated in studies using clinical samples that childrearing history might be more important in influencing parenting when marital quality was low, this too was investigated. However, in this nonclinical sample, the relationship between childrearing history and parenting style did not vary as a function of marital quality. The interaction between marital quality and childrearing history was not significant.

To further examine the influence of childrearing history under conditions of higher and lower marital quality, the sample was split

into two groups based on mothers' level of marital quality. Childrearing history still failed to significantly predict parenting scores. Socioeconomic status continued to be the only predictor of mothers' parenting, although the amount of variance that was explained by socioeconomic status differed for each group. For the group of mothers with higher marital quality, socioeconomic status explained 21.7% of the variance in the parenting scores. For the group of mothers with lower marital quality, it explained 13% of the variance in parenting scores.

In this sample of mothers, higher socioeconomic status was associated with more optimal parenting scores. One possible explanation for the relationship is that women in higher socioeconomic classes have both more financial resources and more social support (Williams, 1990). Both of these factors can provide important assistance in parenting.

More financial resources means increased opportunities for women. They can afford more in terms of assistance with childcare, time away from their infants and the opportunity to have other interests, all factors which can ultimately contribute to the quality of time spent with their infants. Financial resources means more access to community services such as parenting classes or mothers' groups which serves as a form of social support to mothers.

Women in lower socioeconomic classes do not have these same advantages. The lack of financial resources to afford childcare and the lack of time and money to have personal activities can take a toll on women. Stress related to financial problems has been associated with both physical and mental health problems especially depression (Pesnecker, 1984). Furthermore, both increased stress and economic hardship have been associated with child maltreatment (Caplan et al., 1984; Egeland, 1988; Herrenkohl et al., 1984; Hunter & Kilstrom, 1979; Straus et al., 1980; Zuravin, 1989).

In a review of research on social differentials in health, Williams

(1990) reported that people in lower socioeconomic classes not only have less access to social support and less stable community ties but they have less satisfying marriages. Simons, Lorenz, Wu, and Conger (1993) found that economic pressure disrupted parenting by decreasing the amount of spousal support available which is related to the quality of parenting.

Consequently, women with more financial worries have lower spousal and other forms of social support. This is problematic since social support has been found to be so important for individuals' well-being. Social support acts as a buffer against stress by enhancing personal coping abilities. Social support has been positively related to decreased stress and better health (Williams, 1990), factors important to providing optimal parenting. People who are healthier and under less stress are less vulnerable to parenting stress and thus more able to provide optimal care of their children. It is possible that since socioeconomic status is correlated with social support, this might be the reason why no additional variance was accounted for by marital quality.

Other studies have found that socioeconomic status was positively associated with the quality of parent-infant interactions (Crittenden & Bonvillian, 1984; Simons, Lorenz et al., 1993; Herrenkohl et al., 1984). Herrenkohl et al. (1984), using income as a measure of socioeconomic status, found a positive correlation between family income and positive, warm, responsive parenting interactions, more task supportive behaviours and even an increased amount of verbal interactions between mothers and fathers and their children.

The second possible explanation is that there is also a relationship between socioeconomic status and discipline practices. Parents in lower socioeconomic classes use more authoritarian practices (Baumrind, 1991) and more coercion (Herrenkohl et al., 1984) as a control technique than parents in higher socioeconomic classes.

The tendency to control children's behaviour might have been reflected in the parenting scores obtained in this study. Several items in the Nursing Child Assessment Teaching Scale (NCATS) are sensitive to parent's controlling behaviour. Exhibiting controlling behaviour would result in lower parenting scores. For instance, parents would have scored lower if they did not give the infant time to try the teaching task or if they physically forced the infant to complete the task. Both of these behaviours are seen as exhibiting excessive control of the infant by diminishing the infant's exploratory freedom.

Neither excessive control nor authoritarian discipline practices cause maladaptive parenting. These behaviours, though, warrant attention since they might predispose individuals to maladaptive parenting practices especially when other stresses are present.

Fathers' Predictors of Parenting

Two variables proved to be important predictors of fathers' parenting. Group membership (i.e., whether the father had a preterm or term infant) and marital quality explained 20.4% of the variance in the total parent score on the NCATS which measures parent-infant interactions.

Group Membership

Group membership was a significant predictor of fathers' parenting scores. Fathers of term infants were predicted to have higher parenting scores on the NCATS than fathers of preterm infants. Less responsive interactions in parenting preterm infants has been documented in studies of mothers and their infants (Barnard et al., 1984; Crnic et al., 1983; Harrison, 1988; Magyary, 1983). Studies have shown that preterm infants are less alert and less responsive to their mothers. This occurs during infants' first few months of life. Mothers respond by being more intrusive. However, by the time infants are around eight months old and are more alert and responsive, mothers seem to burn out. They become less responsive to their infants. Crnic and Ragozin et al. (1983)

reported that these interactional incongruities are often more dramatic by the time the infant is 12 months old. This might explain the reason for the less responsive interactions by fathers of preterm infants seen in this study.

There is less research on fathering interactions with preterm infants. In a longitudinal study of 10 preterm infants and 10 term infants, Yogman (1987) found fathers with preterm infants played fewer, shorter and less arousing games than fathers who had term infants. However, the small sample size warrants a cautionary note. On the other hand, Harrison (1990) found in a sample of 28 families with preterm infants and 31 families with term infants that fathers of preterm infants were more responsive in their interactions than fathers of term infants. Clearly, more research is needed to assess the interactional patterns of fathers with preterm infants. Interactional patterns are critical because the quality of parenting interactions is related to later social-emotional and intellectual development in children.

Another explanation for the reason that group membership might make a difference is that there is more stress involved in parenting premature infants. When infants are born prematurely, fathers have less time to prepare psychologically for their infants' births. They are also faced with immediate worries at the time of birth. The worry and stress does not end there; it has been shown to continue even after the infancy period (Macey et al., 1987; McCain, 1990). This adds to the stress that parents normally have.

A final explanation is that prematurity often alters parents' perceptions of their infants, causing parents to treat their infants differently (Stern & Hildebrandt, 1986). This has been noted in mothers but it is reasonable to suspect that fathers' perceptions are altered in the same way.

The finding that group membership predicted fathers' interactions with preterm infants to be less responsive than fathers' interactions

with term infants is reason for concern. Prematurity has often been identified as a characteristic of children who are maltreated (Straus et al., 1980).

Marital Quality

Marital quality was also a significant predictor of fathers' parenting scores. When the data were analyzed for both the total sample of fathers and for the group of fathers with lower marital quality, an interesting finding emerged. Fathers with lower marital quality had significantly higher scores on the NCATS, a finding that appears counterintuitive. Why lower marital quality was associated with more optimal parenting scores is not entirely clear. There are several possible explanations. Fathers who are less satisfied with their marriages may invest more in the parent-child relationship. The parent-child relationship then compensates for the lack of emotional satisfaction provided by the marriage. Alternately, fathers who give more energy in the parent-child relationship may spend less energy on their marriages, and as a consequence their marriages suffer. As parenting is still often seen as the primary responsibility of mothers especially in the infancy period, mothers could feel threatened by fathers who are more involved with their infants, and conflict in the marriage ensues.

The finding that lower marital quality was related to better parenting was not supported by other studies. Positive levels of marital quality have been consistently linked with positive parenting. This was evident in research using clinical samples (Crockenberg, 1987; Egeland et al., 1988; Hunter & Kilstrom, 1979) and nonclinical samples (Belsky, 1984; Belsky et al., 1984; Cowan & Cowan, 1992; Fish, Stifter, & Belsky, 1993; Goldberg & Easterbrooks, 1984). There are some exceptions, though, that are noteworthy. One study by Grossman and colleagues (1988) found no relationship between marital quality and the quality or quantity of fathering. However, they did postulate that marriages might

influence fathering in more subtle and complex ways than their data allowed them to examine. Simons, Whitbeck, Conger and Melby (1990) also found no relationship between marital quality and fathers' parenting. Finally, Brody, Pillegrini and Sigel (1986) found an inverse relationship between marital quality and parenting for mothers with school-aged children. Poor marital quality was related to more positive parenting. The researchers speculated that women compensate for their unsatisfactory marriages by becoming enmeshed in the parent-child relationship. However, the opposite relationship between marital quality and parenting was found for the fathers of these school-aged children. As marital quality decreased, fathers became more intrusive and less responsive to their children.

A review of the studies which included both mothers and fathers and which found a positive association between marital quality and parenting revealed inconsistency in the measures used to assess marital satisfaction. These differences in measurement make comparison of findings difficult. For instance, Belsky, Gilstrap and Rovine (1984) and Cox et al. (1989), researchers who are often cited, used observations of the amount of marital interaction to assess marital satisfaction. Other studies which assess marital adjustment used a measure which combined the scores of the husband and wife to provide a score for the dyad. This does not reveal the husband's or wife's individual perceptions of his/her marital quality. These perceptions may differ. This study utilized an individual measure of mother's and father's perceptions of marital quality. The inconsistency in measurement may explain the difference in results.

Group of Fathers with Lower Marital Quality

There was one other finding from the fathers' data that might also provide a reason for the negative association found between marital quality and parenting. When the sample of fathers was divided into lower and higher marital quality groups, childrearing history became a

significant predictor of parenting scores in fathers with lower marital quality. Fathers with more rejection in their childhoods had lower parenting scores. It is possible that fathers with negative childrearing experiences have a more difficult transition to parenthood. Belsky and Isabella (1985), using the same measure of childrearing history that was used in this study, found that rejection in childhood predicted marital adjustment in the transition to parenthood for both mothers and fathers. More rejection was associated with more marital differences.

In the Becoming a Family Project, Cowan and Cowan (1990) found rejection in childhood only accounted for a small, though significant, portion of the variance in parenting. It did account for a larger portion of the variance in parenting stress. It is such a widespread belief that one generation influences the next, that these fathers might be more concerned about their parenting ability because they feel ill prepared to parent. The additional stress because of a negative childrearing history might result in more marital conflict at this time. Parenting stress has been shown to predict marital satisfaction in both mothers and fathers (Wallace & Gotlieb, 1990).

Fathers with poor marital quality and negative childrearing histories may well be a group at risk for later parenting problems. Berman and Pederson (1982) found that fathers' competence in parenting decreased with low marital support disproportionately when compared to mothers with low marital support. As mentioned previously, Brody et al. (1986) found that fathers with lower marital quality were less responsive to their school-aged children. This is a concern, given that in the sample of fathers with lower marital quality, childrearing history was predictive of parenting scores. Fathers who recalled more maternal rejection in their childhoods had lower parenting scores.

In this study, the infants were only 12 months old. The stress of parenthood is likely to increase as the children get older. When

fathers have to contend with the increased stress, it is possible that marital quality and childrearing history will be more predictive of maladaptive parenting. In addition, fathers who experienced more rejection in their childhoods and who presently have lower marital support and who are experiencing the added stress of parenting preterm infants, may well be fathers at risk for parenting problems. This is a concern since it has been shown that men physically abuse children disproportionately more often than women when the amount of time spent with children is taken into consideration. Moreover, when fathers abuse their children, it is usually of a more severe nature than when mothers abuse (Magolin, 1992).

In conclusion, although no support for the intergenerational hypothesis was found using the total sample of fathers, some conditional support for this hypothesis was found in the group of fathers with lower marital quality. In these fathers, childrearing history explained 18% of the variance in parenting scores. This provides support to those researchers who have suggested that other risk factors must co-exist before past childrearing experiences influence present parenting style (Altemeier et al., 1986; Cappell & Heiner, 1990; Egeland, 1988; Hamner & Turner, 1990; Joy, 1986; Kaufman & Zigler, 1987; Rutter et al., 1983). Although the fathers with lower marital quality currently had better parenting skills, the relationship may change as children gain independence and autonomy and make increased demands on their fathers' parenting ability.

Comparison of Predictors for Mothers and Fathers

In summary, the variable that predicted mothers' parenting was very different from the variables that predicted fathers' parenting. Socioeconomic status consistently predicted mothers' parenting. Marital quality and group membership significantly predicted fathers' parenting. Childrearing history did not predict mothers' parenting even when marital quality was lower. In contrast, childrearing history predicted

fathers' parenting when marital quality was lower. Clearly, the predictors of parenting for mothers and fathers were very different.

Most past research on parenting has been limited to describing mothers and their infants. Belsky's model of the determinants of parenting (Belsky, 1984) is frequently used as a guide for empirical inquiry on the antecedents of parenting. It has largely been assumed that the model is the same for mothers' or fathers' parenting. This has not been sufficiently explored. The results of this study show that the model for mothers was different than for fathers and that results based on mother-infant studies should not be presumed to apply to fathers. More research is needed to better understand predictors of parenting for fathers. Attention should be given to gender differences.

Conclusion

Since child abuse was first recognized in the 1960s, researchers have attempted to describe variables associated with individuals who abuse their children. A history of abuse in childhood was identified as a prevalent characteristic of parents who abuse their children. Because early studies used only populations of parents known to be abusing their children, the finding that these parents were themselves abused led to an overestimation of the rate of transmission. Studies designed with more rigor have demonstrated that the transmission of maladaptive parenting is not inevitable but that other risk factors must co-exist before parents' childrearing practices are influenced by their childrearing experiences. Unfortunately, the early studies have had a greater impact on people's thinking. Although many other variables that are associated with parents who abuse their children have been identified, this particular variable has received such considerable attention that it is generally believed among professional and lay people alike. Cappell and Heiner (1990) suggest that this belief is so strong that it has become a cliche. The widespread acceptance of this belief has occurred despite the lack of grounding in empirical evidence.

This can be potentially detrimental. For one, it has the negative effect of labelling people which might potentially cause more stress in parents already stressed during the transition to parenthood. Also, people reared in maladaptive environments may feel doomed to failure as parents, feeling that it is only a matter of time before they too will become bad parents (Cappell & Heiner, 1990; Joy, 1986).

This study found childrearing history did not predict parenting except for fathers with lower marital quality. This suggests that childrearing history influences parenting only when fathers also had lower marital support. Several researchers have suggested that investigators study the conditions under which the transmission of parenting occurs to help provide insight into this phenomenon (Belsky & Pensky, 1988; Cappell & Heiner, 1990; Kaufman & Zigler, 1987). This study has contributed to knowledge on the transmission of parenting style by demonstrating one such condition under which negative childrearing history might be associated with less optimal parenting.

Suggestions for Future Research

The variables investigated in this study represent only a limited number of variables thought to influence parenting style. In this study, demographic, group membership, childrearing history and marital quality were used as predictor variables. Numerous other factors are important and might change the relationships seen here. Including psychological variables such as measures of self-esteem or perceptions of competence in the parenting role may increase the portion of explained variance in parenting.

Childrearing history might influence parenting style indirectly. This might well be mediated through the amount of stress that parents have in parenting. Parents with a problematic childrearing history might have more difficulty in the transition to parenthood. Perceived parental rejection in childhood has also been related to adult depression. Perris et al. (1986) found this represented an important

psychological risk factor in the history of patients with depressive disorders. Depression is systematically related to the quality of parenting. Adults who are less healthy psychologically provide less optimal parenting skills, and are more vulnerable to other types of stress which could ultimately impact on parenting ability. The influence of childrearing history may be mediated through parental depression and stress, in combination with a lack of marital support.

Infant gender was not used as a predictor variable in this study. Yet, previous studies have found the child's gender to be significant (Cowan & Cowan, 1992; Cox et al., 1989). Parents are more responsive in interactions with male infants. Childrearing experiences might be more influential when rearing a child of the same sex. Further analyses should explore the possibility that the relationship between childrearing history and parenting may differ in mother-daughter, mother-son, father-daughter and father-son dyads.

The finding in this study that there was an inverse relationship between marital quality and parenting for fathers warrants further research. It may be that the relationship found in this sample is due to chance. Replication of this study is needed to lend support to these findings.

Finally, since socioeconomic status proved to be the important predictor of mothers' parenting, it is important to determine the reason for this association. Further research is needed using a sample of mothers with a wider range of socioeconomic status, in order to analyze subgroups within the sample. This might prove fruitful.

Limitations of the Study

The ideal method of studying the relationship between childrearing history and current parenting style is through a prospective longitudinal design. Unfortunately, this would be highly impractical even for well-funded, experienced researchers. This correlational study can offer an analysis of the association between childrearing history

and current parenting in a sample that is deemed nonclinical. However, due to the correlational nature of this study, causation cannot be implied and the results have to be interpreted with caution.

The sample consisted of people who were predominantly Caucasian, English speaking urban dwellers. Only two-parent families were included. The parents in this study were relatively well-educated. Thus, results may not be applicable to single parents, less educated parents or parents of ethnic minorities.

While control over confounding variables was maximized by matching on infant variables, the parents in this study were not matched on any variables. Both fathers and mothers of preterm and term infants were comparable on the demographic variables selected for study (i.e., age, education and family socioeconomic status). Nevertheless, it is still possible that some difference might exist between the groups of parents which is associated with premature birth. Although there were no differences readily apparent to the researcher, the possibility must still be considered.

There is always the possibility that a certain type of parent volunteered to be in the study. For instance, it is known that more educated people tend to participate in research studies and this sample was well-educated. It is also reasonable to suspect that parents who were more anxious about parenting or their infant's health gave consent knowing that their participation would mean that a registered nurse would visit their homes. In addition, there is the likelihood that parents who felt they functioned less adaptively as parents did not volunteer to participate in the study. Nevertheless, the sample utilized in this study was not unlike other samples previously used to study parent-infant interactions.

This study measures an individual's recall of perceptions of acceptance-rejection experienced in childhood. Use of questionnaires that rely on individual's perceptions of events that occurred long ago

are subject to selective memory, distorted memory, and subjective interpretation of those events. An obvious question arises as to what extent do these recollections represent reality. It can be argued that this presents a limitation of this study since the questionnaire is based on perceptions of childrearing history. Rohner (1986) argues and other researchers concur (Belsky, 1985; Perris et al., 1986) that it is the parent's perceptions of their experiences that are of paramount importance and not whether or not the person was actually rejected. Parental perceptions are of functional significance. An individual's development is affected only to the extent that he/she perceived the rejection. Therefore, it is only the perceived rejection that is relevant when investigating this phenomenon.

Two other factors need to be considered. First, one method of coping psychologically with negative childrearing experiences is to consciously or unconsciously forget them. Second, another method of coping is the repression of personal emotions associated with the negative experiences. This phenomenon was seen quite clearly in both Frailberg et al. (1975) and Main and Goldwyn's (1984) research with clinical samples. These potential coping strategies have implications for research in this area. First, individuals who remember nothing of their childhood experiences are unlikely to volunteer to be in a study of this nature. As they are unable to recall their childhood experiences, they might feel they cannot contribute to the study. Alternately, individuals may not volunteer because they do not want to remember what they have chosen to forget.

The sample utilized in this study consists of a greater number of people who recalled more positive than negative childrearing experiences. This is reflected in the Parental Acceptance-Rejection Questionnaire (PARQ) scores. Out of a possible range of 60 to 240, with low scores reflecting more positive childrearing experiences, the median for the fathers' scores was 85.6 ($\underline{M}$ = 96.6). The median for mothers'

scores was 91.0 ($\underline{M}$ = 103.3). Because of this fact, the study findings may well underestimate the true association of the relationship between childrearing experiences and parenting.

Implications for Nursing

Many studies have shown that warm sensitive parenting is related to optimal child development. The investment of resources in the promotion of optimal parenting is then a wise investment in the future. Children raised in optimal environments are psychologically healthier and perform better intellectually.

Since it is generally a common assumption among professionals and lay people alike that parents learn to be parents from their parents, many people with a negative past may feel doomed to failure as parents and may experience added stress in the already difficult role as parent. It is important for nurses to stress to parents with negative childrearing histories that some studies have not found a link, and other studies have found that other risk factors must exist before past childrearing experiences influence present childrearing practices. This information would reassure those parents with negative past childrearing histories and help allay their anxieties about their parenting ability. These parents should be encouraged to talk freely about their concerns. They should also be given encouragement and support when interacting with their infants. Providing them with positive feedback may also help to reduce their feelings of anxiety. Since these parents still do not have a foundation of early adaptive experiences to draw on as a resource in learning optimal parenting skills, caregivers should pay more attention to these parents to help them establish optimal parenting behaviours.

This study found important differences in predictors of parenting for mothers and fathers. This has important implications for nursing practice. Fathers of preterm infants were predicted to have less responsive interactions. This is distressing because of the association between the quality of father-infant interactions and children's later

social-emotional and intellectual development. As preterm infants are less responsive in the early months of life, fathers have to be helped to learn how to accurately interpret their infants' cues so that they can respond in appropriate ways. For instance, teaching fathers about the purposeful nature of some infant behaviours such as gaze aversion will help fathers understand that this is the infant's way of communicating the need for less stimulation. With increased understanding of their infant's behaviour patterns, father's competence in interacting should increase. Follow-up of these dyads is crucial. Interactional patterns should be assessed frequently so that any maladaptive patterns can be detected early and corrected.

Traditionally, most of the nurse's contact is with mothers and when children are young. Fathers have had less opportunity to access health care provider's opinions and suggestions or to discuss concerns. Moreover, the attention usually given to fathers is mostly centred around providing assistance to mothers. Because fathers' concerns in parenting are different, they need individual attention. The assistance that nurses provide needs to be tailored more closely towards the father's needs as a parent. One way of doing this is to actively support father's involvement with the infant by listening to their concerns as parents.

This study found that fathers with poorer marital quality had better parenting skills. As the children get older, and the stress of parenting increases, this may well be a group at risk for later parenting problems. While it is reasonable to assume that this is a group at risk for parenting problems and needing follow up, this is probably a group not easily identifiable. The fact remains that while marital quality is known to decrease in the transition to parenthood, this is seldom discussed with new parents. Perhaps by openly discussing this with parents, communication between the couple would be enhanced and marital differences might be discussed. Just knowing that this is a

normal response in new parents might help some couples and alleviate some marital tension.

This study has also shown that socioeconomic status was related to mothers' parenting. Mothers in lower socioeconomic classes need more assistance in learning optimal parenting skills. Research has shown the important role of social support in parenting. Nurses may provide assistance by helping mothers actively mobilize and/or develop their social support systems. Referral to appropriate agencies and programs, can assist mothers in the lower socioeconomic classes to obtain the services they need and to establish important linkages with other mothers. Nurses can organize informal parenting support groups or put mothers in contact with parenting courses offered through community agencies.

Establishing healthy warm interactions between parents and children are critical because of the long term implications for children's development. By helping parents establish optimal parenting behaviours, nurses can make a significant contribution to children's health and well-being. This has long term consequences not only for the health and well-being of children but also for their families and ultimately for all of society.

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Appendix A

Correspondence with Parents

First Letter Sent to Participants

in Parent-Infant Project

From Dr. Harrison

May 10, 1993

Dear X and Y

I want to thank you for your continued participation in the Parent-Infant Project. We appreciate your time and help with our research. When you volunteered to be in the Parent-Infant Project, you said that you would consider being in other studies on families with children. Judee Onyskiw, a graduate student in the Faculty of Nursing, is studying how one's childhood experiences are related to current parenting. There would be no direct benefit to you for being in the study. The information from her study may help to improve the care that nurses give to other parents of young children.

If you are interested in being part of this study, Judee would like each of you to fill in one of the enclosed questionnaires. The questionnaire takes 10 - 15 minutes to answer. You may refuse to answer any question(s). If you do not wish to answer the questionnaire, please return the blank questionnaires to Judee using the enclosed envelope. This will let Judee know that you do not want to participate. If only one of you wishes to participate, please return the completed questionnaire with the blank one.

The code number that has been assigned to your family in the Parent-Infant Project is used on this questionnaire. Judee will use the code number to match the information on the questionnaires with the coded information from the 12 month visit. She will only have access to the code numbers, not the names of the families in the project. The questionnaires will be kept in locked files. They will destroyed seven years after the end of the study. If the researchers look at the information in the future, they will ask permission from a university ethical review committee. When the findings are discussed, only group information is used. Your name will not be used.

If you have any questions, please call either Judee Onyskiw at xxx-xxxx or myself at xxx-xxxx. Thank you for considering participation in Judee's study.

Sincerely,

Margaret J. Harrison, RN, PhD
Associate Professor

Directions Sent with First Letter to Participants

Dear Parents

I want to thank you for considering participating in my study. The following are directions for completing the questionnaire.

The questionnaire printed on white paper is to be filled out by the mother. The form to be filled out by the father is printed on green paper. In the top left hand corner there is your identifying code number that you were assigned in the Parent-Infant Project.

It is very important to me to know who filled out which questionnaire. So at the end of the questionnaire I have asked "Who completed this questionnaire - mother or father? Please circle the appropriate answer. If you should make a mistake and fill out the questionnaire with your spouse's number on it, please be sure to tell me.

If there is any question that you do not want to answer, please mark "no comment" beside it. This will let me know that you have not just forgotten it. I have provided a self-addressed stamped envelope to return the questionnaires. Please return them by June 11, 1993.

There is no direct benefit to you for being in this study. If remembering your childhood is upsetting and you need help in dealing with this, please phone me at xxx-xxxx or Dr. Harrison at xxx-xxxx. We can refer you to someone who can provide counselling.

If you wish to receive a summary of the results of this study, please phone and leave your name and address on the answering machine (xxx-xxxx). I would like to thank you very much for participating in this study.

Yours truly,

Judee E. Onyskiw, M.N. Candidate

First Reminder Letter Sent to Participants

June 18, 1993

Dear X and Y

About three weeks ago, Judee Onyskiw, a graduate student in the Faculty of Nursing, sent both of you a letter asking you to participate in her study. In the envelope, Judee included questionnaires for you to complete.

If you would like to participate in this study, Judee would very much appreciate if you could mail back the questionnaires as soon as possible. If you do not wish to participate then please return the blank questionnaires. This will let her know that you do not want to participate.

If you have misplaced the questionnaires and need another one, please call Judee at xxx-xxxx. Should you have any questions or concerns about the study or the questionnaire, please call either Judee at the above number or myself at xxx-xxxx. We would both be pleased to answer any questions you might have.

We know how hectic life can be with small children and how time slips by. We appreciate the time you have already given us and would like to sincerely thank you for considering participation in this study.

Sincerely,

Margaret J. Harrison, RN, PhD
Associate Professor

Second Reminder Letter Sent to Participants

July 22, 1993

Dear X and Y

I know how busy families are today, especially in summer time. Since Judee Onyskiw has not received your blank questionnaires, we are presuming that you might still wish to participate in her study. Judee has enclosed a second copy of the questionnaires in case you have misplaced them.

If you would still like to participate in this study, please mail back the questionnaires as soon as possible. If we do not hear from you, we will then presume that you do not wish to participate.

Should you have any questions or concerns about the study or the questionnaire, please call either Judee at xxx-xxxx or myself at xxx-xxxx. We would both be pleased to answer any questions you might have.

We appreciate the time you have already given us and would like to sincerely thank you for considering participating in this study.

Sincerely,

Margaret J. Harrison, RN, PhD
Associate Professor

Appendix B

Nursing Child Assessment Teaching Scale

Nursing Child Assessment Teaching Scale

Permission to use the Nursing Child Assessment Teaching Scale was granted to Dr. Margaret Harrison by Georgina Sumner, Director of NCAST.

All information regarding this instrument may be obtained from Georgina Sumner, Director of NCAST, University of Washington, Seattle, Washington.

Appendix C

Dyadic Adjustment Scale

Dyadic Adjustment Scale

Copies of the Dyadic Adjustment Scale can be obtained from Multi-Health Systems, Inc., 65 Overlea Blvd, Suite 210, Toronto, Ontario, M4H 1P1.

Appendix D

Parental Acceptance-Rejection Questionnaire

Parental Acceptance-Rejection Questionnaire

Permission for use of this questionnaire was granted by Dr. R. Rohner to Judee E. Onyskiw.

The questionnaire and procedures for deriving scores may be obtained from Dr. R. Rohner, Director of the Center for the Study of Parental Acceptance and Rejection, University of Connecticut, Storrs, Connecticut.

Appendix E

Zero Order Correlations Between the Demographic Variables, Group Membership, and the Subscales of the DAS, PARQ and NCATS

Zero Order Correlations Between the Demographic Variables, Group Membership and the Subscales of the DAS, PARQ and MCATS for Mothers (N = 72)

	Demographic			G R P	DAS				PARQ				MCATS			
	SES	AGE	EDUC		AFF	CON	CON	SAT	WARM	HOST	INDIFF	REJECT	SENSIT	RESP	SOCIO	COGNIT
SES		.40[c]	.73[c]	.22	.19	.16	.23	.18	.05	.17	-.01	.19	.25[a]	.02	.33[b]	.33[b]
AGE			.51[c]	-.02	.11	-.05	.05	-.08	.08	.03	-.04	.09	.13	.02	.12	.07
EDUC				.19	.15	.14	.10	.06	.04	.10	-.03	.15	.17	.12	.11	.18
GRP					-.17	.18	.08	.14	.14	.12	.12	.22	.05	.07	.10	.24[a]
AFF						.22	.50[c]	.47[c]	-.10	-.07	-.11	-.10	.27[a]	.04	.12	.20
CON							.53[c]	.71[c]	-.03	-.15	-.07	-.15	.10	.06	.09	.09
CON								.69[c]	.20	.13	.16	.11	.25[a]	-.11	.22	.06
SAT									.08	.00	.05	-.02	.24[a]	-.06	.15	.26[a]
WARM										.75[c]	.89[c]	.75[c]	.07	.03	.00	-.06
HOST											.73[c]	.93[c]	.06	-.18	-.05	.00
INDIFF												.74[c]	.02	-.06	-.08	-.10
REJECT													.07	-.16	-.08	-.02
SENSIT														.31[b]	.59[c]	.49[c]
RESP															.35[b]	.17
SOCIO																.33[b]
COGNIT																

[a] $p < .05$; [b] $p < .01$; [c] $p < .001$

Zero Order Correlations Between the Demographic Variables, Group Membership and the Subscales of the DAS, PAIRQ and MCATS for Fathers (N = 66)

	Demographic			G R P	DAS				PAIRQ				MCATS			
	SES	AGE	EDUC		AFF	COH	CON	SAT	WARM	HOST	INDIFF	REJECT	SENSIT	RESP	SOCIO	COGNIT
SES		.25[a]	.75[c]	.23	-.17	-.13	-.17	.03	-.22	-.30[a]	-.33[b]	-.29[a]	-.04	.25[a]	.02	.20
AGE			.21	-.11	.09	-.17	-.08	-.21	-.19	-.23	-.19	-.18	-.10	.14	-.10	-.08
EDUC				.14	-.01	-.09	-.12	.13	-.08	-.09	-.17	-.08	.04	.13	.04	.15
GRP					-.02	.04	-.08	.09	-.08	-.16	-.05	-.14	.04	.30[a]	.20	.17
AFF						.24[a]	.31[b]	.42[c]	-.08	-.07	-.07	.00	-.11	.01	-.08	-.22
COH							.41[c]	.56[c]	.07	.00	.02	.13	-.03	-.05	.01	.00
CON								.55[c]	.07	-.06	.00	.09	-.26[a]	-.13	-.19	-.18
SAT									.07	-.05	-.05	.02	-.07	-.02	-.06	-.14
WARM										.78[c]	.87[c]	.70[c]	.03	-.06	.03	-.08
HOST											.81[c]	.85[c]	.10	-.11	.13	-.15
INDIFF												.80[c]	-.05	-.05	.06	-.15
REJECT													.03	-.02	.06	-.20
SENSIT														.00	.45[c]	.23
RESP															.35[a]	.27
SOCIO																.50[c]
COGNIT																

[a]p < .05; [b]p < .01; [c]p < .001