STRESS, COPING, AND HELPFULNESS OF STAFF INTERVENTIONS AS PERCEIVED BY FATHERS OF INFANTS IN THE NEONATAL INTENSIVE CARE UNIT

BY

ALISON BERTRAM FAROUGH

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BY

ALISON BERTRAM FAROUGH

A Thesis submitted to the Faculty of Graduate Studies of the University of Manitoba in partial fulfillment of the requirements of the degree of

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To my husband Doug

and my daughter Renae,

with love.

ABSTRACT

Having a baby in a neonatal intensive care unit (NICU) is a stressful event in the life of a father. Few studies have examined how these stressors are cognitively appraised. How fathers cope with appraised stressors and which nursing interventions are perceived as resources for coping has received little attention. This study examined the following questions: 1) what factors are identified as stressful? 2) what factors are cognitively appraised as most stressful to least stressful? 3) which staff interventions are received the most frequently? 4) what staff interventions are perceived as resources for coping? 5) what coping responses are employed? and 6) what coping responses are cognitively appraised as helpful?

A retrospective, descriptive design was chosen using the following self administered questionnaires: the Parental Stress Scale: Neonatal Intensive Care Unit (PSS:NICU) with additional questions concerning personal/family and situational stress and the Parental Coping Scale: PICU (PCS:PICU). Data were collected from 25 fathers within 5 to 312 hours of their infants' transfer from the NICU area. Subjects were obtained from one of two tertiary care hospitals. Fathers eligible for the study had infants who

were: 1) born equal to or less than 36 weeks gestation; 2) born without congenital anomalies; 3) admitted for a period of greater than 3 days and not more than 60 days; and 4) transferred from the NICU at or prior to 60 days from admission.

The item identified the most often and rated as most stressful was "trying to juggle work, home responsibilities and visiting the hospital." Staff behaviour and communication was the least stressful category. The three most helpful staff interventions were those involving: 1) giving information; 2) friendliness and compassion; and 3) accessibility. The coping response identified as the most helpful was: "believing that my infant is getting the best care possible." Problem-focused coping was used the most often and seen as most helpful. Results will be beneficial to enhance care to fathers in the NICU area.

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I would like to acknowledge my appreciation of those individuals who have assisted and supported me in the process of this research.

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CHAPTER I: INTRODUCTION

Statement of the Problem

Having a baby in a neonatal intensive care unit (NICU) is a stressful event in the life of a family (Kaplan & Mason, 1960). Feelings frequently evoked in parents are anxiety, fear, anger, guilt, helplessness, shock and disappointment (Beaton, 1984; Blackburn & Lowen, 1986; Caplan 1960). Studies such as Benfield, Leib and Reuter, (1976); Harper, Sokal and Sokal, (1976); Jeffcoate, Humphrey and Lloyd, (1979); Miles and Carter, (1982) have identified aspects of the experience which families identify as particularly stressful. These aspects are related to personal family factors such as parent personality and concurrent life events, situational conditions such as uncertainties, and environmental stimuli such as disruption in parenting and sights and sounds of the environment. A few studies have examined how these stressors are cognitively appraised, or perceived as to degree of threat (Miles, 1989; Miles & Carter, 1985; Novak, 1990). Yet, how parents cope with these appraised stressors has received little attention. As well, very limited empirical data are available regarding which nursing interventions are appraised by parents as being resources for coping (Curley, 1988; Miles & Carter, 1985). Unfortunately, previous studies have been limited in scope and many have focused on maternal stressors and coping (Benfield, Leib & Reuter, 1976; Blackburn & Lowen, 1986; Caplan, 1960; Curley, 1988; Harper, Sokal & Sokal, 1976;

Jeffcoate, Humphrey & Lloyd, 1979; Miles & Carter, 1985). Although some recent studies have explored the stressors and stress response of both parents (Miles, 1989; Miles, Funk, Kasper, 1992; Perehudoff, 1990), no studies have focused exclusively on fathers. The literature has not adequately explored the stressors and coping of fathers who have had infants admitted to NICU.

A small body of current research indicates that fathers and mothers react differently to the crisis of a high-risk newborn. Trause and Kramer (1983) found that fathers and mothers differed significantly in their reports of needs and feelings. Reliability and validity of the tools are not given, yet fathers are described as showing less distress than mothers. Consolvo (1984) identified seven distinct roles of the father of the high risk newborn. The identified roles are "nurturer, intermediary, caretaker, playmate, parent, visitor, and provider" (p. 27). Consolvo further remarks "when they too need nurturing, fathers of high-risk infants are expected to adapt readily and to be models of self-control" (p. 27). Benfield, Leib and Reuter (1976) found that fathers reported drastic alterations in their patterns of daily activities, and assumed a central role in maintaining family stability. Mothers did not report these extreme alterations in their daily living.

In an effort to meet the needs of all family members, health care professionals strive to provide family centred care. "Family-centred maternity, newborn, and early childhood care may be defined as the delivery of safe, quality care of both the physical and psychosocial needs of the mother, the father, the child, and the family" (Canadian Institute of Child Health, 1980, p. V). To provide this type of comprehensive care, a knowledge of the experience from the perspective of each family member is essential. Lack of research in this area has resulted in health care professionals having minimal understanding of the father's experience. Without this knowledge, it is difficult for the nurse to provide comprehensive family centred care. Consolvo (1984) writes "fathers in NICU are observed to withdraw, become bystanders, and become entrenched in learning medical terminology that applies to his child's care" (p. 30). While working in the NICU environment the author heard nurses frequently remark that they did not understand these behaviours and found them annoying. If nurses are to assist fathers as well as mothers in adapting successfully to the crisis of their infant's admission to NICU, nurses must understand the experience from both the mother's and father's perspective. The stressors fathers appraise to be most difficult and a knowledge of paternal coping are critical factors in exploring the experience from their unique perspective.

This study will explore the father's experience of having an infant admitted to NICU by examining the following research questions:

1. What factors do fathers of an infant admitted to NICU identify as stressful?
2. What factors do fathers of infants admitted to NICU cognitively appraise as most stressful to least stressful?
3. What staff interventions do fathers receive most frequently?
4. What staff interventions do fathers perceive as resources for coping?
5. What coping responses (appraisal-focused, problem-focused and emotion focused) do fathers of infants admitted to NICU employ?
6. What coping responses do fathers of infants admitted to NICU cognitively appraise as helpful?

Significance of the Study

Numerous studies over the past two decades have indicated an increased incidence of child abuse and neglect among infants cared for in an intensive care nursery (Evans, Reinhart, & Succop 1972; Hunter, Kilstrom & Kraybill, 1978; Klein & Stern 1971; Levanthal, Garber & Brady, 1989). The factors associated with increased risk of abuse and neglect are numerous, but a disruption in parental attachment may be related to the infant's high risk status for later parental

abuse. Cranley and Weaver (1983) demonstrated that paternal attachment begins during pregnancy. Herzog (1982) describes how fathers of premature infants have this attachment phase shortened and describes fathers as angry, distressed, and having feelings of guilt and fear. Lefy-Shiff et al. (1990) found that the frequency of paternal visits to hospitalized preterm infants is positively related to the father's later relationship with the infant. To determine how health professionals can best promote positive paternal attachment it "..is necessary to consider what the parent brings into the parenting situation and to examine the sources of support and stress which impinge upon the parent's ability to establish an affectionate bond with the infant" (Penticuff, 1980, p. 169).

There is an increasing body of research demonstrating that fathers are an integral and critical unit in the family grouping. Marton, Minde and Perrotta (1981) found that "fathers appear to play a meaningful role with their premature infants" (p. 677). The quality and quantity of social interaction between father and child is a critical factor in the child's social, emotional and physical development (Cronenwett & Kunst-Wilson, 1981; Radin, 1976).

Quality nursing care is necessary if fathers are to be assisted to cope with the stress of having an infant in NICU. To deliver quality care, staff must have confidence in their skills and knowledge. Working with families of sick/premature neonates presents challenges to providing high quality care.

Jacobson (1977, 1978) determined that nurses' anxiety about their knowledge and competence was one of the ten top categories of stressors for NICU nurses. Lust (1984) identifies families as a source of stress for nurses. Griffing (1990) states "Family coping styles may be threatening or overwhelming to the nurse... Working with families is demanding for neonatal staff and related to burnout" (p. 59). Under stress, nurses may change jobs frequently within nursing or may leave nursing entirely. This increases the cost of nursing care and disturbs the continuity of the care provided. In a survey of turnover in NICU's, Price (1979) obtained estimates of annual turnover ranging from 20 - 45 percent and there have been reports of some units where turnover was well over 100 percent (cited in Jacobson, 1984). The Price (1979) study suggests that increasing the nurses' confidence in her knowledge would decrease her stress. Decreased stress in nurses could decrease staff turnover thereby decreasing cost to the health care system.

By reviewing the literature, it becomes increasingly evident that fathers have a unique and important role in parenting. If fathers of ill infants are to parent successfully, they must be assisted to cope with the stress of the birth of an ill infant. This study, by identifying how fathers cognitively appraise and cope with stress, will provide a crucial step in assisting health care professionals to provide family focused care. Supportive nursing for

fathers may reduce problems such as child abuse and improve the health and development of their infants. Identifying nursing interventions that fathers perceive as helping them cope with stress, will give nurses greater knowledge and greater confidence in the quality of care they provide. This confidence may alleviate some of their work related stress, and improve their ability to provide quality care.

Summary of Chapter One

This study describes the stressors, coping behaviours and perceived helpfulness of staff interventions in fathers of infants admitted to NICU. The rationale for conducting this study arises from the lack of literature in this area. Little is known about the unique experience of fathers or the nursing interventions that best assist them to positively adapt to the situation. Fathers play a critical role in the family unit and their behaviour influences the physical, mental and emotional development of the infant. It is, therefore, imperative that nursing interventions be investigated and developed to assist fathers to adaptively cope with the stress of having an infant in NICU. If nurses are to provide interventions with confidence, thereby minimizing their own stress, they must be guided by access to empirical data on the subject.

CHAPTER II: CONCEPTUAL FRAMEWORK

Models of Stress and Coping

Selye (1976) is often credited with clarifying and defining what in previous years various researchers referred to as stress. Selye defined stress as "the nonspecific response of the body to any demand" (p. 1). He further states "the symptoms of stress can be both biophysical and psychological" (p. 55).

Selye (1978) states "stress is the common denominator of all adaptive reactions in the body" (p. 64). This is congruent with Roy's nursing model. Roy (1984) believes that the ability to adapt to stress is dependent on the degree of environmental change and the person's coping patterns.

Lazarus and colleagues have developed a transactional model of stress and coping which describes the interactions between a person and the environment. They describe stress and coping as relating to and affecting each other (Lazarus, 1966; Lazarus & Folkman, 1984). Stress must be viewed from the individual's perspective. A stimulus-stressor can be assessed as either good or bad. Lazarus defines this initial appraisal as "primary appraisal." This evaluation of the degree of threat produced by stress is referred to as cognitive appraisal.

"What is judged to be stressful depends not only on the taxing qualities of the environment as appraised, but also, and equally as important, on the appraised strength and suitability of the available resources to meet the demand" (Roskies & Lazarus, 1980, p. 45). Appraising the availability of resources is as important as appraising the actual stressor. The factors which influence these appraisals are: past experience, availability of response options, personality dispositions and uncertainty. Coping follows secondary appraisal and is influenced by the decisions made in secondary appraisal. The availability of response options, otherwise known as resources for coping, can, therefore lower arousal directly or operate directly on coping or the choice of coping strategy (Garrity & Marx, 1985). Roskies and Lazarus (1980) further describe stress "as prevalent but not necessarily pathologic" (p. 41) and that coping influences whether the outcome of stress is adaptive functioning or pathologic in nature.

Moos (1977) addressed coping strategies as an important, interrelated, and dynamic link between stress and adaptive functioning. The three dimensions of coping identified by Moos and Billings (1982) are: appraisal-focused, problem-focused, and emotion-focused coping. Appraisal focused coping is the individual's attempt to define the meaning of a situation by logical analysis, mental redefinition, or cognitive avoidance. Problem-focused coping is the attempt to

alter the source of stress, handle the consequence, or create change by developing appropriate skills. Emotion-focused coping is the individual's attempt to maintain equilibrium by managing the emotions created by the stress. An example of emotion focused coping is resigned acceptance. Coping is, therefore, viewed as the cognitive and behavioral attempts used to overcome, accept, or reduce the demands that are perceived by the individual as exceeding the available resources and/or perceived as threat. (Lazarus, 1966; Lazarus & Folkman, 1984). Lazarus & Folkman (1984) state that the coping strategy chosen is dependant upon the person-environment relationship and the choice will change as the environment changes. The process is dynamic, interdependent and cyclical.

Selye, Roy, Moos, and Lazarus and colleagues, all view stress as a process. It is something that cannot be avoided. These theorists agree that stress arises from environmental stimuli, characteristics of the situation and personal factors. They agree that cognitive appraisal affects how the stress is perceived and coped with. Reappraisal of the stressor and the stress produced, along with an evaluation of the effectiveness of the coping strategies used to manage the situation complete the cycle. The outcome is either maladaptive or adaptive functioning of the individual.

Miles and Carter (1983) developed a model of assessing parental stress in intensive care units. It was derived from theories of stress, adaptation and coping. In particular, the authors were influenced by "Selye's theory of stress, Richard Lazarus's cognitive-phenomenological theory on stress and coping, Sister Callista-Roy's model of nursing, and Rudolph Moos's theory on coping with illness" (Miles & Carter, 1983, p. 354). Miles and Carter identify consistencies within these theories and use this consensus to derive their theory of parental stress in the intensive care unit. They describe their transactional model by stating:

> interacting personal/family factors, situational conditions, and environmental-stimuli are cognitively appraised by parents. The parents respond to the perceived stressors by using coping skills developed in the past and by developing new coping skills. The response to stress likewise is a changing phenomenon... Maladaptive outcomes may occur if the parent's cognitive appraisal of the situation remains harmful and the parent's internal and external resources are inadequate or are not used adequately. (Miles & Carter, 1983, p. 358).

Appendix A provides an overview of this theory.

Theoretical Framework

After analyzing Miles and Carter's (1983) framework of parental stress the author has chosen to use a modified version as the basis for this research study. The modified version was developed due to inadequacies in the Miles and Carter (1983) framework. Their framework does not provide clear definitions for the concepts within the framework and the relationships between concepts are sometimes unclear. Examples of the ambiguous relationships are as follows:

1) Situational conditions are not directly linked to cognitive appraisal; therefore, it is unknown if it can be appraised directly or only as it relates to personal/family factors and environmental stimuli.

2) The relationship between resources and stressors is not described.

3) Miles and Carter (1983) describe cognitive appraisal and coping responses as separate concepts dynamically interrelated. Their diagram, however, suggests two concepts joining to form something specific.

4) The written description describes personal and environmental resources interacting with both cognitive appraisal and coping responses while their diagram depicts a relationship with only the coping responses.

Appendix B provides a summary of the revised framework.

The assumption implied in the Miles and Carter (1983) theory is explicitly stated as: The admission of a child to an intensive care unit can be an extremely stressful experience for parents. This assumption was accepted for the purposes of this study.

The following definitions have been developed based on Miles and Carter (1983) theory and Roy's (1984) theory:

1. Stressor: An agent or experience that may cause stress. Stressors arise from the person's physical (external), internal, or psychosocial environment. They can be pleasant or unpleasant. All stressors require a readjustment in life.
2. Stress Response: Roy's (1984) definition of adaptive and ineffective responses will be used. An adaptive response is "behaviour that maintains the integrity of the individual." (p. 38). Ineffective responses are behaviours that "disrupt the integrity of the individual" (p. 38).
3. Personal Family Factors: Aspects of the parent's life and personality. For example, parent personality, concurrent life events, and past experience.
4. Situational Conditions: Any condition related to the specific reason for the child receiving care in this setting. For example, severity of the infant's illness or the uncertainty of the outcome.

5. Environmental Stimuli (Stressors): Events or aspects found in the actual NICU setting, for example, sights and sounds, infant's appearance and behaviour, or actions of health professionals.
6. Cognitive Appraisal: The individual's assessment of the degree of harm or threat a sressor imposes.
7. Coping: Cognitive and behavioral attempts to overcome, accept, or reduce the demands that are perceived by the individual as threatening.
8. Coping Resources: The physical and psychosocial assets that the individual perceives as being usable in attempts to cope with the stressor.
9. Appraisal focused coping: The individual's attempt to define the meaning of a situation by logical analysis, cognitive redefinition, or cognitive avoidance; for example, believing this child is getting the best care possible, trying to understand why this happened to their child, or having hope that all will be well.
10. Problem focused coping: The individual's attempt to modify the source of stress, deal with the consequences, or create change via skill development. Seeking information, asking questions of staff, talking with other parents, or making sure their child is getting the best possible care are examples of problem focused coping.

11. Emotion focused coping: The individual's attempts to maintain equilibrium by managing the emotions created by the stress, for example, seeking comfort from family or praying.

Summary of Chapter Two

The study will be guided by a revised version of Miles and Carter (1983) framework of understanding parental stress and coping in the NICU. This framework allows the researcher to examine the interaction of environmental, personal/family and situational stressors in relation to coping.

CHAPTER III: REVIEW OF RELATED LITERATURE

Introduction

Research has indicated that the hospitalization of an ill baby is stressful to parents (Miles, 1989; Roskies et al., 1975). The parental reactions reported in these studies were overt anxiety, passive behaviours, withdrawal and denial, fear, guilt and hostile feelings. Lazarus and Folkman (1984) describe these behaviours as the individual's attempt to cope with the appraised threatening event. This chapter will review the literature related to the stressors, coping behaviours, and nursing interventions which reduce stress and assist adaptive coping. Emphasis will be placed on literature pertaining specifically to fathers.

Stress

Observation of parents in the critical care area led Miles and Carter (1983) to identify three potential sources of stress: personal/family, situational and environmental factors. The literature relating to these three areas will be discussed separately.

Personal and Family Factors of Stress for Fathers

According to Miles and Carter (1983), personal/family factors include parent personality, concurrent life events, and past experience. The stress dimensions of parent personality and past experience of the NICU experience has received no attention in the literature. Minimal research has been conducted on concurrent life events.

The personal importance that the individual places on an event can produce stress. In general, the diminishment of self-esteem and lack of mastery are described as being a stressor, (Thoits, 1983) as well as the individual's internal-external locus of control (Sarason, Sarason & Johnson, 1985). Sarason et al. (1985) summarize these factors of personality and past experience by reviewing the research on self esteem and mastery and stating that the individual's appraisal of the stressor as threatening is influenced by "the schedule of recent-events, internal-external locus of control, prior experience." (p.241). No study has explored the relationship between the birth of an ill infant and the father's sense of threat to self-esteem or mastery. Nor has any study examined whether the birth of an ill infant is perceived by fathers as a threat to their self-esteem.

Personal/family stressors have been empirically studied in families experiencing other life events. For example, studies have been conducted that examine the personal/family stressors of expectant and postpartum fathers of healthy infants. These studies demonstrate that fathers of healthy infants are concerned about finances, specifically the additional expenses of the child and concern about the loss of their wife's income (Glazer, 1989; Heinowitz, 1982; Tonti, 1979). No study was found which explored this aspect of

concern in fathers of ill infants but it is hypothesized that this financial stressor might be heightened. The birth of an ill infant increases the financial burden on the family through costs of transportation to/from hospital, parking, extra babysitting for siblings, and the parents taking more time off work than initially planned.

Aspects of concurrent life events have been studied in relation to fathers of children and infants admitted to a critical care setting. Drastic alteration in daily living and assuming a central role in maintaining family stability were found to be most stressful (Benfield, et al. 1976; Jeffcoate, Humphrey & Lloyd, 1979; Lewandowski, 1980). A qualitative study by Jeffcoate et al. examined role perception and response to stress following preterm delivery in mothers and fathers. Two groups of families were included in the study, a group of parents of pre-term infants and a control group of normal weight infants. The groups were matched for parity, social status, educational, and ethnic background with parents of full term infants. The pre-term fathers (5 of 13), reported having to cope "with far more housework and baby care than they had anticipated, at times taking over completely the running of the house and caring for the baby as well as coping with a full time job" (p. 142). The pre-term fathers also described that their "work had been disturbed by having to take time off to visit the hospital or help at home, or of anxiety and inability to concentrate through worry or

exhaustion" (p. 142). No control group fathers mentioned this unexpected depletion of energy or time interference with personal or professional life. Similar stressors were found in fathers of children undergoing open-heart surgery who indicated that the response from other family members, job responsibilities, and absence from work were major stressors (Lewandowski, 1980).

Lack of preparation and control over the child's admission to a critical care setting has been found to be a stressor. Carter, Miles, Buford and Hassanein (1985) indicate that parents who felt prepared for their child's admission to the Pediatric Intensive Care Unit (PICU) appraised the unit as less stressful than the parents who felt unprepared. Parents whose infants were delivered by cesarean section or transferred to a tertiary care setting reported higher grief scores than those not transferred or delivered vaginally (Benfield, Leib & Reuter, 1975). Results suggest that parents' lack of control in these situations is the stressor.

In summary, the literature in the area of personal/family stressors of fathers of infants admitted to NICU is limited. While diminishing self-esteem and mastery have been studied in the normal childbearing population, no research has examined fathers of ill infants in NICU. Research findings indicate

that factors in this area can be stressors. A recurring theme is that struggling with concurrent life events, and in particular with job responsibilities and the expanded family role, is particularly stressful to these men. How these stressors relate to the stressors of situational conditions and environmental factors is unknown.

Situational Conditions

Situational conditions are described as the specific event or condition that requires the infant to receive care in the NICU. Uncertainty and seriousness of the infant's condition are the factors identified in this area by Miles and Carter (1983).

Uncertainty as a stressor is consistent with the findings of many researchers. Mishel (1984), while studying 100 adult medical patients, states that uncertainty occurs when the decision maker is unable to predict the outcomes of the situation. While studying parents of ill children, Mishel (1983) found that when an event generates uncertainty, it is judged to contain one or more of the following characteristics: ambiguity, lack of clarity, lack of information, or unpredictability. Mishel makes the assumption in this study that increased uncertainty increases parental stress.

Parents frequently use problem focused coping in attempts to deal with their child's hospitalization in an intensive care unit (Miles & Carter, 1985). These authors identified aspects of problem focused coping in a retrospective survey. They include "seeking information, asking questions, talking with other parents, and being vigilant about the child's care" (p. 20). Terry (1987) found that parents of hospitalized children identified the "need for information, particularly information about what is wrong with the child and about what will happen to the child... as the parents' most important need" (p.19). These studies provide additional evidence to conclude that uncertainty is a stressor to parents of babies in NICU. The only study that specifically addressed uncertainty as a stressor was Mintum's 1984 study. Mintum (1984) suggests that parents of children in pediatric intensive care units have elevated anxiety levels related to the uncertainty of the situation.

Caplan, Mason, and Kaplan (1965) also suggest uncertainty as a stressor. In their study the parents identified as coping adaptively "continually surveyed the situation and gathered as much information as possible" (p. 53). Schepp (1991) concluded that mothers who knew what to expect

experienced less anxiety and used less energy coping with their child's hospitalization than mothers who did not know what to expect. This would indicate that uncertainty is a stressor that the parents are attempting to cope with by using problem focused coping.

In addition to uncertainty, the seriousness of the child's illness can be a stressor. The seriousness of the child's illness as a stressor has been identified in parents of children admitted to an acute care setting. Jay's (1977) observational research identified the seriousness of the child's illness as a source of stress in this population. Miles (1979) built upon Jay's work with further observation of the same phenomena. Harper, Sokal, and Sokal (1976) demonstrated a high correlation between parental anxiety and the seriousness of the infant's condition. Miles and Carter, (1982, 1983) and Lewandowski (1980) also supported the conclusion that the seriousness of the child's illness is a stressor.

In summary, research investigating the stressors of situational conditions for fathers of infants admitted to NICU is lacking. The limited amount of research conducted would support the view that uncertainty and seriousness of the infant's condition are stressors for this population. Specific aspects of these stressors and how they interact with other stressors have yet to be examined.

Environmental Stressors

The events or aspects found in the NICU environment that may be stressors for parents of infants in the critical care setting has received the most attention by researchers. Lewandowski (1980) identified the general hospital environment, pediatric critical care environment and appearance of the child as areas of stress for parents of children undergoing open-heart surgery. The specific stressors identified were lack of privacy, strangers, disrupted sleep and eating patterns, unfamiliar machinery, noise and change in the child's appearance. Lewandowski came to these conclusions by interviewing and observing 59 parents of children undergoing open-heart surgery over a period of approximately two years. The number of mothers and fathers participating in the study is unknown and no attempt was made to analyze responses according to gender.

The Parental Stressor Scale: Pediatric Intensive Care Unit (PSS:PICU) has been used in several studies with parents whose child has been admitted to a critical care setting (Carter, Miles, Buford, & Hassanein, 1985; Curley, 1988; Eberly, Miles, Carter, Hennessey, & Riddle, 1985; Riddle, Hennessey, Eberly, Carter, Miles, 1987). This tool was developed to measure parental perceptions of stress arising from seven dimensions of the pediatric intensive care unit (PICU): sights and sounds, child's appearance, child's behaviours and emotions, procedures, staff communication,

anomie, and parental role alteration. The tool is based on the Miles and Carter (1983) framework and the areas were developed from informal interviews. The Parental Stressor Scale: Neonatal Intensive Care Unit (PSS:NICU) by the same author is an adaptation of the PSS:PICU (Miles, 1989; Miles, Funk & Carlson, 1993). The PSS:NICU measures parental perceptions arising from dimensions of the NICU environment: sights and sounds, staff communication, parental role alterations and infant's appearance and behaviours. The PSS:NICU was adapted to reflect the stresses associated with the appearance of a premature infant, changes in the parental role that differ for parents of sick infants, and in the routines and environment of the NICU.

Eberly, Miles, Carter, Hennessey and Riddle (1985) examined parental stress after the unexpected admission of a child to the intensive care unit. Fathers represented only 34% and mothers 66% of the subjects. Unfortunately, data from mothers and fathers were combined for data analysis. This multi-site study concluded that while any admission of a child to an intensive care unit is stressful, unexpected admissions result in higher mean stress scores. The dimensions of parental role alteration, child's behaviour and emotions were the most stressful for parents of planned and unplanned admissions. The child's behaviour, emotions, child's appearance and parental role alteration are

consistently ranked as the most stress inducing factors for parents of children admitted to a critical care setting (Blackburn & Lowen, 1986; Carter, Miles, Buford & Hassanein, 1985; Curley, 1988; Riddle, Hennessey, Eberly, Carter & Miles, 1987).

Miles (1989) used the PSS:NICU to study 53 parents of infants admitted to a NICU. While the sample consisted of 36% fathers, the responses of these fathers were never separated from maternal responses. Miles (1989) reports the infant's appearance and behaviour as causing the most stress to parents followed by parental role alteration, staff communication and sights and sound in the NICU.

Two studies have been conducted comparing stressors for mothers and fathers (Miles, Funk and Kasper, 1992; Perehudoff, 1990). Miles, Funk, and Kasper (1992) used 23 couples. Both mothers and fathers reported parental role the most stressful followed by sights and sounds and then infant appearances. Perehudoff (1990) in a descriptive comparative study used the PSS:NICU to compare 31 fathers and 31 mothers whose infant had been in the NICU for no longer than 7 days. Mothers were found to report parental role alteration as the most stressful followed by sights and sounds, infant's appearance and staff communication. Fathers reported the sights and sounds of the NICU the most stressful, followed by parental role alteration, appearance and staff communication as least stressful.

The differences in findings between Miles (1989) and Perehudoff (1990) could result from Miles combining fathers and mothers in the data analysis. Unfortunately it is difficult to know if the rating of sights and sounds versus parental role alteration in the studies by Miles, Funk, Kasper (1992), and Perehudoff (1990) is meaningful, as neither study reports testing the differences for significance. In addition all three studies used small sample sizes.

Staff communication was cited as one of the highest stressors by Riddle et al. (1987). Novak's (1990) qualitative study describes a similar phenomenon. The aspect of nursing communication specifically described as stressful was that of nurses directing all teaching to the mothers rather than including the fathers (Novak, 1990). Eberly et al. (1985) found staff communication the third highest stress dimension for parents of children with unplanned admissions. Miles (1989) found aspects of the staff-parent relationship as only moderately stressful and Perehudoff (1990) reported staff communication as not stressful to either fathers or mothers. The items relating to staff behaviour and communication have been removed from a revised version of the PSS:NICU as a result of the work of Miles, Funk, and Carlson (1993). However as Miles (1989), in discussing the limitations of this study, suggests "parents are unable to accurately rate their experiences with staff while their infant is still a patient

in the unit and dependent on the staff for care" (p. 73). A similar comment could be made regarding Perehudoff's (1990) study as parents were questioned while their infant was still receiving care in the NICU. Research conducted after the infant is discharged or transferred from the unit might be more less subject to bias.

In addition to the stress that having an infant in an acute care setting has on parents, some work has been done with the extended families in this setting. Blackburn and Lowen (1986) studied the impact of an infant's premature birth on the grandparents and parents. Data from their questionnaire indicated that parents and grandparents were more prepared for their first view of the NICU than for the infant's initial appearance. This finding is consistent with that of Miles (1989). Harper, Sokal and Sokal (1976) found that the other infants and equipment increased parent stress. In Blackburn and Lowen's (1986) study mothers reported feelings with the greatest intensity followed by fathers, grandmothers, and grandfathers. Grandfathers and fathers reported that they received the emotional support required but mothers indicated that they desired more emotional support than they received. Accordingly, this study would suggest that the child's appearance is most stressful, sights and sounds least stressful and staff communication might be more stressful to mothers than fathers.

In summary, the literature supports that aspects of environmental stimuli are cognitively appraised by fathers as stressful. The research suggests that the aspects appraised as most stressful are the behaviour and appearance of the infant, parental role alteration and staff communication. The area that may be the least stressful are aspects of the physical environment, for example, sights and sounds. No study has examined the stressors of personal/family factors, environmental factors, and situational factors simultaneously. How these stressful areas relate to each other, or which area is the most stressful to fathers remains undetermined. It is only in understanding the total experience of fathers that effective intervention can be planned to assist them to cope with the stress of having an infant in NICU.

Summary of the Stress Literature

The review of the literature on stress of fathers with children admitted to a critical care setting supports the perspective that personal/family factors, situational factors and the environment are perceived as stressors. While studies have begun to focus on these three areas individually, no research to date has compared which area is the most stressful, or if factors of one area are more stressful than factors of another area.

Parental Coping

In addition to personal/family stressors, situational and environmental stressors, parental coping during a child's hospitalization has been studied. Miles and Carter (1983) state that after cognitively appraising a stressor as threatening the parent will attempt to cope with the situation. "Coping is an active force in shaping what is happening and what will happen" (Roskies & Lazarus, 1980, p. 44). The coping strategies available are: problem-focused, appraisal-focused, and emotion-focused.

Problem-Focused Coping

Problem-focused coping is the individual's attempt to modify the source of stress, deal with the consequences, or create change by developing the appropriate skills. Problem-focused coping is the strategy used most often by parents of acutely ill children (Miles & Carter, 1985). Being near their child as much as possible is a behaviour that all parents participate in and most perceive as helpful. However, Harper et al. (1976) demonstrated that increased contact with their infant increased parental anxiety.

Studies examining problem focused coping used by parents when their child is hospitalized in an acute care setting have been conducted. Miles and Carter (1985) conducted a study "to identify staff behaviours and parental coping patterns helpful to parents during their child's hospitalization in a pediatric intensive care unit" (p. 14). This retrospective self-report

study used the Parental Coping Scale: Pediatric ICU (PCS:PICU) which was developed for the study. Twenty-one mothers and 15 fathers of 27 hospitalized children participated in the study. Problem focused behaviours that were observed in most parents and perceived as helpful were: seeking information, asking questions of staff and making sure that their child is getting proper care (Miles & Carter, 1985). Caplan (1960) in a much earlier qualitative study, describes a similar phenomenon. A problem-focused coping behaviour that is used but not viewed as helpful by parents is going home to rest (Miles & Carter, 1985).

Appraisal-Focused Coping

Appraisal-focused coping is the individual's attempt to define the meaning of the situation by logical analysis, cognitive redefinition or cognitive avoidance. In studies of hospitalized children, parents were found to initially withdraw and have an inability to remember information (Scoupios, Gallagher & Orlowski, 1980). Other appraisal behaviours found are visual survey, restructuring and intellectualization. Fathers were found to use intellectualization the most often as they explain and try to understand the child's illness and prognosis on an intellectual level (Lewandowski, 1980). All parents were found to cope by believing their child is getting the best

care possible. Most parents find this coping mechanism helpful. Thinking too much about their child's illness and refusing to believe the seriousness of the situation are viewed by parents as coping techniques which were not helpful (Miles & Carter, 1985).

Emotion-Focused Coping

Emotion-focused coping is the individual's attempt to maintain equilibrium by managing the emotions evoked by stress (Miles & Carter, 1985). Rothstein (1979) found that parents of critically ill children displayed coping behaviours that involved feelings of helplessness, blaming themselves, using religious explanations and being angry towards staff. Timing of these behaviours was dependent on the stage of the child's illness. The ability to express these feelings is viewed as essential for positive adaptation (Caplan, 1960; Caplan, Mason & Kaplan, 1965). Emotion-focused behaviours that Kaplan and Mason, (1960) found necessary for maternal positive adaptation were: preparing for the possible loss of the child and recognizing the failure to deliver a normal child. These findings are in opposition to Miles and Carter's (1985) findings in which parents expressed that preparing for the worst was not helpful.

While many of the studies (Benfield et al. 1976; Caplan et al., 1965; Harper et al., 1976; Kaplan & Mason, 1960; Rothstein, 1979) have dealt almost exclusively with emotion focused coping, Miles and Carter (1985) found that parents report using it the least often. The reason for this discrepancy could be that parents do not feel comfortable reporting these behaviours or that these are the behaviours most problematic to health care professionals. A behaviour not frequently employed and not found helpful is the taking of drugs, including alcohol (Harper, 1976; Miles & Carter, 1985). A behaviour that many do employ and find helpful is praying (Miles & Carter, 1985). Many parents report that they attempt to cope by seeking help from family, friends, and the community but few find this beneficial (Miles & Carter, 1985).

Summary of Stress and Coping Literature

In summary, problem-focused, appraisal focused and emotion focused strategies are employed by parents in attempts to deal with the stressors evoked by their child's admission to a critical care setting. Few studies have examined which coping behaviours are beneficial and under what circumstances. Without validation of previous research, it is difficult to draw definitive conclusions. The literature would suggest that while problem-focused coping is employed the most often, and emotional focused the least often, aspects of all three strategies may be beneficial or destructive. The aspects indicated as beneficial are: being with their child as much

as possible, seeking information and asking questions, making sure their child is receiving proper care, believing their child is receiving proper care, being able to express emotions and praying. While many parents attempt to cope by seeking help from family and friends, few find this beneficial.

Staff Interventions that are Resources of Coping

In addition to the types of coping styles employed by fathers, the father's ability to cope adaptively and their choice of coping strategy can be influenced by nursing interventions. These nursing interventions are resources of coping as they "operate directly on appraisal and coping" (Garrity & Marx, 1985, p. 236). "Nursing interventions that help parents to decrease their stress will enable them to assume the vital role that is therapeutic to them and their child" (Curley, 1988, p. 683). Nurses need to provide quality care and to do this they need knowledge that is rooted in research. Research concerning the effectiveness of various nursing interventions in assisting fathers to cope with an acutely ill child is limited. Research examining the interventions that assist parents to cope with their acutely ill child has an over representation of mothers in their samples. This section will review the literature that has

investigated nursing interventions that assist parents, particularly fathers, to cope with the stressors of having an infant admitted to NICU. Particular attention will be given to those interventions that parents have themselves identified as most or least helpful.

Preparing parents for the admission of their child to an acute care setting by giving them a pre-admission tour is an intervention that is cited in the clinical literature as beneficial (Carter et al, 1985; Steele, 1987). Some research has been conducted to determine if parents find this intervention helpful. Miles and Mathes (1991) determined that parents found preparation to the PICU as helpful. Carter and colleagues (1985) asked 55 fathers and 110 mothers to assess, retrospectively, their perception of their personality in respect to anxiety traits and their present anxiety level. They were then asked to describe the adequacy of preparation for the experience of having a child in PICU and the level of stress the PICU environment created. The personal background of anxiety traits and anxiety level were matched when comparing adequacy of preparation and the types of admission. The PSS:PICU was used to assess the intensive care unit environment. It was discovered that nurses frequently omit the pre-admission tour and that only little over half of the parents receiving it found it helpful. This study did not, however, discuss which specific aspects of the tour were helpful or not helpful (Miles & Carter, 1985). Chappel (1988)

however, used the Spielberger State-Trait Anxiety Inventory to determine if orientation to the NICU decreased maternal anxiety at the mothers' first visit with their infants in NICU. Three groups of 10 mothers were sequentially studied. The control group received no orientation, the bedside group received information at the bedside and the tour group received information at the bedside and tour of NICU. There was a significant difference in anxiety scores between the control and tour group. Orientation and a tour appeared to decrease the mothers' anxiety. These findings are similar to Montgomery (1989) who evaluated an orientation program and found that all parents receiving a tour reported it as helpful.

Communication as a nursing intervention has received the most attention by researchers. Staff introducing themselves, encouraging questions, and honestly answering them, has been reported by parents as being extremely beneficial (Fiser, Stanford & Dormamn, 1984; Miles & Carter, 1985). Other interventions reported as beneficial in the Miles and Carter (1985) study were: being able to phone at anytime, being treated with genuine concern and caring, and having explanation about tubes and equipment. Fathers have reported that the nurses directing all teaching towards the mothers is not helpful (Novak, 1990).

While studies have examined the effects of self-help groups for parents of children admitted to NICU no study was found that directly related self-help groups to the parents' cognitive appraisal of stress and coping. Minde, Shosenberg, Marton, Thompson, Ripley & Burns (1980) found self-help groups for mothers in a premature nursery increased maternal visiting. This could be said to result from decreased stress, but Dillard and colleagues (1980) found mothers exposed to a parent program showed no difference in responses regarding positive attachment than those not exposed to the program. There has been no similar study on fathers.

Being allowed to stay with their infant in the NICU as much as possible, even during painful procedures has been reported by parents as a helpful intervention (Harper et al., 1976; Miles & Carter, 1985). Parents have reported that being allowed to participate in their acutely ill child's care is helpful (Bakare, 1977; Curley, 1988; Miles & Carter, 1985). It has also been found that parents want to assume more care giving than nurses will allow and that this resistance of nurses to allow parents to participate in their child's care may increase the parent's stress. (Bakare, 1977; Curley, 1988).

The giving of knowledgeable professional and technical care is important to the parents of these infants. This is evidenced by parents reporting that providing immediate attention to changes in their child's condition helped them cope (Miles & Carter, 1985).

Curley's (1988) study is the only study to evaluate a specific group of interactions designed to reduce parental stress. The PSS:PICU tool was used to study the effects of the nursing participation model of care (NMPMC) on the perceived environmental stress of parents in the PICU. The NMPMC was a program of nursing interventions that "facilitated the development of parental trust (in themselves, their children and the PICU staff), providing information about the children's illness, and the PICU environment, anticipatory guidance, preparation for admission, providing physical and psychosocial resources, and assisting in reestablishment of a parental relationship through visitation and participation in care." (p. 683). The thirty-three participating parents were divided into two groups. The experimental group participated in the NMPMC. No specific planned program was followed in caring for the parents in the control group. Control group parents received care as "normally" delivered by the unit.

The PSS:PICU was administered to both groups within 24 - 48 hours of PICU admission, every 48 hours thereafter and 24 hours after PICU discharge. The findings indicate that the program significantly decreased perceived parental stressors in the PICU.

In summary, while many articles have been written suggesting that paternal visiting, preparation for the NICU environment, direct communication with the father and parent groups all constitute quality care for fathers of infants in NICU, little of this advice has been empirically substantiated. As well, the studies that have been conducted have findings that need to be validated. Communicating with parents by genuinely caring, introducing care givers, encouraging questions, honestly responding to questions, and directing teaching towards both fathers and mothers is indicated as beneficial. Allowing and encouraging fathers open access to their infant including being present during painful procedures and participating in care giving, appears essential for coping from the parents' perspective.

Summary of Chapter Three

Individual stressors have been identified for parents of infants admitted to the NICU. How fathers appraise these stressors has not been studied widely. No studies have examined the relationship between the stressors of personal/family, situational and environmental factors. The coping strategies fathers employ, the coping strategies they

find useful and the nursing interventions they perceive to be resources of coping has been largely unexplored. No study has examined stressors, coping styles and helpful nursing interventions with the same population. If the unique experience of fathers is to be understood then further research and validation is critical. If the fathers of infants admitted to NICU are to adapt successfully to the stressors found with the experience and progress to positive relationships and parenting of their child, nurses must understand the experience from the unique perspective of these men. Quality family centred care is fundamentally rooted in this research.

CHAPTER IV: METHODOLOGY

Design

A retrospective, descriptive design was chosen for the proposed study for several reasons. First, descriptive studies are used "when various characteristics of a particular population are either unknown or partially known" (Brink and Wood, 1989, p. 124). There is minimal available research regarding what fathers of infants in NICU find stressful. Research discussing how fathers cope with stressors, and which nursing interventions best assist them to cope is extremely limited. Second, this design allowed the researcher to test and build upon the theory proposed by Miles and Carter (1983). Theory building and testing is a function of descriptive studies (Brink and Wood, 1989). A descriptive design using questionnaires is appropriate when the purpose of the investigation is to describe the characteristics or experience of a population. The subjects in this study completed questionnaires to obtain self-report data about stressors, coping mechanisms and staff interventions that they found helpful. The subjects also completed questions to determine selected demographic and biophysical data. All data were collected within 120 hours (five days) of the infant's live

transfer from the NICU area. This was close enough in time to the actual experience to allow subjects to recall their NICU experience. By completing the questionnaires after transfer, the fear that fathers might have of honest responses jeopardizing their infant's care was minimized.

Study Setting

Subjects were obtained from the St. Boniface General Hospital Neonatal Intensive Care Unit and the Health Sciences Centre Neonatal Intensive Care Unit. The St. Boniface Neonatal Intensive Care Unit is unit has a 10 bed capacity and admits approximately 250-323 infants each year. Fifteen percent of these infants are born elsewhere and transferred to St. Boniface General Hospital. Birth weights range from approximately 500 grams to 4500 grams. Length of stay ranges from 1 day to 201 days. The neonatal death rate for the NICU (0 - 28 days) is 14-18 per year (St. Boniface 1989 Obstetrical Annual Report and St. Boniface 1992 Obstetrical Annual Report). When functioning at full capacity, 12 registered nurses (RN) are employed per shift. The unit also is staffed by four full time and two part-time Neonatologists, a Clinical Nurse Specialist, a Nurse Educator and a Head Nurse. Parents are welcomed 24 hours per day while siblings and grandparents may visit once per week.

The Health Sciences Centre NICU has an 18 bed capacity and admits approximately 450-540 infants each year. Birth weights of these infants range from approximately 500 grams to 4500 grams. Length of stay ranges from 3 days to over 200 days. The unit employs 13 registered nurses (RN) per shift. The unit is also staffed by 6 full time and 3 part-time neonatologists, a Nurse Educator and a Head Nurse. (Health Sciences Centre NICU - Unit Statistics 1993).

Some flexibility in visiting policies is allowed in both units when situations necessitate it. Primary nursing is encouraged, particularly for the chronically ill infant. Family meetings and team conferences are planned as warranted by the situation.

Sample and Sample Selection

The population of interest to the study was all fathers who have infants admitted to the St. Boniface General Hospital Neonatal Intensive Care Unit and Health Sciences Center Neonatal Intensive Care Unit for a period of greater than 3 days and not more than 60 days. The limitation of admission for greater than 3 days was employed because the father must have had enough experience in the setting to have encountered the stressors. The limitation of not greater than 60 days was applied since infants who are admitted to the unit for longer than this period often develop chronic problems. The father's adaptation to the chronic nature and extremely prolonged hospitalization of their infants could very well create an

experience different from other fathers. The final sample consisted of 21 subjects from the St. Boniface Neonatal Intensive Care Unit and 4 from the Health Science Center Neonatal Intensive Care Unit. In total, 25 fathers participated.

All fathers who met the inclusion criteria were eligible for the study. The inclusion criteria were as follows: A father of an infant admitted to NICU for greater than 3 days and not more than 60 days who:

1. agreed to participate
2. was able to read and write English
3. had an infant who was born equal to or less than 36 weeks gestation
4. had an infant with no major congenital anomalies
6. had an infant transferred live from the NICU at or prior to 60 days of life.

Instrumentation

Instruments were selected to operationalize the three concepts in the conceptual framework that were being studied: sources of stress, methods of coping, and coping resources (specifically staff interventions). The instruments chosen were the Parental Stress Scale: Neonatal Intensive Care Unit (PSS:NICU), and the Parental Coping Scale: PICU (PCS:PICU).

1. Parental Stress Scale: Neonatal Intensive Care Unit (PSS:NICU)

Content Validity

The Parental Stress Scale: Neonatal Intensive Care Unit (PSS:PICU) was adapted from the Parental Stress Scale: Pediatric ICU (PSS:NICU) and both instruments were developed by Carter and Miles (1982, 1984, 1989). The PSS:PICU was developed to measure parental perceptions of stressors arising from seven dimensions of the pediatric intensive care unit (PICU): sights and sounds, child's appearance, child's behaviour and emotions, procedures, staff communication, anomie (behaviours and attitudes of professional staff) and parental role alteration. The tool is based on the Miles and Carter's (1983) framework and the areas were developed from informal interviews. The PSS:PICU was tested at five midwestern pediatric intensive care units in order to establish reliability, internal consistency, and validity. Test-retest reliability for the seven dimensions ranged from 0.58 to 0.99. Alpha coefficients for the seven dimensions ranged from 0.72 to 0.99. The alpha coefficient for the total instrument was 0.95 (Carter, Miles, Buford & Hassanein, 1985).

The Parental Stress Scale: Neonatal Intensive Care Unit (PSS:NICU) is an adaptation of the PSS:PICU. The PSS:NICU measures parental perceptions arising from four dimensions of the NICU environment: sights and sounds, staff communication, parental role alterations and infant's appearance and

behaviours. The PSS:NICU was adapted to reflect the stressors associated with the appearance of a premature infant, changes in the parental role that occur for parents of sick infants, and the routines and environment of the NICU. Criteria for these alterations were developed from observations, expert review, and a pilot test, and repeated research studies. The instrument was suitable for those with a reading level of grade eight or above (Miles, 1989). To assess face validity and suitability for a Canadian population the PSS:NICU (see appendix C) with additions was given by this researcher to a small group of three fathers prior to its use in this study. The length of time to complete the questionnaire was determined to be twenty minutes and no items were found to be problematic. This researcher also had the tool reviewed by a group of Canadian nurse experts which included a clinical nurse specialist with 10 years experience in NICU, a head nurse with 11 years experience in NICU, two staff nurses with over five years experience in NICU, and a nurse researcher with 10 years experience in NICU.

Construct Validity

To assess the construct validity Pearson correlation coefficients were computed between each of the NICU parental stress scale dimension scores and State Anxiety scores. "Correlation coefficients were significant at $p = .01$ for three of the four dimensions: Sights and Sounds ($R = .48$); Infant Behaviour and Appearance ($R = .43$); and Parental Role

Alteration (R = .43). There was no significant correlation between the dimension, Staff Relationships, and State Anxiety. The correlation between the total NICU:PSS score and State Anxiety was significant at P = .01 (R = .42)" (Miles and Funk, 1991, p.2).

The "occurrence" and "level of stress" are part of each response, since each item asks the parent whether or not he has experienced a particular situation and if so to rate the degree to which it was stressful. Because each question has two parts, two possible methods of scoring degree of stress are available: "1) the level of stress produced when a situation occurs - in which case only those who have had the experience receive a score on the item (Metric 1: Stress Occurrence Level) and 2) (Metric 2: Overall Stress Level) the overall level of stress experienced in the area in question, in which case all individuals receive a score on the item, with those not having the experience receiving a 1, indicating no stress was experienced" (Miles and Funk, 1991 p.4). The purpose of this study was to describe stressors occurring to fathers when their infant were admitted to NICU; therefore, upon the advise of a statistical consultant, a modified version of metric 2 was used in data analysis. In this

modified version those fathers not experiencing the item received a score of 0. Scoring the items in this manner allowed the researcher to distinguish fathers who did not experience the item versus those who found the item not at all stressful.

Structural Analyses

Principal components analysis with varimax rotation was used by Miles and Funk in the development of this instrument. Six factors with eigne values greater than one were identified and collectively accounted for 59.3% of the variance in the observations. A skree test was then performed and indicated that three rather than six factors should be retained. The scales identified were: 1) infant behaviour and appearance, 2) parental role alterations and 3) sights and sounds (Miles & Funk, 1991). Miles, Funk, and Carlson (1993) report almost identical findings in their further testing of this tool.

Miles and Funk (1991) identified two items, one on the infant behaviour and appearance scale (baby's size) and one on the parental role alteration scale (having felt helpless about how to help your baby) which did not quite meet a .40 loading criterion for retention. The items were retained as they loaded most strongly on their respective a priori scale and their loadings were .39 and .38 respectively. The subscale Staff Relationships was eliminated from analysis, but retained on the tool. The elimination from analysis resulted from few

parents reporting stress from the items in this category. This category was retained as the authors felt that the parents might have been reluctant to express stress in this area while their children were still being cared for by the individuals being rated (Miles and Funk, 1991).

Internal Consistency

Pearson correlations were calculated between the PSS:NICU items and the subscale scores, stress occurrence level and overall stress level. The correlation coefficients ranged from .57 to .91 and from .37 to .77 respectively. The higher correlations for the first scaling procedure are largely a result of few items on some subscales (such as staff relationships) being experienced by the subjects. Cronbach's alpha coefficients were calculated for each subscale and for the total instrument. All alphas were above a .70 criterion (Miles & Funk, 1991).

Scoring

The instrument can be scored three ways. The scores produced will be different as they provide information about different aspects of the NICU experience for parents (Miles & Funk, 1991).

The methods of scoring are:

(1) the percentage of parents experiencing each item or dimension in the unit under study;

(2) Metric 1: Stress Occurrence Level -- which is the level of stress produced when a situation occurs. In this case only those who reported having the experience receive a score on the item; those reporting they did not experience an item are coded as missing.

(3) Metric 2: Overall Stress Level -- which is the overall stress from the environment. In this case parents who did not report having an experience on an item were scored as a 1, indicating no stress was experienced (Miles & Funk, 1991 p. 2).

For the purposes of this study a modified version of metric 2 was used. Parents who did not report having an experience on an item were scored as 0. By scoring these fathers as 0 rather than 1 it was possible to distinguish fathers not experiencing the item from those finding the item not at all stressful.

Additions

The PSS:NICU examines the stressors found in the NICU environment only. No tool has been developed that examines the stressors found in personal/family factors and situational factors that relate to the experience of having an infant in an NICU. Since no tool is available to examine these areas, the related literature was examined and additional questions to be added to the PSS:NICU were developed. The headings for the additions are Personal Family (PF), and Situational (S).

The questions were derived from the review of the literature, personal experience, and have been reviewed by experts in the area. Open ended questions were added at the end of the personal family and situational sections to determine any other stressors in these areas. See appendix C.

The additions PF and S, follow the same format as the PSS:NICU. The questions within the PF heading were derived to elicit information about the personal/family stressors of having an infant in NICU. The questions within the S heading were derived to elicit information regarding the situational stressors of having an infant admitted to NICU. An open ended question was designed to obtain any other stressors that were not identified by the instrument. None of the additions read above a grade nine level, using the Flesch-Kincaid formula and the readability index is equivalent to the overall reading grade level for the document (Right Writer, user manual, 1988).

The scoring for PF and S was the same as for the PSS:NICU. Content analysis was used to analyze the open ended questions.

Parental Coping Scale: Pediatric Intensive Care Unit (PCS:PICU)

This instrument was developed by Miles & Carter for their 1985 study. The original tool was developed for use with parents whose children were admitted to a PICU. The original tool has been altered for the purposes of this study to

reflect the NICU environment. These changes consisted of changing child to infant and PICU to NICU. See appendix D. The instrument has two major parts - staff behaviours and parental coping responses, plus a demographic section. The instrument has two possible responses for each item in the section on staff behaviours. One response, on a three point scale determines the frequency that the behaviour was provided; the other is a 5 point scale indicating the perceived helpfulness of the behaviour. Open ended questions asking the respondents about the most helpful behaviours complete this section. The second section examines the coping responses of the subjects. This is a five point scale rating possible coping responses from not helpful to extremely helpful with a response available for not used. Open ended questions requiring the subject to list coping responses that were most helpful complete this section.

Content Validity

A review of the literature, an earlier unpublished pilot study by Miles and Carter, and the pilot phase of the Miles and Carter (1985) study determined the content for the Staff Behaviours section of this questionnaire. In their pilot study 46 parents of children admitted to a pediatric ICU were asked to identify staff behaviours and interventions that they perceived as helping them to cope with the situation. Content

analysis of these responses revealed 19 potential helpful staff behaviours. Four overall parental needs were identified: assistance with the parenting role, provision of adequate information, provision of emotional support, and good physical/technical care (Miles & Carter, 1985).

Two previously unpublished pilot studies by Miles, a review of the coping literature, and an examination of other coping instruments formed the basis for the parental coping section of the questionnaire. The questions were formulated in reference to a short-term experience with a very sick child. Coping responses associated with chronically ill children were not included (Miles & Carter, 1985).

The framework used in the development and categorization of this tool was devised by Moos and Billings (1982). A list separating the coping responses into appraisal, problem and emotion focused is outlined in appendix E. The open ended questions at the end of each section provide additional support for the adequacy of the content in this instrument. Further studies need to be completed to establish the validity and reliability of this questionnaire. The results of the Miles and Carter (1985) study were a beginning step in this process. Unfortunately, the Miles and Carter (1985) study used a small sample of parents (n=21 mothers; n=15 fathers), thus further testing of reliability and validity is essential. The data from this study are to be utilized in a larger data pool for this purpose.

Additions

The demographic form that accompanies the PCS:PICU was developed for use with parents who have a child admitted to a PICU not NICU. The questions are, as a result, not always applicable to the parent who participated in this study. To alleviate confusion, the demographic form accompanying the PCS:PICU was exchanged for a demographic form developed by the researcher. See appendix D. Only data that may have a relationship to the areas being investigated were included in the form. These areas were:

1) reason for infant's admission to NICU
2) gestational age of infant at birth (in weeks)
3) length of time since transfer out of NICU (in hours)
4) number of days spent in NICU
5) expected/unexpected admission
6) perceived seriousness of infant's condition on admission
7) perceived seriousness of infant's condition now
8) previous experience with infant in NICU
9) hours the parent spent at the hospital
10) number of support people available to the parent
11) explanations given prior to infant's admission to NICU
12) received tour of NICU prior to infant's admission
13) perceived adequacy of explanations regarding NICU

14) age of father

15) education of father

16) marital status

17) length of relationship with mother

18) number of other children living with this family unit

19) ethnic background

20) family income

As with the PSS:NICU with additions, the revised PCS:PICU was assessed for face validity by giving the questionnaire to a small group of three fathers prior to its use. The length of time to complete the questionnaire was determined to be 20 minutes and no items were found to be problematic. The tool was also reviewed by the same group of nurse experts, which included a clinical nurse specialist with 10 years experience in NICU, a head nurse with 11 years experience in NICU, 2 staff nurses with over 5 years experience in NICU and a nurse researcher with 10 years experience in NICU.

Procedure for Data Collection

Prior to data collection, ethical approval was received from the Ethical Review Committee of the Faculty of Nursing, University of Manitoba, and approval for access to human subjects was received from the St. Boniface General Hospital, Winnipeg, MB, and Health Sciences Centre, Winnipeg, MB.

The nurse working in the NICU confirmed with eligible fathers the father's willingness to have his name and

telephone number released to the researcher and gave him a written explanation of the study. (Appendix G). The researcher or her assistant received the names of fathers who met the inclusion criteria and were willing to participate, from the charge nurse of the NICU on a biweekly basis. The researcher or her assistant contacted the father either by phone or in the NICU. This allowed the potential participant to receive a verbal explanation of the study, and to have any questions answered. The protocol for this contact appears in appendix F. Once verbal consent was obtained an appointment for data collection was arranged. The subjects were advised that the researcher or her assistant would contact them just prior to or shortly after their infant's transfer from the NICU to arrange a convenient time for them to complete the questionnaires. The disclaimer was signed before data was collected. (See appendix G).

The questionnaires were administered to the fathers in two ways. The first method was for the researcher to administer the questionnaire to the father in a location convenient to the subject and researcher. If data were collected in the hospital, a setting not visible to unit staff was utilized. The researcher collected the completed forms from the fathers immediately following their completion. The researcher was available to answer questions during the administration of the questionnaires. When the research assistant gave the questionnaire to the father, the father

completed the questionnaire at his convenience and returned it to the researcher in a stamped, self-addressed envelope. The instruments were administered in the following order: PSS:NICU, PCS:PICU. After collecting the completed forms the subjects were thanked for their participation. This method of data collection was chosen for the following reasons:

1) The research project did not increase the work load of the bedside nurse.
2) By only the researcher or her assistant approaching the subjects the researcher was assured that subjects received consistent and accurate information.
3) By the researcher administering or having the fathers mail their responses to the researcher it was impossible for others to see and identify individual father's responses.
4) The guaranteed anonymity to fathers, which was crucial for encouraging honest responses, was more easily obtainable with this data collection method.

Protection of the Rights of Human Subjects

Subject participation was voluntary and a disclaimer was signed by the subjects following a written and verbal explanation of the study. Risks to participants were minimal as no deleterious conditions were imposed upon them. Subjects

were given a copy of the disclaimer explaining the qualifications of the investigator, the purpose of the study, its relevance and expectation of participants. Participants were advised that they had the right to withdraw from the study at any time, without compromise to their child's care.

At no time were the subjects' names associated with the questionnaires. All instruments were number coded so that cross tabulation between instruments was possible. Responses and signed consents were kept in a locked file box. The investigator, her thesis committee, a statistician and a research colleague, Professor M. Miles (the developer of the PSS:NICU and PCS:PICU) of Chapel Hill, North Carolina are the only people having access to the data collected. Subjects were informed that data would not be reported in a manner that would identify individual respondents. A summary of the study results was made available to participants who requested it.

Data Analysis

Descriptive statistics and tables are used to organize and summarize raw data in a manner that is meaningful and easily communicated to others. Tables were utilized to display the data. For all analyses, the level of significance was set at the .05 alpha level. To analyze the data regarding stressors in the NICU the following steps were followed. The first step was to calculate the frequency of parents who rated each item on the PSS:NICU as stressful or not stressful. The second step was to determine the degree to which each item was

considered stressful. Means for each item were calculated. Items were then ranked according to degree of stress. There are six categories of stress on this instrument (sights and sounds, appearances, staff behaviour and communication, parental role alteration, personal/family and situational). The mean percentage score was determined for each category. To determine significant differences between categories, ratings for each category were compared. The data was tested for normality and the categories were not normally distributed. The Wilcoxon sign rank was, therefore, utilized to test differences between categories of stress. Similarly, the findings of the PCS:PICU were analyzed using frequencies and means. Comparisons between the categories of fathers receiving and not receiving the interventions were examined by using the non-parametric Wilcoxon rank sum test. Comparisons between the coping categories (appraisal-focused, problem-focused, and emotion-focused) were also conducted. The data were tested for normality, by using the Shapiro-Wilk Test for normality, and the categories were not normally distributed. A nonparametric approach, the Wilcoxon sign rank, was utilized, therefore, to test for the differences between coping categories.

Content analysis was utilized to code and categorize theopen ended data from each questionnaire. Common themes were identified as they emerged. Similarities and differences in the data were examined. Stressors and coping responses not included on the instruments were generated through the use of content analysis.

Data for this study were collected over a nine month period from April, 1992 to November, 1992. The instruments were scored by the investigator and all data were coded and transferred to a computer file. The statistical package SAS® was used to calculate results. SAS is a registered trademark of SAS Institute, Inc. Cary, NC.

CHAPTER V: RESULTS

The purpose of this study was to explore fathers' experiences of having infants admitted to NICU.

This chapter will describe the results of data analyses. Following a discussion of the sample characteristics, each research question will be addressed in relationship to the instrument scores. The qualitative data will then be analyzed.

Sample Characteristics

During the nine month period of data collection, 31 fathers who met the study criteria were approached on an individual basis by either the investigator or her assistant and asked to become involved in the study. Twenty-six fathers agreed to participate in the study. One of the 26 fathers who agreed to participate did not appear at the agreed upon time for participation. (The father later came to the NICU in an intoxicated state). Data was not collected from this father. Twenty five fathers participated in the study. Other reasons for not participating were: i) too stressed to deal with anything more; ii) spouse called to say that her husband would not be participating with no reason given; iii) spouse called to say her husband would not be participating due to the fact that he was too intoxicated and iv) the eligible father was under 18 years of age. All participating subjects were given the questionnaires. After completing the questionnaires the

subjects either gave them immediately to the investigator or mailed them to the investigator in a self-addressed, stamped envelope. The following section presents a description of the 25 fathers who met the sample criteria and who completed self report questionnaires.

Demographic Data

The age of the subjects ranged from 23 to 50 years with the mean age being 31.6 years (S.D.= 7.09). The majority of subjects had received some post-secondary education (n=19) with a mean educational level of 15.12 years and a range of 10 to 25 years (S.D.=3.54). The subjects with the most education were those who had or were working towards a PhD (n=5). Eleven subjects reported a family income of more than 50,000 per year and 5 subjects reported a total family income of $40,000 to $50,000 per year. Two of the subjects with a total family income of less than $20,000 per year were presently full time students at the university level. The majority of subjects were caucasian (n=20).

All of the fathers were either married or living common-law with the mother of the infant admitted to NICU. They had known the mother for more than 2 years with the range of years knowing the mother being 2 to 40 years. The subjects reported having a range of 0 to 20 support people with a mean of 6 support people. Thirteen subjects had at least one other child living at home with them.

Only one of the fathers had experienced having another infant admitted to NICU prior to this infant's NICU admission. The majority of fathers (n=16) reported not being told what NICU was like prior to admission but 20 reported having a tour of NICU prior to their infant's admission. Thirteen of the subjects reported the explanation they received prior to their infant's admission to NICU as satisfactory. The number of hours spent visiting the NICU per day ranged from 1 to 14 hours with a mean of 3.7 hours per day.

The gestational age of the infants at birth ranged from 25 to 36 weeks with a mean of 31.56 weeks. The admission of the infant to NICU was equally distributed between expected and unexpected (13 subjects expected the admission and 12 subjects did not expect the admission). The majority of fathers (n=13) perceived their infants' condition upon admission to NICU as very serious or extremely serious. Upon discharge from the NICU only 4 fathers perceived their infant' condition to be very serious or extremely serious. The number of days the infant spent in NICU ranged from 3 - 56 days with a mean of 19.8 days (S.D.=16.67). The number of hours from discharge to completing the questionnaire ranged from 5 to 312 hours with the mean of 93.2 hours.

In summary, the typical subject in this study was a white, married, well educated upper-middle class father with a premature infant admitted to NICU.

Instrument Scores

Research questions one and two were addressed by using the Parental Stress Scale: Neonatal Intensive Care Unit (PSS:NICU) with revisions. Research questions three and four were addressed by using the staff behaviours section of the PCS:PICU. Research questions five and six were addressed by using the parental coping response section of the PCS:PICU. This chapter will discuss the instrument scores and will provide an overview of the data obtained in response to the research questions. In the tables that follow the number following the abbreviation refers to the number of the question within that category. The PSS:NICU (refer to appendix E) examined stressors in the categories of sights and sounds (SS); baby looks, behaviours, or treatments (ap); staff behaviours and communication (BC); relationship (R); personal/family (PF); and situational (SI). The PCS:PICU (refer to appendix E) examined staff behaviours and parental coping responses, and provided demographic data.

Research Question 1

What factors do fathers of an infant admitted to NICU identify as stressful?

The items that the fathers identified as stressful were obtained via descriptive statistics. Bruises, cuts or incisions on my baby, the sudden noises of monitor alarms, tubes and equipment on or near my baby , trying to juggle work, home responsibilities and visiting the hospital, being

uncertain about my infant's condition, and difficulty concentrating at work were stressors frequently identified by the fathers as stressful. Appendix H presents the frequencies of fathers reporting each item as a stressor. The frequency represents the number of fathers of the 25 that identified that item as a stressor. The items **not** frequently identified by the fathers as stressful were: my baby crying for long period; clapping on baby's chest for chest drainage; staff explaining things too fast; reliving previous hospital experiences; staff acting as if they did not understand my baby's behaviour or special needs. The item never identified as stressful was feeling that I am less of a man since my baby is sick. Table 1 presents the items that fathers identified the most often as stressful and the items that fathers identified the least often as stressful. Table 2 presents the frequency of items being identified as stressful within the categories of sights and sounds, appearances, staff behaviour and communication, relationship, personal/family, and situational. The frequencies for Appendix H and Tables 1 and 2 were calculated using the number of fathers who responded two or higher on each individual item.

Research Question 2

What factors do fathers of infants admitted to NICU cognitively appraise as most stressful to least stressful?

The factors fathers with infants admitted to NICU appraise as most to least stressful were obtained. Means

TABLE 1

ITEMS IDENTIFIED BY FATHERS THE MOST OFTEN AS STRESSFUL
Indicated by a Score of 2 or More

RANK	ITEM		FREQUENCY
1	AP2	Bruises, cuts or incisions on my baby	24
2	SS3	The sudden noises of monitor alarms	23
4.5	AP1	Tubes and equipment on or near my baby	22
4.5	PF2	Trying to juggle work, home, responsibilities and visiting the hospital	22
4.5	S11	Being uncertain about my infant's condition	22
4.5	PF4	Difficulty concentrating at work	22
7	R8	Feeling helpless and unable to protect my baby from pain and painful procedures	21
8	AP4	My baby's unusual or abnormal breathing patterns	20
11	AP9	Having a machine (respirator) breathe for my baby	19
11	AP11	My baby being fed by an intravenous line or tube	19
11	R1	Being separated from my baby	19
11	R11	Feeling helpless about how to help my baby during this time	19
11	R4	Not being able to hold my baby when I want	19

TABLE 1

(CONTINUED)
ITEMS IDENTIFIED BY FATHERS THE LEAST OFTEN AS STRESSFUL
Indicated by a Score of 2 or More

RANK	ITEM		FREQUENCY
1.5	BC6	Too many different people...talking to me	6
1.5	BC10	Staff acting as if they did not want parents around	6
1.5	SI2	Being unsure that the staff will respond to my child's alarm	6
6	AP13	My baby crying for long period	5
6	AP19	Clapping on baby's chest for chest drainage	5
6	BC1	Staff explaining things too fast	5
6	BC7	Difficulty in getting information	5
6	PF9	Reliving previous hospital experiences	5
9	BC11	Staff acting as if they did not understand my baby's behaviour or special needs	3
10	PF7	Feeling that I am less of a man since my baby is sick	0

TABLE 2

NUMBER OF FATHERS RATING ITEM AS STRESSFUL BY CATEGORY Indicated by a Score of 2 or More

RANK	ITEM		FREQUENCY
SIGHTS AND SOUNDS			
1	SS3	The sudden noises of monitor alarms	23
2	SS2	The constant noises of monitors and equipment	17
3	SS1	The presence of monitors and equipment	14
4	SS4	The other sick babies in the room	13
5	SS5	The large number of people working	8
APPEARANCES			
1	AP2	Bruises, cuts or incisions on my baby	24
2	AP1	Tubes and euqipment on or near my baby	22
3	AP4	My baby's unusual or abnormal breathing patterns	20
4.5	AP9	Having a machine breathe for my baby	19
4.5	AP11	My baby being fed by an intravenous line or tube	19
6.5	AP3	The unusual color or my baby...	18
6.5	AP7	The small size of my baby	18
8	AP10	Seeing needles and tubes put in my baby	17

TABLE 2

(CONTINUED)
NUMBER OF FATHERS RATING ITEM AS STRESSFUL BY CATEGORY
Indicated by a Score of 2 or More

RANK	ITEM		FREQUENCY
APPEARANCES			
9.5	AP12	When my baby seems to be in pain	16
9.5	AP17	Jerky or restless movements of my baby	16
11	AP16	The limp or weak appearance of my baby	15
12	AP6	Seeing my baby stop breathing	13
13	AP18	My baby not being able to cry like other babies	11
14	AP15	When my baby looked sad	9
15	AP5	Seeing my baby suddenly change color	8
16	AP14	When my baby looked afraid	8
17	AP8	The wrinkled appearance of my baby	7
18.5	AP13	My baby crying for long period	5
18.5	AP19	Clapping on baby's chest for chest drainage	5
STAFF BEHAVIOUR AND COMMUNICATION			
1.5	BC5	Not talking to me enough	10
1.5	BC4	Not telling me enough about tests and treatments...	10

TABLE 2

(CONTINUED)
NUMBER OF FATHERS RATING ITEM AS STRESSFUL BY CATEGORY
Indicated by a Score of 2 or More

RANK	ITEM		FREQUENCY
STAFF BEHAVIOUR AND COMMUNICATION			
3	BC3	Telling me different things about my baby's condition	9
5	BC2	Staff using words I don't understand	8
5	BC9	Staff looking worried about my baby	8
5	BC8	Not feeling sure that I will be called about changes in my baby's condition	8
7.5	BC6	Too many different people talking to me	6
7.5	BC10	Staff acting as if they don't want parents around	6
9.5	BC1	Staff explaining things too fast	5
9.5	BC7	Difficulty in getting information or help when I visit or telephone the unit	5
11	BC11	Staff acting as if they did not understand my baby's behaviour or special needs	3

TABLE 2

(CONTINUED)
NUMBER OF FATHERS RATING ITEM AS STRESSFUL BY CATEGORY
Indicated by a Score of 2 or More

RANK	ITEM		FREQUENCY
		RELATIONSHIP	
1	R8	Feeling helpless and unable to protect my baby from pain and painful procedures	21
2.5	R1	Being separated from my baby	19
2.5	R11	Feeling helpless about how to help my baby during this time	19
4	R4	Not being able to hold my baby when I want	19
5	R7	Not being able to share my baby with other family members	17
6	R9	Being afraid of touching or holding my baby	14
7	R2	Not feeding my baby myself	13
8	R6	Not being alone with my baby	11
9.5	R10	Feeling staff was closer to my baby than I am	10
9.5	R3	Not being able to care for my baby myself	10
11	R5	Sometimes forgetting what my baby looks like	7

TABLE 2

(CONTINUED)
NUMBER OF FATHERS RATING ITEM AS STRESSFUL BY CATEGORY
Indicated by a Score of 2 or More

RANK	ITEM		FREQUENCY
PERSONAL/FAMILY			
1.5	PF2	Trying to juggle work, home responsibilities and visiting the hospital	22
1.5	PF4	Difficulty concentrating at work	22
3	PF5	Coping with housework	18
4	PF3	Dealing with responses of other family members	17
5	PF8	Worrying about finances	16
6	PF6	Assuming an increased role in family functioning	15
7	PF1	Having to take time off work	11
8	PF10	Difficulty relating or talking to my wife/girlfriend	9
9	PF9	Reliving previous hospital experience	5
10	PF7	Feeling that I am less of a man since my baby is sick	0
SITUATIONAL			
1	S11	Being uncertain about my infant's condition	22
2	S13	Feeling powerless	17
3	S12	Being unsure that the staff will respond quickly to my child's alarms	6

were calculated for each item and were ranked from highest to lowest score. The stressors that fathers identified as the most stressful were: trying to juggle work, home responsibilities and visiting the hospital; being uncertain about my infant's condition; feeling helpless and unable to protect my baby from pain and painful procedures; the sudden noises of monitor alarms; bruises, cuts or incisions on my baby; and difficulty concentrating at work. Appendix I presents the identified stressors in order of intensity (from most to least stressful). The items rated as the most frequently encountered stressors included all ten items rated as most stressful. Items that were identified as being not stressful were: difficulty in getting information when I visit or telephone; clapping on my baby's chest for chest drainage; my baby crying for long periods; staff acting as if they did not understand my baby's behaviour or special needs; feeling that I am less of a man since my baby is sick. Table 3 presents the items identified as the most stressful and the items identified as the least Stressful. Table 4 presents the mean scores grouped and ranked within the categories of sights and sounds, appearances, staff behaviour and communication, relationship, personal/family and situational.

TABLE 3

MOST STRESSFUL ITEMS

RANK	ITEM		(MEAN) INTENSITY SCORE (OUT OF 5)
1	PF2	Trying to juggle work, home responsibilities and visiting the hospital	3.40
2.5	SI1	Being uncertain about my infant's condition	3.16
2.5	R8	Feeling helpless and unable to protect my baby from pain and painful procedures	3.16
4	SS3	The sudden noises of monitor alarms	3.13
5	AP2	Bruises, cuts, or incisions on my baby	3.08
6	PF4	Difficulty concentrating at work	3.04
7	AP1	Tubes and equipment on or near my baby	2.96
8	R11	Feeling helpless abut how to help my baby during this time	2.88
9	R1	Being separated from my baby	2.84
10	AP4	My baby's unusual or abnormal breathing patterns	2.80

LEAST STRESSFUL ITEMS

1.5	SI2	Being unsure that the staff will respond quickly to my child's alarms	1.04
1.5	BC1	Staff explaining things too fast	1.04
3	R5	Sometimes forgetting what my baby looks like	1.00

TABLE 3

(CONTINUED)

LEAST STRESSFUL ITEMS

RANK	ITEM		(MEAN) INTENSITY SCORE (OUT OF 5)
4	BC10	Staff acting as if they did not want parents around	0.92
5	PF9	Reliving previous hospital experience	0.88
7	BC7	Difficulty in getting information or help when I visit or telephone unit	0.80
7	AP19	Clapping on baby's chest for chest drainage	0.80
7	AP13	My baby crying for long period	0.80
9	BC11	Staff acting as if they did not understand my baby's behaviour or special needs	0.60
10	PF7	Feeling that I am less of a man since my baby is sick	0.36

TABLE 4

MEAN STRESS SCORES WITHIN CATEGORY

RANK	ITEM		MEAN (OUT OF 5)	STANDARD DEVIATION
SIGHTS AND SOUNDS				
1	SS3	The sudden noises of monitor alarms	3.13	1.03
2	SS2	The constant noises of monitors and equipment	2.33	1.17
3	SS4	The other sick babies in the room	2.00	1.32
4	SS1	The presence of monitors and equipment	1.96	1.08
5	SS5	The large number of people working in the unit	1.29	0.69
APPEARANCES				
1	AP2	Bruises, custs or incisions on my baby	3.08	1.32
2	AP1	Tubes and equipment on or near my baby	2.96	1.30
3	AP4	My baby's unusual or abnormal breathing patterns	2.80	1.53
4	AP10	Seeing needles and tubes put in my baby	2.72	1.77
5	AP9	Having a machine (respirator) breathe for my baby	2.64	1.74
6	AP11	My baby being fed by an intravenous line or tube	2.48	1.23
7	AP3	The unusual color of my baby	2.36	1.22
8.5	AP7	The small size of my baby	2.32	0.85
8.5	AP12	When my baby seemed to be in pain	2.32	1.95

TABLE 4

(CONTINUED)
MEAN STRESS SCORES WITHIN CATEGORY

RANK	ITEM		MEAN (OUT OF 5)	STANDARD DEVIATION
APPEARANCES				
10	AP16	The limb and weak appearance of my baby	2.04	1.62
11	AP17	Jerky or restless movements of my baby	1.96	1.31
12	AP6	Seeing my baby stop breathing	1.88	1.96
13	AP18	My baby not being able to cry like other babies	1.56	1.58
14	AP15	When my baby looked sad	1.36	1.70
15	AP14	When my baby looked afraid	1.20	1.78
16	AP8	The wrinkled appearance of my baby	1.16	1.58
17	AP5	Seeing my baby suddenly change color	1.12	1.74
18.5	AP13	My baby crying for long period	0.80	1.41
18.5	AP19	Clapping on my baby's chest for chest drainage	0.80	1.32
STAFF BEHAVIOUR AND COMMUNICATION				
1	BC4	Not telling me enough about tests and treatments done to my baby	1.72	1.62
2.5	BC2	Staff using words I don't understand	1.44	1.42
2.5	BC8	Not feeling sure that I will be called about changes in my baby's condition	1.44	1.36

TABLE 4

(CONTINUED)
MEAN STRESS SCORES WITHIN CATEGORY

RANK	ITEM		MEAN (OUT OF 5)	STANDARD DEVIATION
STAFF BEHAVIOUR AND COMMUNCIATION				
4	BC9	Staff looking worried about my baby	1.40	1.55
5	BC5	Not talking to me enough	1.36	1.52
6	BC3	Telling me different (conflicting) things about my baby's condition	1.28	1.57
7	BC6	Too many different people talking to me	1.24	1.13
8	BC1	Staff explaining things too fast	1.04	1.27
9	BC10	Staff acting as if they don't want parents around	0.92	1.55
10	BC7	Difficulty in getting information or help when I visit or telephone the unit	0.80	1.15
11	BC11	Staff acting as if they did not understand my baby's behavior or special needs	0.60	0.82
RELATIONSHIP				
1	R8	Feeling helpless and unable to protect my baby from pain and painful procedures	3.16	1.55
2	R11	Feeling helpless about how to help my baby during this time	2.88	1.62

TABLE 4

(CONTINUED)
MEAN STRESS SCORES WITHIN CATEGORY

RANK	ITEM		MEAN (OUT OF 5)	STANDARD DEVIATION
RELATIONSHIP				
3	R1	Being separated from my baby	2.84	1.86
4	R4	Not being able to hold my baby	2.56	1.50
5	R7	Not being able to share my baby with other family members	2.28	1.40
6	R9	Being afraid of touching or holding my baby	1.92	1.58
7	R2	Not feeding my baby myself	1.72	1.40
8.5	R3	Not being able to care for my baby myself	1.60	1.47
8.5	R10	Feeling staff was closer to my baby than I am	1.60	1.71
10	R6	Not being alone with my baby	1.44	1.19
11	R5	Sometimes forgetting what my baby looks like	1.00	1.38
PERSONAL/FAMILY				
1	PF2	Trying to juggle work, home responsibilities and visiting the hospital	3.40	1.55
2	PF4	Difficulty concentrating at work	3.04	1.51
3	PF5	Coping with housework	2.32	1.41

TABLE 4

(CONTINUED)
MEAN STRESS SCORES WITHIN CATEGORY

RANK	ITEM		MEAN (OUT OF 5)	STANDARD DEVIATION
PERSONAL/FAMILY				
4	PF3	Dealing with responses of other family members	2.20	1.38
5	PF1	Haivng to take time off work	2.04	1.81
6	PF8	Worrying abut finances	2.00	1.55
7	PF6	Assuming an increased role in family functioning	1.84	1.25
8	PF10	Difficulty relating or talking to my wife or girlfriend	1.24	1.33
9	PF9	Reliving previous hospital experiences	0.88	1.20
10	PF7	Feeling that I am less of a man since my baby is sick	0.36	0.49
SITUATIONAL				
1	S11	Being uncertain about my infant's condition	3.16	1.40
2	S13	Feeling powerless	2.72	1.70
3	S12	Being unsure that the staff will respond quickly to my child's alarms	1.04	0.79

Mean scores were calculated for each category (sights and sounds, appearances, staff behaviour and communication, relationship, personal/family and situational) and were analyzed to determine possible significant differences between categories. There were a different number of items in each category (sights and sounds, appearances, staff behavour and communication, relationship, personal/family and situational) which makes comparisons between categories difficult. To make comparisons possible responses were changed to percentages. For example, the category of SS contained 5 items. Each of which could be rated to 0 to 5 producing a summative score with a range 0 to 25. This score was translated into a percentage, which would range from 0 to 100. This allows us to say that SI was the most stressful category with a mean percentage of 46.1. The data were tested for normality by using the Shapiro Wilk Test for normality, and the categories were not normally distributed, therefore, the Wilcoxon sign rank, a non-parametric test, was utilized to test differences between groups. Table 5 presents this data. No significant difference was found between situational, sights and sounds, parental role alteration appearances and personal/family stress. All of these categories were (SI, SS, R, AP, PF) were, however, more stressful than staff behaviour and communication.

TABLE 5

DIFFERENCES BETWEEN STRESS RATING BY CATEGORY USING WILCOXON SIGN RANK TEST

	SS	AP	BC	R	PF	SI
MEAN PERCENTAGE	42.8333333	39.5368421	24.0727273	41.81818	38.6400000	46.1333333
S.O.	15.7581357	15.6103288	16.0515698	19.5613044	15.1846414	20.2685672

DIFFERENCE VARIABLE	SIGN RANK	PROB P<	MEAN DIFFERENCE
DSS=SI-SS	24.5	.4995	4.388889
DSR=SS-R	-1	.9779	2.0757
DRA=R-AP	28.5	.4544	2.28134
DAP=AP-PF	-3.5	.9272	.89684
DPB=PF-BC	117.5	.0005	14.56727

Urgency indicators were utilized to examine the percentage of fathers scoring items as highly stressful (indicated by a score of 4 or 5). These scores were ranked from highest to lowest and are presented in Table 6. The item ranked by more than half the fathers as highly stressful was trying to juggle work, home responsibilities and visiting the hospital.

Research Question 3

What staff interventions do fathers receive most frequently?

Frequency of staff interventions that fathers reported receiving the most frequently were analyzed. Frequencies of fathers reporting receiving each item were calculated by using the number of fathers who responded that the intervention was minimally or frequently provided (score of 2 or 3 for the individual item). These calculations are listed from highest to lowest and displayed in Table 7. The majority of fathers reported receiving the interventions of: having explanations about the equipment and tubes on or near my infant; being treated with genuine concern and caring; being provided with hope; having all questions answered honestly; and being allowed to stay with my infant as much as possible.

TABLE 6

NUMBER OF FATHERS RATING ITEM AS HIGHLY STRESSFUL BY URGENCY INDICATORS OF SCORING 4 OR 5

RANK	ITEM		FREQUENCY
1	PF2	Trying to juggle work, home, responsibilities and visiting the hospital	15
3	SI1	Being uncertain about my infant's condition	11
3	R8	Feeling helpless and unable to protect my baby from pain and painful procedures	11
3	AP10	Seeing needles and tubes put in my baby	11
6.5	R11	Feeling helpless about how to help my baby during this time	10
6.5	S13	Feeling powerless	10
6.5	R1	Being separated from my baby	10
6.5	AP12	When my baby seemed to be in pain	10
10.5	SS3	The sudden noises of monitor alarms	9
10.5	PF4	Difficulty concentrating at work	9
10.5	AP4	My baby's unusual or abnormal breathing patterns	9
10.5	AP2	Bruises, cuts or incisions on my baby	9
14.5	SS5	The large number of people working in the unit	8
14.5	R4	Not being able to hold my baby when I want	8
14.5	AP6	Seeing my baby stop breathing	8
17.5	PF1	Having a machine (respirator) breathe for my baby	8
17.5	AP1	Having to take time off work	7

TABLE 6

(CONTINUED)

NUMBER OF FATHERS RATING ITEM AS HIGHLY STRESSFUL
BY URGENCY INDICATORS OF SCORING 4 OR 5

RANK	ITEM		FREQUENCY
19.5	SI2	Being unsure that the staff will respond quickly to my child's alarms	7
19.5	PF5	Coping with housework	6
24	PF3	Dealing with the responses of other family members	6
24	AP11	My baby being fed by an intravenous line or tube	5
24	R7	Not being able to share my baby with other family members	5
24	R10	Feeling staff was closer to my baby than I am	5
24	AP16	The limp and weak appearance of my baby	5
24	AP14	When my baby looked afraid	5
24	AP3	The unusual color of my baby	5
32.5	SS2	The constant noises of monitors and equipment	4
32.5	R9	Being afraid of touching or holding my baby	4
32.5	AP17	Jerky or restless movements of my baby	4
32.5	AP5	Seeing my baby suddenly change color...	4
32.5	BC9	Staff looking worried about my baby	4
32.5	PF8	Worrying about finances	4
32.5	R3	Not being able to care for my baby myself	4
32.5	AP15	When my baby looked sad	4

TABLE 6

(CONTINUED)

NUMBER OF FATHERS RATING ITEM AS HIGHLY STRESSFUL BY URGENCY INDICATORS OF SCORING 4 OR 5

RANK	ITEM		FREQUENCY
32.5	AP18	My baby not being able to cry like other babies	4
32.5	AP7	The small size of my baby	4
40.5	SS4	The other sick babies in the room	3
40.5	BC11	Staff acting as if they did not understand my baby's behavior or special needs	3
40.5	PF6	Assuming an increased role in family functioning	3
40.5	BC3	Telling me different (conflicting) things about my baby's condition	3
40.5	BC4	Not telling me enough about tests and treatments being done on my baby	3
40.5	AP13	My baby crying for long period	2
48	SS1	The presence of monitors and alarms	2
48	BC8	Not being sure that I will be called about changes in my baby's condition	2
48	R2	Not feeding my baby myself	2
48	R6	Not being along with my baby	2
48	BC2	Staff using words I don't understand	2
48	R5	Sometimes forgetting what my baby looks like	2
48	AP19	Clapping on my baby's chest for chest drainage	2
48	BC5	Not talking to me enough	2

TABLE 6

(CONTINUED)

NUMBER OF FATHERS RATING ITEM AS HIGHLY STRESSFUL BY URGENCY INDICATORS OF SCORING 4 OR 5

RANK	ITEM		FREQUENCY
55	BC6	Too many different people...talking to me	1
55	BC10	Staff acting as if they did not want parents around	1
55	BC1	Staff explaining things too fast	1
55	PF9	Reliving previous hospital experiences	1
55	BC7	Difficulty in getting information or help when I telephone or visit the unit	1
58.5	PF7	Feeling that I am less of a man since my baby is sick	0
58.5	AP8	The wrinkled appearance of my baby	0

TABLE 7

NUMBER OF FATHERS REPORTING RECEIVING STAFF INTERVENTIONS INDICATED BY A RESPONSE OF 2 OR 3

RANK	ITEM		FREQUENCY
2	CF17	Having explanations about the equipment and tubes on or near my infant	24
2	CF9	Being treated with genuine concern and caring	24
2	CF6	Being provided with hope	24
6	CF10	Having all questions answered honestly	23
6	CF18	Knowing the names of the staff caring for my infant	23
6	CF11	Being able to telephone the unit at anytime	23
6	CF5	Being given complete and understandable explanations about everything being done to our infant	23
6	CF13	Providing immediate attention to any changes in my infant's physical condition	23
11	CF1	Being allowed to stay with my infant as much as possible	22
11	CF19	Having the opportunity to share my feelings, worries or concerns with staff	22
11	CF7	Preparing me for what to expect on a day-to-day basis	22
11	CF12	Helping me to understand my infant's behaviour and emotional reactions while in NICU	22
11	CF14	Being kept informed about the progress of my infant	22
14.5	CF3	Having the staff sensitive to my infant's needs	21

TABLE 7
(CONTINUED)
NUMBER OF FATHERS REPORTING RECEIVING STAFF INTERVENTIONS INDICATED BY A RESPONSE OF 2 OR 3

RANK	ITEM		FREQUENCY
14.5	CF16	Allowing other family members to visit my infant	21
16.5	CF4	Helping me to do some things for my infant myself	20
16.5	CF15	Providing privacy for me while visiting my infant	19
18	CF8	Being allowed to stay with my infant during painful or frightening procedures	16
19	CF2	Being oriented to the NICU environment through a tour with explanations about the various sights and sounds	14

Research Question 4

What staff interventions do fathers perceive as resources for coping?

The staff interventions fathers perceived as helpful were analyzed. Mean scores of the helpfulness ratings were derived and were ranked from highest to lowest. The interventions that fathers identified as helpful were: being able to telephone the unit at any time; being allowed to stay with my infant as much as possible; having explanations about the equipment and tubes on or near my infant; providing immediate attention to any changes in my infant's physical condition; and being provided with hope. The helpfulness ratings of the interventions are presented in Table 8. Table 9 presents the mean helpfulness ratings for fathers not receiving the intervention. In other words, fathers not receiving the intervention indicated by a response of one for frequency of the intervention being provided. These fathers were asked to rate how helpful they believe it would have been to receive the intervention. This information is ranked from highest to lowest score. The mean helpfulness ratings of fathers receiving the intervention (responding two or three for frequency of the intervention being provided) are ranked from highest to lowest score and presented in Table 10.

TABLE 8

MEAN HELPFULNESS RATINGS CATEGORY

RANK	ITEM		MEAN (OUT OF 5)	STANDARD DEVIATION
1	CI11	Being able to telephone the unit at any time	4.56	0.82
2	CI1	Being allowed to stay with my infant as much as possible	4.54	0.59
3	CI17	Having explanations about the equipment and tubes on or near my infant	4.52	0.59
4	CI13	Providing immediate attention to any changes in my infant's physical condition	4.50	0.72
5	CI6	Being provided with hope	4.48	0.72
6	CI3	Having the staff sensitive to my infant's needs	4.46	0.66
7	CI10	Having all my questions answered honestly	4.42	0.83
8	CI9	Being treated with genuine concern and caring	4.32	0.90
9	CI14	Being kept informed about the progress of my infant	4.28	0.68
10	C15	Being given complete and understandable explanations about everything being done to our infant	4.24	0.97
11	CI2	Being oriented to the NICU environment through a tour...	4.05	1.15

TABLE 8

(CONTINUED)

MEAN HELPFULNESS RATINGS CATEGORY

RANK	ITEM		MEAN (OUT OF 5)	STANDARD DEVIATION
12.5	CI12	Helping me to understand my infant's behaviour and emotional reactions while in NICU	3.96	1.02
12.5	CI4	Helping me to do some things for my infant myself	3.83	1.17
14	CI19	Having the opportunity to share my feelings, worries or concerns with the staff	3.83	1.07
15	CI7	Preparing me for what to expect on a day-to-day basis	3.76	1.30
16.5	CI18	Knowing the names of staff caring for my infant	3.64	1.15
16.5	CI8	Being allowed to stay with my infant during painful or frightening procedures	3.64	1.18
18	CI16	Allowing other family members to visit my infant	3.50	1.14
19	CI15	Providing privacy for me while visiting my infant	3.40	1.32

TABLE 9

MEAN HELPFULNESS RATINGS OF FATHERS NOT RECEIVING THE INTERVENTION

RANK	N	ITEM		MEAN (OUT OF 5)	STANDARD DEVIATION
1.5	1	CI11	Being able to telephone the unit at anytime	5.00	-
1.5	1	CI3	Having the staff sensitive to my infant's needs	5.00	-
3.5	1	CI17	Having explanations about the equipment and tubes on or near my infant	4.00	-
3.5	1	CI14	Being kept informed about the progress of my infant	4.00	0
5	6	CI2	Being oriented to the NICU environment through a tour...	3.50	1.52
6	6	CI8	Being allowed to stay with my infant during painful or frightening procedures	3.33	1.51
7	1	CI19	Having the opportunity to shae my feelings, worries or concerns with staff	3.00	-
8	3	CI16	Allowing other family members to visit my infant	2.67	1.53
9.5	4	CI15	Providing privacy for me while visiting my infant	2.5	1.91
9.5	2	CI12	Helping me to understand my behavioural and emotional reactions while in NICU	2.5	2.12
11.5	1	CI13	Providing immediate attention to any changes in my infant's condition	2.0	-
11.5	3	CI4	Helping me to do some things for my infant myself...	2.0	1.00
14	1	CI18	Knowing the names of the staff caring for my infant	1.0	-
14	1	C15	Being given complete and understandable explanations about everything beong done to our infant	1.0	-
14	2	C17	Preparing me for what to expect on a day-to-day basis	1.0	-

TABLE 10

MEAN HELPFULNESS RATINGS OF FATHERS RECEIVING THE INTERVENTION

RANK	ITEM		MEAN (OUT OF 5)	STANDARD DEVIATION
1	CI11	Being able to telephone the unit at anytime	4.56	0.82
2	CI1	Being allowed to stay with my infant as much as possible	4.54	0.60
3	CI17	Having explanations about the equiment and tubes on or near my infant	4.52	0.59
4	CI13	Providing immediate attention to any changes in my infant's physical condition	4.50	0.72
5	CI6	Being provided with hope	4.48	0.77
6	CI3	Having the staff sensitive to my infant's needs	4.46	0.66
7	CI10	Having all my questions answered honestly	4.42	0.84
8	C19	Being treated with genuine concern and caring	4.32	0.90
9	CI14	Being kept informed about the progress of my infant	4.28	0.68
10	CI5	Being given complete and understandable explanations about everthing being done to our infant	4.24	0.96
11	CI2	Being oriented to NICU through a tour...	4.05	1.15
12.5	CI12	Helping me to understand my infant's behavioural and emotional reactions while in NICU	3.96	1.02
12.5	C14	Helping me to do some things for my infant myself	3.96	1.19
14	CI19	Having the opportunity to share my feelings, worries, or concerns with the staff	3.83	1.07
15	CI7	Preparing me for what to expect on a day-to-day basis	3.76	1.30
16.5	CI8	Being allowed to stay with my infant as much as possible	3.64	1.18

TABLE 10

(CONTINUED)

MEAN HELPFULNESS RATINGS OF FATHERS RECEIVING THE INTERVENTION

RANK	ITEM		MEAN (OUT OF 5)	STANDARD DEVIATION
16.5	CI18	Knowing the names of the staff caring for my infant	3.64	1.15
18	CI16	Allowing other family members to visit my infant	3.50	1.14
19	CI15	Providing privacy for me while visiting my infant	3.40	1.32

The non-parametric Wilcoxon rank sum test was used, to determine if there were significant differences in the helpfulness ratings between fathers who received the intervention versus those that did not. Two items demonstrated a significant difference. These were:

item - CF4 - Helping me to do some things for my infant myself.

item - CF7 - Preparing me for what to expect on a day-to day basis.

In both situations the fathers receiving the item identified it as significantly more helpful than those fathers who did not receive the item.

Urgency indicators were utilized to determine the frequency of fathers identifying an item as very helpful (indicated by a score of 4 or 5). The frequencies were ranked from highest to lowest and are presented in Table 11. The interventions rated by over ninety percent of the fathers as very helpful were: "having explanations about the equipment and tubes on or near my infant"; "providing immediate attention to any changes in my infant's physical condition"; "being allowed to stay with my infant as much as possible"; "being provided with hope"; "being given complete and understandable explanations about everything being done to our infant"; and "having the staff sensitive to my infant's needs".

TABLE 11

NUMBER OF FATHERS RATING ITEM AS VERY HELPFUL BY URGENCY INDICATORS OF SCORING 4 OR 5

RANK	ITEM		FREQUENCY
1	CI17	Having explanations about the equipment and tubes on or near my infant	24
3.5	CI13	Providing immediate attention to any changes in my infant's physical condition	23
3.5	CI1	Being allowed to stay with my infant as much as possible	23
3.5	CI6	Being provided with hope	23
3.5	CI5	Being given complete and understandbale explanations about everything being done to our infant	23
7	CI3	Having the staff sensitive to my infant's needs	22
7	CI14	Being kept informed about the progress of my infant	22
7	CI11	Being able to telephone the unit at any time	22
9	CI10	Having all questions answered honestly	21
10	CI9	Being treated with genuine concern and caring	20
11	CI4	Helping me to do some things for my infant myself	19
12	CI12	Helping me to understand my infant's behavioral and emotional reactions while in NICU	19
13	CI19	Having the opportunity to share my feelings with staff	16
14	CI7	Preparing me for what to expect on a day-to-day basis	17
15	CI18	Knowing the names of staff caring for my infant	15
16	CI2	Being oriented to the NICU environment through a tour with explanations about the various sights and sounds	13
17	CI16	Allowing other family members to visit my infant	14

TABLE 11

(CONTINUED)

NUMBER OF FATHERS RATING ITEM AS VERY HELPFUL BY URGENCY INDICATORS OF SCORING 4 OR 5

RANK	ITEM		FREQUENCY
18	CI15	Providing privacy for me while visiting my infant	12
19	CI8	Being allowed to stay with my infant during painful or frightening procedures	11

Research Question 5

What coping responses (appraisal-focused, problem-focused and emotion focused coping) do fathers of infants admitted to NICU employ?

The coping responses (appraisal-focused, problem-focused, and emotion-focused) that fathers of infants admitted to NICU employ were obtained. Frequencies of fathers reporting each item that was experienced as a coping response were calculated by using the number of fathers who responded 1 or higher (indicating they used the response) on each individual item. This data was ranked from highest to lowest score and is displayed in Table 12. The coping response items were grouped according to category (i.e. problem-focused, emotion-focused, and appraisal-focused). The frequency of fathers reporting each item as a coping response within these categories is displayed in Table 13. Urgency indicators were utilized to examine the frequency of fathers scoring the item as an extremely helpful coping response (indicated by a score of 4). This data was ranked from highest to lowest and is displayed in Table 14.

TABLE 12

NUMBER OF FATHERS RATING ITEM AS A COPING RESPONSE INDICATE BY A SCORE OF 1 OR MORE

RANK	ITEM		FREQUENCY
1.5	CR14	Being near my infant as much as possible	25
1.5	CR2	Believing that my infant is getting the best care possible	25
4	CR10	Having hope that all would be well	24
4	CR6	Asking questions of the staff about my infant	24
4	CR3	Seeking as much information about the situation as posisble	24
6	CR17	Going home to rest	23
7.5	CR20	Making sure that my infant is getting proper care	22
7.5	CR21	Keeping busy	22
9	CR18	Trying not to let myself get too emotional	20
10	CR11	Sharing my concerns and feelings with staff	19
11	CR4	Trying to understand why this happened to my infant	16
13	CR5	Trying not to think too much about my infant's condition	14
13	CR19	Accepting my infant's illness as fate or God's will	14
13	CR1	Seeking help or comfort from family, friends	14
15.5	CR8	Getting prepared to expect the worst	13
15.5	CR15	Praying	13
17	CR7	Talking with other parents in the waiting room	11
18	CR12	Refusing to believe in my own mind the seriousness of the situation	10
19	CR16	Crying and expressing my feeling with others	9
20	CR13	Drinking	4
21	CR9	Taking drugs	0

TABLE 13

NUMBER OF FATHERS RATING ITEM AS A COPING RESPONSE BY CATEGORY

RANK	ITEM		FREQUENCY
PROBLEM - FOCUSED			
1	CR14	Being near my infant as much as possible	25
2.5	CR3	Seeking as much information about the situation as possible	24
2.5	CR6	Asking questions of the staff about my infant	24
3	CR17	Going home to rest	23
5.5	CR20	Making sure my infant is getting proper care	22
5.5	CR21	Keeping busy	22
7	CR7	Talking with other parents in the waiting room	11
EMOTION - FOCUSED			
1	CR18	Trying not to let myself get too emotional	20
2	CR11	Sharing my concerns and feeling with staff	19
3.5	CR19	Accepting my infant's illness as fate or God's will	14
3.5	CR1	Seeking help or comfort from family, friends or others	14
5.5	CR8	Getting prepared to expect the worst	13
5.5	CR15	Praying	13
7	CR16	Crying and expressing my feelings with others	9
8	CR13	Drinking	4
9	CR9	Taking drugs to calm me	0
APPRAISAL - FOCUSED			
1	CR2	Believing that my infant is getting the best care possible	25
2	CR10	Having hope that all would be well	24
3	CR4	Trying to understand why this happened to my infant	16

TABLE 13

(CONTINUED)

NUMBER OF FATHERS RATING ITEM AS A COPING RESPONSE BY CATEGORY

RANK	ITEM		FREQUENCY
		APPRAISAL - FOCUSED	
4	CR5	Trying not to think too much about my infant's problem	14
5	CR12	Refusing to believe in my own mind the seriousness of the situation	10

TABLE 14

NUMBER OF FATHERS RATING ITEM AS AN EXTREMELY HELPFUL COPING RESPONSE BY URGENCY INDICATOR OF SCORING 4

RANK	ITEM		FREQUENCY
1	CR2	Believing that my infant is getting the best care possible	22
2	CR6	Asking questions of the staff about my infant	16
3.5	CR20	Making sure that my infant is getting proper care	15
3.5	CR14	Being near my infant as much as possible	15
5	CR10	Having hope that all would be well	13
6	CR3	Seeking as much information about the situation as possible	12
7	CR17	Going home to rest	10
8	CR11	Sharing my concerns and feelings with staff	7
10	CR7	Talking with other parents in the waiting room	6
10	CR21	Keeping busy	6
10	CR15	Praying	6
12	CR19	Accepting my infant's illness as fate or God's will	5
14	CR4	Trying to understand why this happened to my infant	3
14	CR12	Refusing to believe in my own mind the seriousness of the situation	3
14	CR1	Seeking help or comfort from my family, friends or others from my community	3
17	CR8	Getting prepared to expect the worst	2
17	CR16	Crying and expressing my feelings with others	2
19	CR18	Trying not to let myself get too emotional	1
20.5	CR13	Drinking	0
20.5	CR9	Taking drugs to calm me	0

Research Question 6

What coping responses do fathers of infants admitted to NICU cognitively appraise as helpful?

Using Appendix E, questions were categorized as either appraisal-focused, problem-focused or emotion-focused coping. The coping responses that the subjects appraise as helpful were obtained. Mean scores were calculated for each item. These calculations were ranked from highest to lowest score and are displayed in Table 15.

Mean scores were calculated for each category (appraisal-focused, problem-focused and emotion-focused), and were analyzed to determine possible significant differences between categories. There were a different number of items in each category (appraisal-focused or AF, problem-focused or PRF, and emotion-focused or EF) which makes comparisons between categories difficult. To make comparisons possible responses were changed to percentages. For example, the cateogry of EF contained 9 items. Each of which could be rated from 0 to 5 producing a summative score with a range 0 to 45. This score was translated into a percentage, which would range from 0 to 100. This allows us to say that EF coping was used the least often with a mean percentage of 25.69. The data were tested for normality and the categories

TABLE 15

MEAN COPING RESPONSE RATINGS

RANK	ITEM		MEAN (OUT OF 5)	STANDARD DEVIATION
1	CR2	Believing that my infant is getting the best care possible	3.88	0.33
2	CR6	Asking questions of the staff about my infant	3.44	0.96
3	CR14	Being near my infant as much as possible	3.28	0.98
4	CR20	Making sure my infant is getting proper care	3.24	1.30
5	CR10	Having hope that all would be well	3.16	1.07
6	CR3	Seeking as much information about the situation as possible	3.00	1.19
7	CR17	Going home to rest	2.84	1.28
8	CR21	Keeping busy	2.52	1.29
9	CR11	Sharing my concerns and feeling with staff	2.24	1.51
10	CR18	Trying not to let myself get too emotional	1.96	1.27
11	CR1	Seeking help or comfort from family, friends or others from my community	1.80	1.66
12	CR4	Trying to understand why this happened to my infant	1.75	1.42
13	CR15	Praying	1.56	1.42
14	CR19	Accepting my infant's illness as fate or as God's will	1.44	1.61
15	CR7	Talking with other parents in the waiting room	1.40	1.76
16	CR8	Getting prepared to expect the worst	1.38	1.46
17	CR5	Trying not to think too much about my infant's problem	1.32	1.38
18	CR16	Crying and expressing my feelings with others	1.04	1.51

TABLE 15

(CONTINUED)

MEAN COPING RESPONSE RATINGS

RANK	ITEM		MEAN (OUT OF 5)	STANDARD DEVIATION
19	CR12	Refusing to believe in my own mind the seriousness of the situation	0.96	1.46
20	CR13	Drinking	0.20	0.50
21	CR9	Taking drugs to calm me	0	0

were found not to be normally distributed. The Wilcoxon sign rank was, therefore, utilized to test for the differences between groups. Table 16 demonstrates a significant difference between all three categories of coping. Problem-focused coping was used the most often and emotion-focused the least often. Table 17 presents the use of appraisal, emotion, and problem-focused coping pictorially. The graph shows all fathers found emotion focused coping the least helpful.

Stressfulness of the Overall NICU Experience

The subjects were asked to rank the experience of having an infant admitted to NICU from not at all stressful to extremely stressful. Twenty-two fathers rated the overall experience as stressful with 9 rating the experience as very or extremely stressful. Three rated the experience as not at all stressful. The responses ranged from 1 (not at all stressful) to 5 (extremely stressful), with the mean stress score for the experience being 2.92 with a standard deviation (SD) of 1.26.

Both Spearman and Kendall correlational tests were used to determine if the overall stress rating was related to the following demographic data: gestational age of infant at birth; number of days infant in NICU; number of hours between infant discharge from NICU and the father's completion of the questionnaires; expected or unexpected admissions; number of

TABLE 16

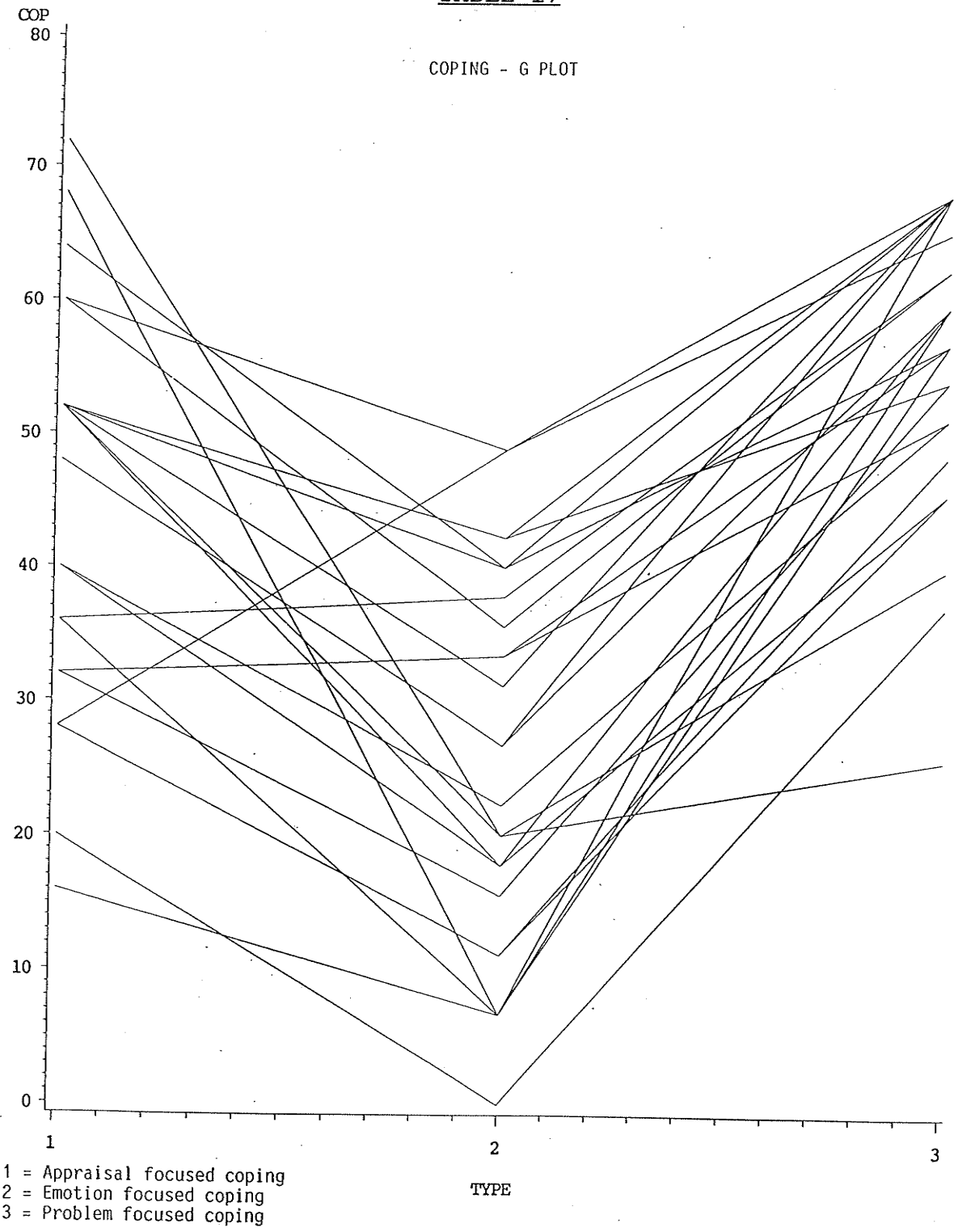
DIFFERENCES BETWEEN MEAN INTENSITY SCORE RATING BY CATEGORY

USING WILCOXIN SIGN RANK TEST

	AF (N=25)	PRF (N=25)	EF (N=25)
MEAN PERCENTAGE	44.0000000	56.3428571	25.6888889
S.D.	15.0111070	11.2340590	14.2880421

DIFFERENCE VARIABLE	SIGN RANK	PROB P <	MEAN DIFFERENCE
DAE=AF-EF	142.5	0.0001	18.3111
DAP=AF-PRF	-109	0.0016	-12.342

TABLE 17


COP
80
70
60
50
40
30
20
10
0
COPING - G PLOT
1
2
3
TYPE
1 = Appraisal focused coping
2 = Emotion focused coping
3 = Problem focused coping

hours per day father spent visiting infant; number of support people. There was no statistically significant correlation between the fathers' overall stress rating and these demographic variables.

Qualitative Data

In order to enrich descriptions of the father's experience of having an infant admitted to NICU, open ended questions were included in the questionnaire. Wilson (1985) describes qualitative analysis as "the nonnumerical organization and interpretation of data in order to discover patterns, themes, forms, and qualities found in field notes, interview transcripts, open-ended questionnaires,.... and the like" (p. 397). For each interview question and notation made in the investigator's notes (taken while talking to the subjects), various categories were devised based on the themes that emerged from the data.

Qualitative Question 1

The first question asked "Was there anything else that was stressful for you during the time that your baby has been in the neonatal intensive care unit?" The following categories of stress were identified by subjects:

Sights and Sounds

The stressor identified in this category was not enough room between cribs/babies to walk around (n=1).

Staff Behaviours and Communication:

Stressors identified in this category were "not getting information fast enough and everything was so vague" (n=1), and one individual discussed how the relationships between staff members created stress for him. He wrote:

> Tension between nurses was very stressful, scheduling meal times often caused this tension. The resulting stress on the nurse often meant procedures were performed in a hurried fashion. I must also emphasize that clearly no errors were observed, however, the departure at times from the usual professional manner was a source of considerable stress for me. I must also emphasize that most of the nurses did not have a problem with interdepartmental conflict i.e. they got along well together, some nurses, a few, however, were difficult, with each other more than parents. An effort to further harmonize the nurses work environment would improve both the nurses and parents experience.

Relationship and Parental Role

Stressors in this category were well described by one father. He said: "not being able to hold her when or as often as I wanted was hard. The other women in her (my wife's) room were permitted to hold their babiies all the

time. It was hard to watch them. Alternate bedding should have been available for our situation", another father wrote the "first time I held my new baby" and another father wrote "I didn't want her to be hurt....".

Personal Family

Stressors identified in this category were difficulty with work (n=2) and difficulty juggling work, family responsibilities and visiting the hospital (n=2). One father wrote "-the stress of family life, taking care of an 18 month old".

Situational Stress

Stressors identified in this category were of three types. "Difficulty trusting the staff" was identified by two fathers. One father wrote "it is difficult to trust someone you don't know to be taking care of my child"; another wrote "a line was improperly placed and she had some swelling - it is hard to trust after mistakes are made." Concern for the baby and concern for the wife were also identified by fathers as areas of stress.

In summary, the other stressors identified by fathers could be grouped according to the categories already present within the questionnaire. Trust as a specific stressor and concern for the partner's physical and emotional well-being relate to situational stress but were not addressed in the questionnaire. The information gained by asking this first question "humanized and enlightened" the quantitative data.

The stress of these fathers is made more poignant by their words. Most of the "other stressors" identified were already incorporated in the tool. This served to demonstrate that the tool used was effective and comprehensive with the exceptions of trust and concern. Situational stressors were described the most often in this question (n=5), followed by the category of personal/family (n=4), then relationship with child and parental role (n=3), staff behaviours and communication (n=2) and sights and sounds (n=1).

Qualitative Question 2

The second question asked "what was the single most stressful aspect of this experience?" The following categories of "most stressful experience" were developed:

Appearances

Concerns in this category focused on procedures (n=4). One father wrote "watching as they inserted an IV into my son's hand"; and another wrote "it bothered me that they had to keep poking my baby even though I knew it was for her own good." Another father emphasized what he had written by discussing the event in great detail with the investigator. He said,

> They take all these x-rays, not just on my baby but all the other babies - and the babies are so close together. Well anyway they take all these x-rays and all the nurses race away - like the x-rays can do some terrible damage. What bothers me is my baby can't run away from all those

x-rays. If it can hurt the nurses it must be doing something to him too - nobody will talk to me about it. When he's my age will he get cancer or be sterile or something?

Relationship with child and parental role

Two fathers described items within this category as the single most stressful event. One father wrote "having to leave our baby at the hospital when my wife went home" and the other father wrote "being unable to care for my child in a normal way."

Personal/Family

Stressors identified in this category were difficulty concentrating at work (n=2), and difficulty juggling home, work and visiting the hospital (n=3).

Situational Stress

Stressors identified within this category can be grouped within three terms or themes. These themes are uncertainty (n=7), helplessness (n=5) and trust (n=1).

i) uncertainty: Some of the comments in response to the question of the single most stressful aspect were: "not being sure when he could come home", "the first visit of the day. Phone calls did not reassure me, although the staff tried very hard over the phone, without facial

expressions as a co-factor I was uncomfortable. I was tremendously impressed with the staff support and willingness to communicate about the babies condition.", "not knowing if the baby would be okay".

ii) helplessness and guilt: Comments within this theme reflected the fathers' frustration with not knowing how to protect the infant or change the situation. One father verbalized to the investigator, "it is like I've passed my bad luck or something on to my kid and there is nothing I can do to help or stop it."

iii) trust: The comment written was " placing the trust in the people who are taking care of your child when you do not know these people."

In summary, the "most stressful experiences" identified by the fathers could be categorized according to those already present in the questionnaire. However, there were specific stressors mentioned that were not part of the questionnaire but these newly identified stressors were easily accommodated by the existing categories. These stressors were: 1) the issue of x-rays; 2) having to leave our baby at the hospital when my wife went home; 3) not being sure when the baby could come home; 4) placing trust in people you do not know. Situational stressors were described the most often as the most stressful followed by personal/family, appearances, and relationship. Hence, the qualitative data substantiates the quantitative data which found situation, personal/family and

appearances all more stressful than the relationship category. The specific experiences described the most often as "the most stressful experience" were those involving uncertainty. Once again the quantitative and qualitative data are similar as the item "being uncertain about my infant's condition" was rated as the second most stressful item. The most stressful item in the quantitative data was "trying to juggle work, home responsibilities and visiting the hospital".

Qualitative Question 3

The third question asked "List the three staff behaviours which you found most helpful." The following categories of "most helpful behaviours" were developed:

Giving Information

Several fathers expressed that the most helpful behaviour was when staff willingly gave information (n=16).

Friendliness and Compassion of Staff

Repeatedly, friendliness and compassion were listed as the most helpful behaviours (n=16). Comments included: "compassion and letting me talk about concerns", "concern for my wife and myself", "helpful," "taking time just to talk", "genuine caring".

Accessibility

Staff being easily accessible was identified as one of the three most helpful staff behaviours (n=8). One father wrote "nurses were always ready to come when I called".

Other staff behaviours that were listed as the most helpful were professional knowledge and skill (n=7) and increasing the father's relationship/interaction with his child (n=7).

In summary, the three most helpful staff behaviours identified by these fathers were those involving: 1) giving information; 2) friendliness and compassion; and 3) accessibility. While all of the items in the first section of the PCS:PICU could be grouped within these categories the qualitative data enriches the numerical data by its depth of emotion. In hearing these fathers describe the extent to which they appreciate receiving information promptly, warmth and compassion and the readiness of the nurses to interact with them one begins to realize just how important these interventions are.

Qualitative Question 4

The fourth question asked "Were there other staff behaviours which have not been listed that you would like to mention as helpful to you?" The following categories of most helpful behaviours were:

Friendliness and Compassion of Staff

Five fathers (n=5) described this category as a helpful behaviour. One father wrote:

> one incident in particular I would like to mention. During visiting hours one day, our nurse, M., came tearing into our room with an excited look on her face

and told us that our baby was awake (eyes open). This was on day 4 of our baby's life, and was the first time we got to see her beautiful eyes. M. [the nurse] didn't have to come and find us, but she did. It is this type of staff behaviour that made our stay and visits more bearable and enjoyable.

Giving of Information

Four fathers (n=4) identified this category as another helpful staff behaviour. Written comments included "receiving a phone call for a quick update on baby's health and on any new developments.", "being made aware right after baby born that I could see him as much and as long as I wanted", "sharing with us how well other babies are doing with the latest technology." One father commented how he would have appreciated more information. He wrote "it would have been helpful if they were to tell me bad news as soon as it happened."

In summary the other staff behaviours found helpful were: 1) friendliness and compassion; and 2) giving information. The information gained by this question was available within the quantitative data. The descriptions, however, reiterate in a dramatic manner how intensely important the staff behaviours of friendliness and compassion and information giving are.

Qualitative Question 5

The fifth question asked "List the three responses that were most helpful to you:" The following categories of "most helpful" responses were developed.

Problem Focused Coping

Problem focused coping was identified twenty-four (n=24) times as a most helpful response. The specific responses within this category were " Being near my infant as much as possible" (n=11), "seeking as much information about the situation as possible" (n=7), "keeping busy" (n=3), "talking with other parents in the waiting room" (n=2), and "dealing with the here and now" (n=1).

Appraisal Focused Coping

Appraisal focused coping was identified eighteen (n=18) times as a most helpful response. The specific responses within this category were "believing that my infant is getting the best care possible" (n=10), "having hope that all would be well" (n=4), "refusing to believe in my own mind the seriousness of the situation" (n=3), "seeing daily progress" (n=1).

Emotion Focused Coping

Emotion focused coping was identified six (n=6) times as a most helpful response. The specific responses within this category were "prayer" (n=3), and "seeking help or comfort from family, friends, or others from my community" (n=3).

In summary, the coping responses identified by the fathers could be grouped according to the questionnaire categories of appraisal-focused, problem-focused, and emotion-focused coping. The category of "most helpful coping response" identified most often by the fathers was problem-focused coping. This is consistent with the quantitative data. The two specific coping responses identified the most often were: 1) being near my infant as much as possible (problem-focused category); and 2) believing that my infant is getting the best care possible (appraisal-focused category). All of the coping responses identified were addressed in the questionnaire.

Qualitative Question 6

The sixth question asked "Were there other responses which you found particularly helpful?" The following categories of "other helpful responses" were developed.

Problem Focused Coping

Problem focused coping was identified seven times as another helpful response. The specific responses were "keeping busy" (n=2), getting rest (n= 3) and being near my infant as much as possible (n=2). Comments made in regard to being near the infant were "looking at my baby's picture" and "planning my baby's nursery".

Appraisal Focused Coping

Appraisal focused coping was identified once (n=1) as another helpful response. The particular item identified was "reminiscing with my wife about the whole experience of pregnancy to childbirth".

Emotion Focused Coping

Emotion focused coping was identified three times as another helpful response. The specific responses were "talking with staff about our concerns" (n=2), and "attitudes of friends and loved ones" (n=1).

In summary, the other coping responses identified by the fathers could be grouped according to the categories of appraisal-focused, problem-focused, and emotion-focused coping. The category of "other helpful coping response" identified the most often by the fathers was problem-focused coping. The specific coping response identified the most often was getting enough rest from the problem-focused category. All of the coping responses identified were addressed in the questionnaire.

In general, the fathers' response to being asked to participate was very positive. All fathers took longer than the pilot test fathers because they kept talking about their experience. One father took 2 hours 15 minutes to complete the questionnaires. When this father was asked if he wanted to return to the unit to see his wife and baby without completing the questionnaires he responded "this is the first

time anyone has asked me how I feel. I need to talk and nobody is listening. This is my chance to talk and the world can wait for me." The mean length of time to complete the questionnaires was 1 hour 15 minutes. Several fathers commented that it was great that someone wanted to study how they felt about the experience - that so often everyone just asked about the mothers. The fathers desired to feel a part of things and their need to feel that people care specifically about them can be summarized by what the investigator overheard when she telephoned one father to arrange a time for him to complete the questionnaire. The father called to his wife," it's that nurse doing the research - are you going to breastfeed the baby at seven tonight?" The wife responds "yes, but I can't talk to her while I'm doing that." Husband "That's okay - she doesn't want to talk to you - for once somebody wants to talk to me..."

Analysis of the qualitative data gathered in this study has personalized the experience of having an infant in the NICU from a father's perspective. The information obtained supported the information received from the PSS:NICU and PCS:PICU and confirmed the comprehensiveness of these tools. The human experience cannot be reduced to numbers. Quantitative data while concise and comprehensive is best understood when placed with a contextual framework.

Summary

This investigation combined a quantitative and qualitative approach to studying the six research questions. Descriptive statistics and nonparametric techniques were used to analyze the quantitative data. Interview data were subjected to qualitative analysis. Results of this study indicated that stressors described the most frequently were also the most stress inducing. These frequent and highly stressful experiences were: 1) bruises, cuts or incision on my baby; 2) the sudden noises of monitor alarms; 3) tubes and equipment on or near my baby; 4) trying to juggle work, home responsibilities and visiting the hospital; 5) being uncertain about my infant's condition; 6) difficulty concentrating at work; 7) feeling helpless and unable to protect my baby from pain and painful procedures; 8) my baby's unusual or abnormal breathing patterns; 9) being separated from my baby; and 10) feeling helpless about how to help my baby during this time. The item with the overall highest scores for frequency, mean stress score, and frequency for rating of high stress was "trying to juggle work, home responsibilities and visiting the hospital". This item was the only item that was ranked as extremely stressful by the majority of fathers. No significant difference was found between the stress categories of situational (SI), sights and sounds (SS), personal/family (PF), and infant behaviour and appearances (AP), but all of these categories were found significantly more stressful than

staff behaviours and communication (BC). The difference between staff behaviour and communication and parental role was found to be significant with parental role being the category found least stressful. The qualitative results supported the idea that parental role is the least stressful as it was discussed the least often. Stressors identified in the qualitative data that were not identified in the questionnaire were: 1) trusting people you do not know to take care of your infant; 2) potential harm of x-rays; and 3) having to leave our baby at the hospital when my wife went home. The specific experiences described the most often as "the most stressful experience" were those involving uncertainty regarding the infant's condition and prognosis.

All of the interventions listed in the questionnaire were received by at least 14 of the fathers. All of the listed interventions were reported as moderately to extremely helpful. The helpfulness ratings of fathers receiving the interventions and those not receiving the interventions were only significantly different on two items. These were: 1) helping me to do some things for my infant myself; and 2) preparing me for what to expect on day-to-day basis. In both situations the fathers receiving the item identified it as significantly more helpful than those fathers who did not receive the item.

The interventions that were received by 22 or more of the fathers in descending order were: 1) an explanation about the equipment and tubes on or near my infant; 2) being treated with genuine concern and caring; 3) being provided with hope; 4) having all questions answered honestly; 5) knowing the names of the staff caring for my infant; 6) being able to telephone the unit anytime; 7) being given complete expanations; 8) providing immediate attention to any changes in my infant's physical condition; 9) being able to stay with my infant as much as possible; 10) having the opportunity to share my feelings, worries, or concerns with the staff; 11) preparing me for what to expect on a day-to-day basis; 13) helping me to understand my infant's behavioral and emotions reactions; and 14) being kept informed about the progress of my infant.

The most helpful interventions were 1) being able to telephone the unit at anytime; 2) being allowed to stay with my infant as much as possible; 3) having explanations about the equipment and tubes; 4) providing immediate attention to any changes in my infant's condition; 5) being provided with hope; 6) having the staff sensitive to my infant's needs; 7) having all my questions answered honestly; 8) being treated with genuine caring; 9) being kept informed about the progress of my infant; 10) being given complete and understandable explanations. The intervention received by 16 fathers but perceived as very helpful by only 12 fathers was "being

allowed to stay during painful or frightening procedures." The qualitative data demonstrated that the three most helpful staff interventions were those involving: 1) giving information; 2) friendliness and compassion; 3) accessibility.

The coping response identified with the highest frequency, highest mean helpfulness score, and rated the most often as extremely helpful was "believing that my infant is getting the best care possible." Other coping responses identified as moderately helpful were: 1)asking questions of the staff about my infant; 2) being near my infant as much as possible; 3) making sure my infant is getting proper care; and 4) seeking as much information about the situation as possible. The coping response reported as being used infrequently (n=4 fathers) and never seen as helpful was drinking. No fathers reported using drugs to calm themselves.

Significant differences were found in the helpfulness rating of problem-focused, emotion-focused, and appraisal-focused coping. Problem-focused coping was used the most often and emotion-focused the least often. In fact, all of the emotion-focused coping responses were ranked as not helpful or only minimally helpful. The qualitative data supported the conclusion that problem-focused coping is seen as the most helpful. Other specific coping responses

identified as most helpful were: 1) being near my infant as much as possible (PRF); and 2) believing that my infant is getting the best care possible (AF). In the questionnaire both of these responses were reported as being used by all (100%) of the fathers.

CHAPTER VI

Discussion

The findings of this study support those of earlier investigations. The similarities and differences of this study will be discussed in relation to the literature.

Personal and Family Factors of Stress for Fathers

While models of stress have suggested that personal and family factors are a major source of stress for fathers whose infant is admitted to NICU (Miles & Carter, 1983) this research is the first to begin to test this aspect of the model. This study examined personal and family factors of stress for this population and determined that indeed it is a category of high stress for fathers.

Fathers of premature infants admitted to NICU reported trying to juggle work, home responsibilities and visiting the hospital as the most frequent and highest intensity stressor. This factor was identified as a stressor by 22 fathers, with the mean stress score being moderately stressful and 15 fathers reporting it as very or extremely stressful. This finding is greater than that of Jeffcoate et al. (1979) who in their qualitative study reported 5 of 13 fathers (38%) reporting having to cope "with far more housework and baby care than they had anticipated, at times taking over completely the running of the house....." (p. 142). Jeffcoate et al. identified the inability to concentrate at work as stressful.

Studies have demonstrated that fathers of healthy infants are concerned about finances (Glazer, 1989; Heinowitz, 1982; Tonti, 1979). No studies, however, explored whether fathers of premature infants admitted to NICU worried about finances. This study demonstrated that 16 fathers identified that worrying about finances was a little stressful. This is very similar to the studies of fathers of healthy infants. It must, however, be recognized that the sample was of a high socio-economic status and that the financial stress of a premature infant might be greater for a population that is of lower economic means.

Items were developed to address the concept of self-esteem and mastery within the category of personal/family stress. The question developed to address this issue was "feeling that I am less of a man since my baby is sick." No fathers identified this as a stressor. This could indicate that the experience of having an infant admitted to NICU does not affect the father's self-esteem or mastery. The sample in this study was upper middle class. Since the questions addressing self-esteem and mastery were added to the original tool it is possible that the tool did not reliably test these concepts.

Dealing with the responses of other family members was identified by the majority of fathers as stressful. It could be that family members lack knowledge and experience with the situation and, therefore, do not know what to say or do.

In summary, worrying about finances appeared no more stressful to fathers of premature infants than those of healthy infants. It is possible that fathers in the United States might respond differently as health care costs are the responsibility of the individual versus the state. Unfortunately, these questions were added to the tool and have not been addressed by fathers in the United States. The most frequent and most stressful experience for fathers of premature infants was "trying to juggle work, home responsibilities and visiting the hospital".

Situational Conditions

Situational stressors such as "being uncertain about my infant's condition" was a category of high stress for fathers. While Miles and Carter (1983) describe this concept as a category of stress, this research project was the first to begin testing this aspect of the model.

Previous studies (Caplan, Mason, & Kaplan, 1965; Mishel, 1983; & Schepp, 1991) have indicated that uncertainty could be a stressor for parents whose infant is admitted to NICU. Mishel (1983) found that when an event generates uncertainty, it is judged to contain one or more of the following characteristics: ambiguity, lack of clarity, lack of information, or unpredictability. Mishel's assumption was that increased uncertainty increases parental stress. The research conducted by this researcher would support Mishel's assumption as 22 fathers identified "being uncertain about my

child's condition" as a stressor and the mean stress score was moderately stressful (3.16). Eleven of the fathers identified this item as very or extremely stressful. The hypothesis that uncertainty is a stressor is further supported by the qualitative data of this study. Items pertaining to uncertainty regarding the infant's condition were listed the most often by fathers as the single most stressful experience.

The aspect of difficulty trusting staff as a stressor has not been specifically addressed in the literature. Trust as a stressor was identified through the qualitative data in this study. The specific items were trusting that mistakes would not be made and trusting strangers to care for their babies. This finding is congruent with the research of Thorne and Robinson (1989). Their multiphase, qualitative study of ongoing health care relationships of the chronically ill patient and family describes relationships evolving through three predictable stages: naive trust, disenchantment and guarded alliance. In the final stage hero worship, resignation, consumerism and team playing are identified as the four patterns of relationships that develop between these individuals and the health care providers. In relationships featured by hero worship the individual selects one individual to trust and has difficulty trusting anyone else. In relationships characterized by resignation the individual feels powerless and hence does not trust anyone. The

individual involved in relationship of consumerism believes that service is dependent on conformity to the roles and behaviours expected and participates with the single purpose of obtaining what he/she believes to be an essential service. In relationships oriented towards team playing the individual develops trusting relationships with professionals believed to be exceptional. This author would suggest fathers who have an infant admitted to NICU progress through the three predictable stages of relationships suggested by Thorne and Robinson (1989) and in the final stage develop one of the four types of relationships with health care workers. This might be examined in future research.

In summary, experiences involving uncertainty were the most stressful situational stressors. A theme not previously identified involved trust.

Environmental Stressors

The categories of appearances, and relationships are consistently ranked as the most stress inducing factors to parents of children admitted to a critical care setting (Blackburn & Lowen, 1986; Carter, et al., 1985; Curley, 1988; Riddle, et al. 1989; Miles, Funk, & Kasper, 1992). Miles (1989) reported that appearances caused the most stress to parents followed by parental role alteration, staff communication and sights and sounds in the NICU. This study's findings differ as situational, sights and sounds, parental role alteration, appearances, and personal family were all

identified as more stressful than staff behaviour and communication. This study's findings were more consistent with those of Perehudoff (1990) who found fathers reported sights and sounds the most stressful, followed by parental role alteration, appearance and staff communication as the least stressful. Perehudoff (1990) was not able to discuss situational and personal/family stress as her tool did not address these categories.

Perehudoff (1990) and this study may differ from previous studies (Blackburn & Lowen, 1986; Carter, et al. 1985; Curley, 1988; Riddle, et al., 1987) because previous studies did not separate fathers from mothers and consisted mostly of maternal samples. Perehudoff (1990) found that fathers and mothers did respond differently.

Study results support the work of Blackburn and Lowen (1989), Miles (1989) and Perehudoff (1990) who found staff behaviour and communication not at all or moderately stressful. Miles (1989) suggests that this phenomena results since "parents are unable to accurately rate their experiences with staff while their infant is still a patient in the unit and dependent on the staff for care" (p. 73). This study attempted to correct this design problem by having the fathers participate after their infant was discharged from the NICU. However, the same results were obtained. The low stress rating of staff behaviour and communication could be a result of parental coping patterns. One hundred percent (n=25) of

fathers report that they use "believing that my infant is getting the best care possible" as a coping response and that the majority (n=22) rate this as very helpful. It would be very difficult for these fathers to maintain this coping response and make negative comments about the staff who provided care to their infant. The expertise in communication and professional behaviour of the staff in these units could be another explanation for this category being rated as the least stress inducing.

"Feeling helpless and unable to protect my baby from pain and painful procedures" and "seeing needles and tubes put in my baby" and "bruises, cuts or incisions on my baby" were identified as stressful. Only 12 fathers identified "being allowed to stay with my infant during painful procedures" as very helpful. It could be that the stress of feeling helpless and unable to protect their infant from pain makes this situation very stressful for some fathers.

In summary, the majority of this study's results support those of previous research. The categories of sights and sounds and baby looks, behaviours and treatments continued to be found highly stressful. Other categories identified as highly stressful were situational and personal/family. Staff

behavour and communication was found least stressful. The author suggests that fathers assessment of staff behaviour and communication may be influenced by their use of the coping response "believing that my infant is getting the best care possible."

Overall Stress Rating

Perehudoff (1990) found that fathers rated stress of the overall experience low. The majority of fathers in this study rated stress in the moderate range. Some of the fathers (n=3) rated the overall experience as not at all stressful. The moderate rating in this study and the low rating of overall stress in Perehudoff (1990) could result from fathers being reassured by seeing their infant in NICU. As one father who rated the experience as not stressful commented, "she's sick - NICU is where she should be - she can get the best care there - and she is - I'd be scared stiff if she wasn't in there!" This is consistent with "believing my child is getting the best care possible." Perehudoff's (1990) report of lower overall stress ratings may result from the data being collected earlier in the infant's NICU experience. The data in Perehudoff (1990) was collected within the first 7 days with a mean of 3.8 days while this study's data was collected within a mean of 19.8 days of NICU experience. By collecting the data after the infant was discharged from NICU the fathers may have had more opportunity to reflect and consider the amount of stress they actually experienced. The

lower stress rating in the Perehudoff (1990) study might also indicate the fathers who completed the questionnaire within a shorter duration may have been using denial as a coping mechanism. "The initial use of denial may serve the individual as a delay in gathering strength from within to handle the situation" (Kemp & Page, 1986, p. 234).

Parental Coping

Appraisal Focused Coping

Appraisal-focused coping is the individual's attempt to define the meaning of the situation by logical analysis, congnitive redefinition or cognitive avoidance.

Study findings were similar to Miles and Carter (1985) in the number of fathers who used the coping response "believing that my infant is getting the best care possible". Miles and Carter (1985) found 86% of fathers used this response and this study found 100% used the response. Like Miles and Carter (1985), the subjects in this study found this response very helpful to extremely helpful (mean helpfulness rating of 3.88 with 22 fathers rating at 4 or 5). As with previous research (Miles and Carter 1985) "having hope that all will be well" was also perceived as helpful.

In summary,"Believing that my infant is getting the best care possible" is the coping response used by all fathers and perceived the most often as very helpful.

Problem-Focused Coping

Problem-focused coping is the individual's attempt to modify the source of stress, deal with the consequences, or create change by developing the appropriate skills.

Miles and Carter (1985) describe problem-focused coping as the most commonly used coping response. A similar result was found in this study. Being near their child as much as possible is a behaviour that all parents use and most perceive as helpful. This is a staff intervention that was provided by staff to one hundred percent (100%) of the fathers in this project. Problem-focused behaviours that were observed in most parents and viewed by the parents as helpful were the same in both studies. These were: seeking information, asking questions of staff and making sure that their child is getting proper care. Bass (1991) found parents trying to regain a sense of power "by frequently visiting the NICU and attempting to attain an intellectual understanding of their infant's condition and treatment." (p. 30) The researcher has heard nurses complain that they did not understand these behaviours and found them annoying. Perhaps the fathers attempts to cope by gaining an intellectual understanding, elicit feelings of insecurity in the nurse and are therefore, viewed by the nurse as threatening. While parents in the Miles and Carter (1985) study used "going home to rest" they did not find the response helpful. Fathers in this project used this response (n=23) and found it moderately helpful

(mean helpfulness rating 2.84) while 10 fathers in this study rated this response as extremely helpful (helpfulness rating of 4). Miles and Carter did not separate maternal and paternal responses and their sample was mostly maternal. Sex differences in coping responses is one possible explanation for the difference in findings between these studies. In summary, problem-focused coping was identified by fathers as being the most useful.

Emotion-Focused Coping

Emotion-focused coping is the individual's attempt to maintain equilibruim by managing the emotions evoked by stress (Miles & Carter, 1985).

Kaplan and Mason (1960) found preparing for the possible loss of the child necessary for maternal positive adaptation. Miles and Carter (1985) found that parents expressed preparing for the worst as not helpful. The data from this project support that of Miles and Carter (1985) as the mean helpfulness score for this item was not helpful (1.38). Behaviours in both studies that were not frequently employed and not found helpful were taking drugs and drinking alcohol. Miles and Carter found parents (78%) reported praying as helpful. This study reports only fifty-two percent (n=13) of fathers report using praying as a coping response and that it was found only minimally helpful (mean helpfulness rating of 1.8). Once again not separating paternal-maternal samples could account for the difference between studies. Without

directly comparing the differences between men and women it is difficult to determine if women find praying more helpful than men. Both studies report the majority of participants attempt to cope by seeking help from family, friends and the community but few find this beneficial. (This study reports 14 fathers using this response with a mean helpfulness rating of 1.8 or minimally helpful). Seventeen fathers in this study reported "dealing with the responses of family and friends" as a little stressful and 6 fathers reported it as very to extremely stressful. The researcher would suggest that family, friends lack knowledge as to how to respond to or help these fathers.

In summary, Miles and Carter (1985) and this study found that emotion-focused coping was employed the least often. This study found praying not used as often or found as helpful as in previous research. As in earlier research the majority of fathers reported "attempting to seek help from family, friends and community" but few found this beneficial. Another common finding was that of emotion-focused coping being perceived as the least helpful coping response.

Summary of Coping Responses

The coping responses identified the most often as helpful have been described. The items identified the most often as most helpful coping response were: "being near my infant as much as possible" and "believing that my infant is getting the

best care possible". Coping responses identified as being used frequently but as not helpful were: "Trying not to let myself get too emotional"; and "Sharing my concerns and feelings with staff".

Staff Interventions that are Resources of Coping

Interventions frequently provided and found helpful were similar to Miles and Carter (1985). These were: 1) providing immediate attention to any changes in my infant's physical condition; 2) having explanations about the equipment and tubes on or near my infant; 3) being allowed to stay with my infant as much as possible; 4) having the staff sensitive to my infants needs; 5) being able to telephone the unit at any time. All of these interventions support the most useful coping response - problem focused coping (PRF). Providing immediate attention to any changes in the infant's condition and being sensitive to the infant's needs support the problem-focused coping response of making sure the infant is getting proper care. Providing explanations supports the problem-focused coping response of seeking information. Allowing fathers to be with the infant as much as possible supports that problem focused coping response. Allowing the fathers to phone the unit at any time supports the problem focused coping responses of seeking information and asking questions of the staff.

The item found extremely helpful eighty percent (80%) of the time by Miles and Carter (1985) and found very or extremely helpful only fifty percent (50% or n=12) in this project was "being allowed to stay with my infant during painful procedures". For some fathers, staying during a painful procedure may increase their stress. One father reported that the single most stressful experience for him was "watching while they inserted an intravenous into my son's hand". Miles and Carter (1985) did not separate maternal from paternal responses. It could be suggested that mothers find staying for painful procedures more beneficial than fathers. It might be possible mothers are socially conditioned to be present to support their children during painful situations. Their exposure to coping with this type of situation may have provided them with practice coping and therefore they find the situation not as stressful.

Preparing parents for the admission of their child to an acute care setting by giving them a pre-admission tour is an intervention that is cited in the clinical literature as beneficial (Carter et al, 1985; Steele, 1987). Miles and Carter (1985) found that the pre-admission tour was often omitted by nurses and that only little over half of the parents receiving it found it helpful. The results of this study are conflicting as 16 fathers reported not being told what to expect prior to admission while 20 report receiving a tour. Thirteen of the fathers reported that the explanation

prior to admission was adequate, yet 12 of the admissions were unplanned. This is similar to the number of fathers who found the explanation prior to admission as inadequate. Since pre-admission tours are usually given to parents of expected admissions this number might indicate that the pre-admission tour is beneficial. One explanation for the discrepancy between the number of fathers being prepared prior to admission and those reporting receiving a tour is that fathers may have misread this question. The fathers may have confused being orientated to the unit after their infant's admission as a pre-admission tour. Neither study explored which aspects of preparation were helpful.

Self-help groups are often advocated for parents whose infant is admitted to the NICU (Dammers & Harpin, 1982; Siegel, 1982). Only 11 fathers reported talking to the other parents in the waiting room and only 6 fathers found the response very to extremely helpful. The average helpfulness score of this response was not helpful (mean helpfulness score 1.40). The fathers are reporting that they make contact with each other but these contacts are not always extremely helpful. Self-help groups involve talking to other parents with a formalized agenda. The formalized agenda of the self help groups described by Dammers and Harpin (1982) and Minde et al. (1980) could account for the reported success of these groups.

Bakare (1977) and Curley (1988) reported that parents want to assume more care giving than nurses will allow. This was not evident as 20 fathers reported that they were provided with assistance in caring for their infants. The fathers did, however, identify that "not being able to hold my baby when I want" was stressful. Perhaps nurses could alleviate this stress by encouraging fathers to touch their infants to the infant's level of tolerance.

Discussion Summary

In summary, the majority of findings of this research study support those of previous studies. Some differences in data may be accounted for by maternal/paternal response differences. Other differences may reflect: 1) changing patterns in health care since the original studies were conducted; and 2) timing of the study - For example Perehudoff's (1990) study took place during the first seven days of infant admission. This study asked fathers to participate after their infant was discharged and the average length of stay was 20 days.

This study was the first to specifically compare the stress of environment, personal/family and situational conditions involved in the experience of having an infant admitted to NICU. By including personal/family stressors and

situational conditions the researcher strengthened the Miles and Carter (1983) framework. Findings demonstrated that these categories are indeed areas of stress. In fact, the most stressful item to fathers emerged from the category of personal/family stress.

Previous studies have used separate populations to examine stress than coping in regard to the experience of having an infant admitted to NICU. By studying the appraisal of threat and resulting coping responses in the same population, the researcher continued the work of Miles and Carter (1983). The links between stress, cognitive appraisal, and coping responses have been described. This unique perspective has allowed the researcher to further explain the experience of fathers who have an infant admitted to NICU.

Implications For Nursing

This study has several implications for the nursing care of fathers who have a premature infant admitted to the NICU. Because this event is stressful, it is important for the nurse to individually assess the sources of stress for the father. Knowledge of common sources of stress should be of assistance to the nurse in this process.

Interventions aimed at reducing the stress of "juggling work, home responsibilities and visiting the hospital" need to be employed. Politically motivated interventions that may not assist the individual father but rather the fathers of

future premature infants would be those involving lobbying government and business for better paternal leave. An argument could be made to these agencies that fathers report having difficulty concentrating at work. An investigation into errors and sick time during this period of father stress might produce further evidence for the need for improved paternal leave programs. Assisting the father to access community programs (daycare, homemaker service etc) might also help to alleviate some of this stress.

Interventions directed toward family, friends, and the community could be developed to assist individuals to support fathers. Fathers report that they often turn to family and friends but do not find the help forthcoming. Nurses could ask fathers what type of help they expect from these individuals and groups. Once this knowledge is gained the nurse could work with the father in communicating his needs and assisting others to meet those needs. In this time of economic restraint and decreasing health care dollars it is unrealistic to suggest that more government funding be acquired for support programs for fathers. It is imperative, therefore that nurses assist fathers in requesting help from family, friends and community. This researcher suspects that family and friends want to be helpful but lack the knowledge and experience. Nurses can help the father and community by defining the "helping role". This would improve interactions between the fathers, their family and the community, would

elicit effective help for fathers, thereby decreasing their stress. Interventions that could assist the nurses in this facilitator and educator role would be to 1) ask the father what help/support he would like to receive and from whom 2) provide opportunity for education and discussion with the family. Open visiting is one suggestion as it has been found to enhance family relationships (Consolvo, 1987; Newman & McSweeney 1990; Rempusheski, 1990). Joint meetings between the nurse, father, family and social worker also might be beneficial. Individual assessment of fathers and families is essential if the most effective interventions are to be chosen.

This study indicates that nurses should continue to provide the interventions that encourage problem focused coping. Nurses should be sensitive to and provide immediate attention to the infants' needs. Accurate information, a friendly manner and being accessible in person and by phone are critical nursing activities.

Nurses should discuss with each individual father the effects staying for painful procedures will have. Some fathers will find it beneficial, while others will find it stress provoking. Care must be taken <u>not</u> to make fathers feel like they should or should not stay. The nurse must not induce shame or guilt upon the father regarding his decision to stay or not.

Many fathers reported feeling helpless as stress provoking. It could be this sense of helplessness that makes staying for painful procedures a stress inducing situation. The nurse could decrease the father's sense of helplessness by showing him how he can give comfort to his infant during the procedure, for example, assist him with keeping the soother in infant's mouth, stroke infant's arm etc.

Fathers reported that they were frequently allowed to participate in their infant's care. This practice should be encouraged. While some fathers reported nurses giving information and direction exclusively to their wives, even in their presence, they did not report this as stressful. One father, however, while reporting this practise as not stressful, indicated a resigned acceptance in his comment, "that is just the way it is - women speak to women". Novak (1990) reported the nurses directing conversation and information towards fathers as stressful to the fathers. It would, therefore, be prudent for nurses to become aware of directing information to both parents on an individual basis. Examples of activities that would accomplish this are: alternating eye contact between parents and not directing it only towards the mother; and meeting with the father on an individual basis to determine his desired role for care giving.

Several interventions related to giving information that could decrease the father's stress regarding sights and sounds and infant behaviour and appearances are possible. In some cases, the clinical nurse specialist, head nurse, primary care nurse or unit educator could meet the father prior to the infant's delivery. This meeting could occur on the high risk antepartum unit (if the mother has been hospitalized for complications of pregnancy) or in the labour and delivery area. During this meeting general preparation regarding the sights and sounds of the unit and the expected appearance and behaviour of their infant could be discussed with the father. The nurse could at this time discuss with the father what supports he expects to need and where he expects to receive this support. The nurse could then assist the father in obtaining this support. At the initial meeting or at a subsequent meeting the nurse can give a booklet (several are available from formula and drug companies and some units have developed unit specific booklets) to the parents outlining the various sights and sounds and routines of the unit. Follow-up meetings with the father and mother can be arranged to answer questions as merited or as time allows. Once the infant is born the nurse can meet the father and mother in labour and delivery and describe what they will see upon entering the unit and give specifics about their infant. The names of nursing and medical staff caring for their infant can be given. If it has not been possible to meet the father

prior to the delivery and if it was not possible to meet him in labour and delivery the nurse should meet the father at the entrance to the NICU. It is imperative that the father meet the nurse and be given preparation for what he will see prior to his entering the unit. Thereafter, the father should be met prior to his entering the unit or immediately upon his entry, and be given an update regarding new developments, when the doctor or other personnel will speak to him, preparation for new sights and sounds, and a general plan for upcoming care.

Problem-focused coping was described by the fathers as the most helpful coping response. Nurses need to be aware of the behaviours that fathers will demonstrate while attempting to utilize this style of positive coping. It is essential that nurses not feel threatened or react defensively to these attempts at coping. Problem-focused coping should be encouraged by the nurse. Fathers are individuals and will have individual methods for coping. It is important that the nurse support whatever coping responses the father finds effective. Only those responses that are self-destructive, for example excessive drinking, should be discouraged. Appropriate referrals to social work and/or pastoral care should be made in circumstances where the coping mechanism is self-destructive or dangerous to others.

In summary, interventions should be directed toward assisting the father to obtain paternal leave, improving the support given by friends, family and community, and communicating directly with the father. Nursing interventions should be planned to individually assess the stressor for the father, implement strategies that alleviate the stress and encourage positive coping. In general, encouraging problem - focused coping will assist the father to manage the stress invoked by having an infant in NICU.

Limitations of the Study

Limitations of the study exist. The sample size was small. Almost all fathers were highly educated and of high socio-economic status. The fathers whose incomes were lower were students working towards a PhD. A small sample is less likely to be representative of the population and, therefore, findings may not be generalized without caution. The homogeneity of the sample makes it more difficult to generalize the findings to other populations of fathers.

The retrospective design was chosen so fathers would believe their responses would not affect the care their infant was receiving. While this may have strengthened some aspects of the study, the time between the experience and completing the questionnaires may have influenced the fathers' responses.

The PSS:NICU has received further revision and psychometric study in the United States and Canada. The resulting revisions include removing some items, simplifying

the readability and removing the items pertaining to the category staff behavior and communication (Miles, Funk and Carlson, 1993). The use of the updated tool might have strengthened this study.

The questions relating to personal/family and situational stress had not been tested for reliability and validity. Items were added to the original tool. Without accurately testing the reliability and validity the results relating to these categories may serve as guides for future research only.

The Miles and Carter (1983) model suggests that stress and coping is an interactive event. While some aspects of personal/family stress and situational conditions of stress were examined, the stress response was not. An example of a stress response not studied would be specific personality traits of the fathers in relation to anxiety and appraisal of stress. It remains unknown if specific personality traits influence the perception or ability to cope with the stress of having an infant in NICU.

In conclusion, the limitations of this study are the small homogeneous sample, and the lack of testing of the added questions.

Recommendations For Future Research

This study began to validate some aspects of the model of stress and coping proposed by Miles and Carter (1983). Research to further develop this model is necessary. The original tool did not examine the areas of personal family and

situational stress. While questions concerning these areas were added to the tool, further information in these areas is required. Research arising from this study which would develop knowledge of these stressors further are:

1) What other stressors are identified within the category of "personal family stressors" by fathers whose premature infant is admitted to NICU? A qualitative study to determine these stressors would be appropriate as the literature in this area is limited and questions arising from the father's responses in this study could be addressed. (i.e. what aspects of their interactions with family, friends and community are stressful? what type of assistance would they like to receive from family, friends, and community?)

2) What other stressors are identified within the category "situational stressors" by fathers whose premature infant is admitted to NICU? A qualitative study to determine these stressors would be appropriate.

3) Does time of measurement affect fathers' appraisal of stressors?

This research study determined that aspects of personal/family and situational stressors are stressful to fathers. By conducting qualitative studies in these areas it could be determined if there are any unexplored stressors in these areas. This process would assist in further item development for the PSS:NICU.

A second area of future research arising from this study would be to determine if the stresses and coping styles of various populations are the same. This question arises from the limitations of the study. Questions that need to be addressed are:

1) Does personality type affect the fathers' rating of the stressors involved in having a premature infant admitted to NICU?
2) Does socio-economic status affect the fathers' experience of stress and coping when their infant is admitted to NICU?
3) What are the stresses and coping style of the adolescent father whose infant is admitted to NICU?
4) Do mothers and fathers respond differently in their appraisal of stress and choice of coping responses?

By answering these questions the results would become more generalizeable and proposed interventions could be implemented with greater success to a variety of individuals.

While the study examined father's reactions to specific nursing interventions, the discussion demonstrates that it is still unknown which aspects of some programs of activity are

or are not helpful. These unanswered questions assist in developing a third area of future research. A third area of future research would be to assess the effectiveness of interventions directed at reducing stress in fathers of infants admitted to NICU. Questions needing further research are:

1) What do fathers of premature infants admitted to NICU identify as interventions that would assist them with coping with the stress of "juggling home, work, and family responsibilities?"
2) What pre-admission interventions are beneficial in reducing stress: i.e. pre-admission explanations and tours - which aspects?
3) Does membership in a self-help group reduce paternal stress?
4) Would the effects of the nursing mutual participation model of care on parental stress in the pediatric intensive care unit developed by Curley (1988) alleviate paternal stress in the NICU?

The findings of these research projects would assist in justifying nursing interventions and programs and would ultimately serve as quality control. Fiscal responsibility would be achieved as time and money would not be wasted on those interventions or programs that do not accomplish the desired task of reducing stress and assisting effective coping.

Summary

In summary, the data collected in this study suggests that an infant's admission to NICU was moderately stressful to the father. Although it is moderately stressful certain areas of the experience were more stressful than others. The areas of high stress are situational stressors, sights and sounds, personal/family and infant appearance and behaviour. Staff behaviour and communication is minimally stressful and parental role alteration was not seen as stressful. The specific stressor that was described as the most frequent and most stress inducing was "having to juggle work, home responsibilities and visiting the hospital".

The interventions viewed as most helpful were those that supported problem-focused coping. Problem-focused coping was identified as the most helpful and emotion-focused coping as the least helpful coping category. The most frequent and most frequently identified as helpful coping response was "believing that my infant is getting the best care possible".

Several implications for nursing care of fathers whose premature infant was admitted to NICU were discussed, and recommendations for future research have been outlined. Further research is necessary to fully understand the process of stress and coping by fathers whose infant is admitted to NICU.

Fathers are an integral and critical unit to the family system. It is the father who must often carries the

responsibility of his worry and grief while maintaining active employment. Health care providers often expect the father to give support, love and encouragement to his partner and child. The father is often assigned the role of primary information giver to his immediate and extended family. The fathers in this study have expressed that these responsibilities are extremely stressful. If these tasks are to be successfully accomplished and the family unit to grow in strength and flourish, health care providers must provide men with comprehensive care and support. Further research is necessary to fully understand the process of stress and coping by fathers whose infant is admitted to NICU.

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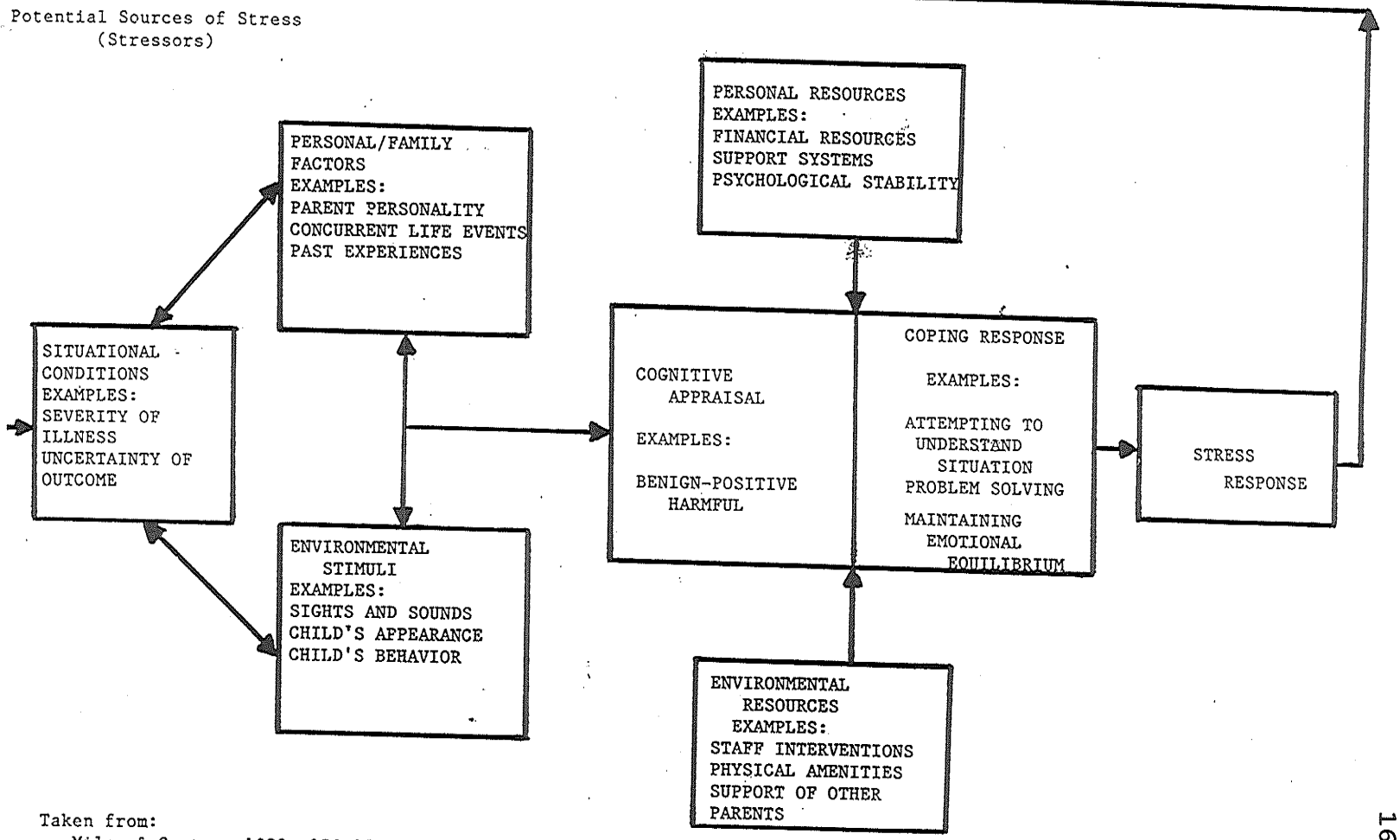
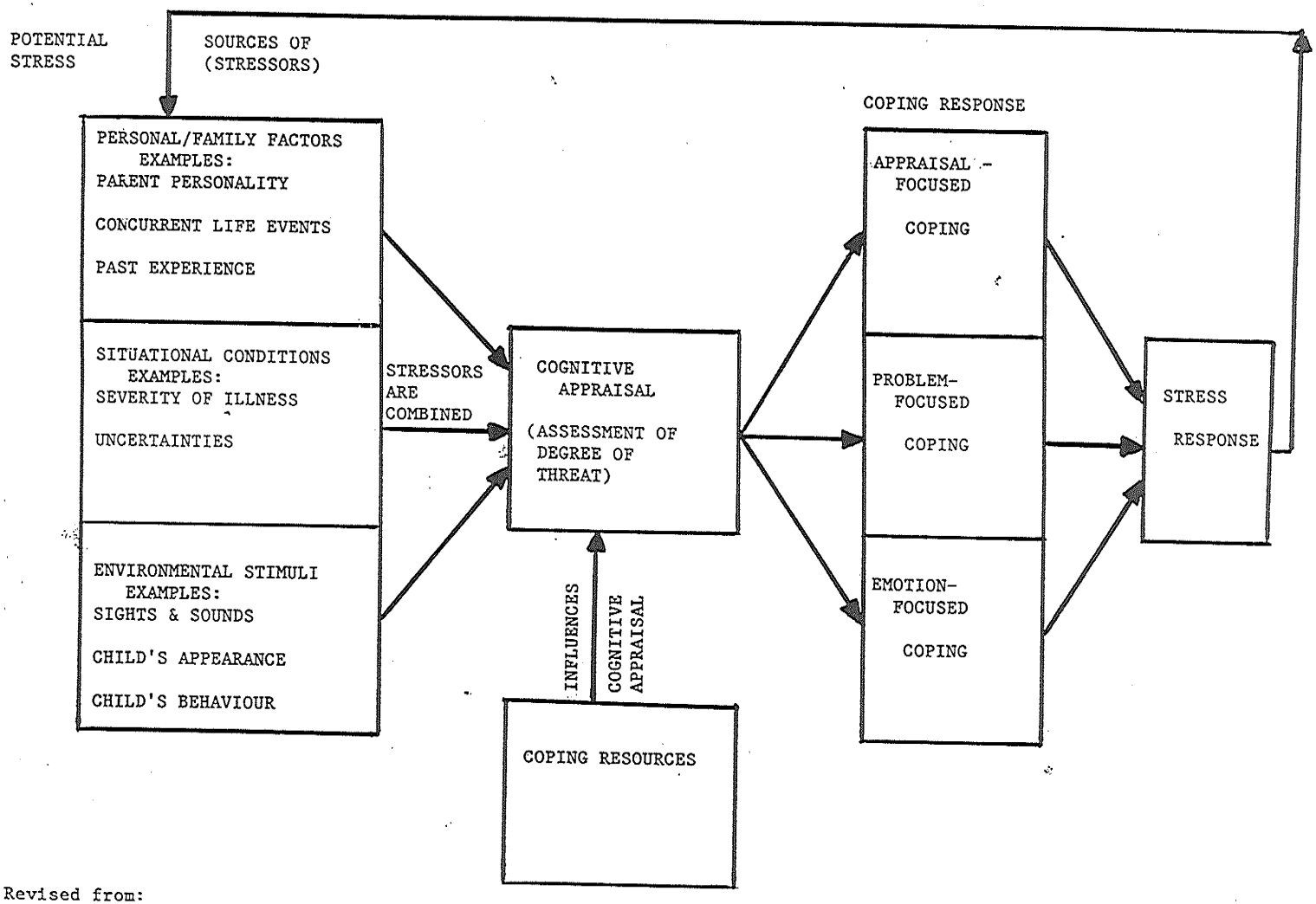


Taken from:
Miles & Carter, 1983, 356-357

A MODEL FOR UNDERSTANDING PARENTAL STRESS IN THE INTENSIVE CARE UNIT

APPENDIX B

CONCEPTUAL FRAMEWORK



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Miles & Carter, 1983, 356-357

APPENDIX C

PSS:NICU WITH ADDITIONS

PARENTAL STRESS SCALE: NEONATAL INTENSIVE CARE UNIT

Self Report Format

Nurses and others who work in neonatal intensive care units are interested in how this environment and experience affects parents. The neonatal intensive care unit is the room where your baby is receiving care. Sometimes we call this room the NICU for short. We would like to know about your experiences as a parent whose child is presently in the NICU.

This questionnaire lists various experiences other parents have reported as stressful when their baby was in the NICU. We would like you to indicate how stressful each item listed below has been for you. If you <u>have not had</u> the experience, we would like for you to indicate this by circling N/A not applicable meaning that you have "not experienced" this aspect of the NICU.

<u>By stressful, we mean that the experience has caused you to feel anxious, upset, or tense</u>.

On the questionnaire, circle the single number that best expresses how stressful each experience has been for you while your infant was in NICU.* The numbers indicate the following levels of stress:

1 = Not at all stressful	the experience did not cause you to feel upset, tense, or anxious
2 = A little stressful	
3 = Moderately stressful	
4 = Very stressful	
5 = Extremely stressful	the experience upset you and caused a lot of anxiety or tension.

Remember, if you have not experienced the item, please circle NA "Not applicable"

Example

Now lets take an item for an example: **The bright lights in the NICU.**

If for example you feel that the bright lights in the neonatal intensive care unit were extremely stressful to you, you would circle the number 5 below:

NA 1 2 3 4 5

If you feel that the lights were not stressful at all, you would circle the number 1 below:

NA 1 2 3 4 5

If the bright lights were not on when you visited (not likely), you would circle NA indicating "Not Applicable" below:

NA 1 2 3 4 5

Below is a list of the various SIGHTS AND SOUNDS commonly experienced an NICU. We are interested in knowing about your view of how stressful these SIGHTS AND SOUNDS are for you. Circle the number that best represents your level of stress. If you did not see or hear the item circle the NA meaning "Not applicable".

1.	The presence of monitors and equipment	NA	1	2	3	4	5
2.	The constant noises of monitors and equipment	NA	1	2	3	4	5
3.	The sudden noises of monitor alarms	NA	1	2	3	4	5
4.	The other sick babies in the room	NA	1	2	3	4	5
5.	The large number of people working in the unit	NA	1	2	3	4	5

Below is list of items that might describe the way your BABY LOOKS or BEHAVES while you are visiting in the NICU as well as some of the TREATMENTS that you have seen done to the baby. Not all babies have these experience or look this way, so circle the NA, if you have not experienced or seen the listed item. If the item reflects something that you have experienced, then indicate how much the experience stressful or upsetting to you by circling the appropriate number.

1.	Tubes and equipment on or near my baby	NA	1	2	3	4	5
2.	Bruises, cuts or incisions on my baby	NA	1	2	3	4	5
3.	The unusual color of my baby (for example looking pale or yellow jaundice)	NA	1	2	3	4	5
4.	My baby's unusual or abnormal breathing patterns	NA	1	2	3	4	5
5.	Seeing my baby suddenly change color (for example, becoming pale or blue)	NA	1	2	3	4	5
6.	Seeing my baby stop breathing	NA	1	2	3	4	5
7.	The small size of my baby	NA	1	2	3	4	5
8.	The wrinkled appearance of my baby	NA	1	2	3	4	5
9.	Having a machine (respirator) breathe for my baby	NA	1	2	3	4	5
10.	Seeing needles and tubes put in my baby	NA	1	2	3	4	5
11.	My baby being fed by an intravenous line or tube	NA	1	2	3	4	5
12.	When my baby seemed to be in pain	NA	1	2	3	4	5
13.	My baby crying for long period	NA	1	2	3	4	5
14.	When my baby looked afraid	NA	1	2	3	4	5
15.	When my baby looked sad	NA	1	2	3	4	5

16.	The limp and weak appearance of my baby	NA	1	2	3	4	5
17.	Jerky or restless movements of my baby	NA	1	2	3	4	5
18.	My baby not being able to cry like other babies	NA	1	2	3	4	5
19.	Clapping on baby's chest for chest drainage	NA	1	2	3	4	5

We are also interested in whether you experienced any stress related to STAFF BEHAVIORS and COMMUNICATION. Again, if <u>you experienced</u> the item indicate how stressful it was by circling the appropriate number. If you <u>did not experience</u> the item, circle the NA meaning "not applicable". Remember, your answers are confidential and will not be shared or discussed with any staff member.

1.	Staff explaining things too fast	NA	1	2	3	4	5
2.	Staff using words I don't understand	NA	1	2	3	4	5
3.	Telling me different (conflicting) things about my baby's condition	NA	1	2	3	4	5
4.	Not telling me enough about tests and treatments being done to my baby	NA	1	2	3	4	5
5.	Not talking to me enough	NA	1	2	3	4	5
6.	Too many different people (doctors, nurses, others) talking to me	NA	1	2	3	4	5
7.	Difficulty in getting information or help when I visit or telephone the unit	NA	1	2	3	4	5

8.	Not feeling sure that I will be called about changes in my baby's condition	NA	1	2	3	4	5
9.	Staff looking worried about my baby	NA	1	2	3	4	5
10.	Staff acting as if they did not want parents around	NA	1	2	3	4	5
11.	Staff acting as if they did not understand my baby's behaviour or special needs	NA	1	2	3	4	5

The last area we want to ask you about is how you feel about your open RELATIONSHIP with the baby and your parental role. If you <u>have experienced</u> the following situations or feelings, indicate how stressed you have been by them by circling the appropriate number. Again, circle NA if you <u>did not experience</u> the item.

1.	Being separated from my baby	NA	1	2	3	4	5
2.	Not feeding my baby myself	NA	1	2	3	4	5
3.	Not being able to care for my baby myself (for example, diapering, bathing)	NA	1	2	3	4	5
4.	Not being able to hold my baby when I want	NA	1	2	3	4	5
5.	Sometimes forgetting what my baby looks like	NA	1	2	3	4	5
6.	Not being alone with my baby	NA	1	2	3	4	5

7.	Not being able to share my baby with other family members	NA	1	2	3	4	5
8.	Feeling helpless and unable to protect my baby from pain and painful procedures	NA	1	2	3	4	5
9.	Being afraid of touching or holding my baby	NA	1	2	3	4	5
10.	Feeling staff was closer to my baby than I am	NA	1	2	3	4	5
11.	Feeling helpless about how to help my baby during this time	NA	1	2	3	4	5

Personal/Family Factors

Below is a list of the various stressors commonly experienced in the lives of fathers who had infants in NICU. We are interested in knowing about your view of how stressful these events are for you. Not all fathers experience these stressors, so circle NA (not applicable), if you have not experienced the item. If the item reflects something that you have experienced, then indicate how much the experience was stressful or upsetting to you by circling the appropriate number.

1.	Having to take time off work	NA	1	2	3	4	5
2.	Trying to juggle work, home responsibilities and visiting the hospital	NA	1	2	3	4	5
3.	Dealing with the responses of other family members	NA	1	2	3	4	5
4.	Difficulty concentrating at work	NA	1	2	3	4	5
5.	Coping with housework	NA	1	2	3	4	5

6.	Assuming an increased role in family functioning	NA	1	2	3	4	5
7.	Feeling that I am less of a man since my baby is sick	NA	1	2	3	4	5
8.	Worrying about finances	NA	1	2	3	4	5
9.	Reliving previous hospital experiences	NA	1	2	3	4	5
10.	Difficulty relating or talking to my wife/girlfriend	NA	1	2	3	4	5

Situational Conditions

Below is a list of the various stressors commonly experienced in the situation of having an infant admitted to NICU. We are interested in knowing about your view of how stressful these events are for you. Not all fathers experience these stressors, so circle NA, if you have not experienced the item. If the item reflects something that you have experienced, then indicate how much the experience was stressful or upsetting to you by circling the appropriate number.

1.	Being uncertain about my infant's condition	NA	1	2	3	4	5
2.	Being unsure that the staff will respond quickly to my child's alarms	NA	1	2	3	4	5
3.	Feeling powerless	NA	1	2	3	4	5

Using the same rating scale, indicate how stressful in general, the experience of having your baby hospitalized in the NICU has been for you.

1 2 3 4 5

Was there anything else that was stressful for you during the time that your baby has been in the neonatal intensive care unit? Please discuss below:

What was the single most stressful aspect of this experience. Please describe:

Note to researcher:

Please consult instrument manual for scoring.

* Indicate is this space the time frame you wish parents to consider (i.e., since admission, in the past week, today).

Revised, July, 1991

APPENDIX D

PARENTAL COPING SCALE: PICU (PCS:PICU) WITH ADDITIONS

Admittedly, having an infant in a neonatal intensive care unit (NICU) is a stressful event. In order to better plan for ways to reduce parental stress, we are interested in learning your perception of staff behaviours which were helpful to you while your child was in the ICU. We are also interested in learning about your own behavioral and emotional responses that were effective in reducing your stress.

Staff Behaviors

Below is a list of staff behaviors which you may have found helpful while your child was in the intensive care unit. By "staff" we mean the nurses, doctors, and other professional staff who worked with you and your child.

Please indicate on the scale to the left, how often you received this help. On this scale, circle a "1" if it was not provided, a "2" if the service was provided minimally, and a "3" if the service was provided frequently.

Indicate on the scale to the right, how helpful this staff intervention (behavior) was to you. On this helpfulness scale, the numbers "2," "3," and "4" represent degrees of the helpfulness between not helpful and extremely helpful. If staff did not provide the experience listed, indicate how helpful you think it would have been.

Example	Not Provided	Minimally Provided	Frequently Provided	Not Helpful	Minimally Helpful	Moderately Helpful	Very Helpful	Extremely Helpful
	1	2	3	1	2	3	4	5
If the item was provided frequently, circle "3" on the scale to the left; if it was found to be moderately helpful, circle the "3" on the scale to the right.....	1	2	3	1	2	3	4	5
If the item was not provided at all, circle "1" on the left scale and indicate on the right how helpful you think it would have been (in this example, very helpful).....	1	2	3	1	2	3	4	5
1. Being allowed to stay with my infant as much as possible.....	1	2	3	1	2	3	4	5
2. Being oriented to the NICU environment through a tour with explanations about the various sights and sounds..	1	2	3	1	2	3	4	5
3. Having the staff sensitive to my infant's needs.....	1	2	3	1	2	3	4	5
4. Helping me to do some things for my infant myself (e.g., bathing, feeding, or holding.....	1	2	3	1	2	3	4	5

		Not Provided	Minimally Provided	Frequently Povided	Not Helpful	Minimally Helpful	Moderately Helpful	Very Helpful	Extremely Helpful
		1	2	3	1	2	3	4	5
5.	Being given complete and understandable explanations about everything being done to our infant.....	1	2	3	1	2	3	4	5
6.	Being provided with hope..	1	2	3	1	2	3	4	5
7.	Preparing me for what to expect on a day-to-day basis.....	1	2	3	1	2	3	4	5
8.	Being allowed to stay with my infant during painful or frightening procedures....	1	2	3	1	2	3	4	5
9.	Being treated with genuine concern and caring.....	1	2	3	1	2	3	4	5
10.	Having all questions answered honestly.....	1	2	3	1	2	3	4	5
11.	Being able to telephone the unit at any time.....	1	2	3	1	2	3	4	5
12.	Helping me to understand my infant's behavioral and emotional reactions while in the NICU.....	1	2	3	1	2	3	4	5
13.	Providing immediate attention to any changes in my infant's physical condition.....	1	2	3	1	2	3	4	5

		Not Provided	Minimally Provided	Frequently Provided	Not Helpful	Minimally Provided	Moderately Provided	Very Helpful	Extremely Helpful
		1	2	3	1	2	3	4	5
14.	Being kept informed about the progress of my infant.	1	2	3	1	2	3	4	5
15.	Providing privacy for me while visiting my infant	1	2	3	1	2	3	4	5
16.	Allowing other family members to visit my infant.....	1	2	3	1	2	3	4	5
17.	Having explanations about the equipment and tubes on or near my infant.....	1	2	3	1	2	3	4	5
18.	Knowing the names of the staff caring for my infant.....	1	2	3	1	2	3	4	5
19.	Having the opportunity to share my feelings, worries, or concerns with the staff.....	1	2	3	1	2	3	4	5

List the three staff behaviors which you found most helpful:

1. _____

2. _____

3. _____

Were there other staff behaviors which have not been listed that you would like to mention as helpful to you?

_____

_____

Coping Responses

We are also interested in learning about <u>your own behavioral and emotional responses</u> that were effective in reduction of your stress while your child was in the ICU.

Below is a list of coping responses which may be helpful to some parents during a time of stress. After each item, indicate how much helpful the response was to you. If you did not use that particular response, circle "0."

		Not Used	Not Helpful	Minimally Helpful	Moderately Helpful	Extremely Helpful
		0	1	2	3	4
1.	Seeking help or comfort from family, friends, or others from my community	0	1	2	3	4
2.	Believing that my infant is getting the best care possible.....	0	1	2	3	4
3.	Seeking as much information about the situation as possible.....	0	1	2	3	4
4.	Trying to understand <u>why</u> this happened to my infant.....	0	1	2	3	4
5.	Trying not to think too much about my infant's problem.....	0	1	2	3	4
6.	Asking questions of the staff about my infant.....	0	1	2	3	4
7.	Talking with other parents in the waiting room.....	0	1	2	3	4
8.	Getting prepared to expect the worst	0	1	2	3	4

		Not Used	Not Helpful	Minimally Helpful	Moderately Helpful	Extremely Helpful
		0	1	2	3	4
9.	Taking drugs to calm me.....	0	1	2	3	4
10.	Having hope that all would be well..	0	1	2	3	4
11.	Sharing my concerns and feelings with staff.....	0	1	2	3	4
12.	Refusing to believe in my own mind the seriousness of the situation.....	0	1	2	3	4
13.	Drinking.....	0	1	2	3	4
14.	Being near my infant as much as possible.....	0	1	2	3	4
15.	Praying.....	0	1	2	3	4
16.	Crying and expressing my feelings with others.....	0	1	2	3	4
17.	Going home to rest.....	0	1	2	3	4
18.	Trying not to let myself get too emotional.....	0	1	2	3	4
19.	Accepting my infant's illness as fate or as God's will.....	0	1	2	3	4
20.	Making sure my infant is getting proper care.....	0	1	2	3	4
21.	Keeping busy.....	0	1	2	3	4

	Not Provided	Minimally Provided	Frequently Provided	Not Helpful	Minimally Helpful	Moderately Helpful	Very Helpful	Extremely Helpful
Example	1	2	3	1	2	3	4	5
If the item was provided frequently, circle "3" on the scale to the left; if it was found to be moderately helpful, circle the "3" on the scale to the right.....	1	2	3	1	2	3	4	5
If the item was not provided at all, circle "1" on the left scale and indicate on the right how helpful you think it would have been (in this example, very helpful).....	1	2	3	1	2	3	4	5
1. Being allowed to stay with my infant as much as possible.....	1	2	3	1	2	3	4	5
2. Being oriented to the NICU environment through a tour with explanations about the various sights and sounds..	1	2	3	1	2	3	4	5
3. Having the staff sensitive to my infant's needs.....	1	2	3	1	2	3	4	5
4. Helping me to do some things for my infant myself (e.g., bathing, feeding, or holding.....	1	2	3	1	2	3	4	5

		Not Provided	Minimally Provided	Frequently Povided	Not Helpful	Minimally Helpful	Moderately Helpful	Very Helpful	Extremely Helpful
		1	2	3	1	2	3	4	5
5.	Being given complete and understandable explanations about everything being done to our infant.....	1	2	3	1	2	3	4	5
6.	Being provided with hope..	1	2	3	1	2	3	4	5
7.	Preparing me for what to expect on a day-to-day basis.....	1	2	3	1	2	3	4	5
8.	Being allowed to stay with my infant during painful or frightening procedures....	1	2	3	1	2	3	4	5
9.	Being treated with genuine concern and caring.....	1	2	3	1	2	3	4	5
10.	Having all questions answered honestly.....	1	2	3	1	2	3	4	5
11.	Being able to telephone the unit at any time.....	1	2	3	1	2	3	4	5
12.	Helping me to understand my infant's behavioral and emotional reactions while in the NICU.....	1	2	3	1	2	3	4	5
13.	Providing immediate attention to any changes in my infant's physical condition.....	1	2	3	1	2	3	4	5

	Not Provided	Minimally Provided	Frequently Provided	Not Helpful	Minimally Provided	Moderately Provided	Very Helpful	Extremely Helpful
	1	2	3	1	2	3	4	5
14. Being kept informed about the progress of my infant.	1	2	3	1	2	3	4	5
15. Providing privacy for me while visiting my infant	1	2	3	1	2	3	4	5
16. Allowing other family members to visit my infant.....	1	2	3	1	2	3	4	5
17. Having explanations about the equipment and tubes on or near my infant.....	1	2	3	1	2	3	4	5
18. Knowing the names of the staff caring for my infant.....	1	2	3	1	2	3	4	5
19. Having the opportunity to share my feelings, worries, or concerns with the staff.....	1	2	3	1	2	3	4	5

List the three staff behaviors which you found most helpful:

1. _____

2. _____

3. _____

Were there other staff behaviors which have not been listed that you would like to mention as helpful to you?

_____

_____

Coping Responses

We are also interested in learning about your own behavioral and emotional responses that were effective in reduction of your stress while your child was in the ICU.

Below is a list of coping responses which may be helpful to some parents during a time of stress. After each item, indicate how much helpful the response was to you. If you did not use that particular response, circle "0."

	Not Used	Not Helpful	Minimally Helpful	Moderately Helpful	Extremely Helpful
	0	1	2	3	4
1. Seeking help or comfort from family, friends, or others from my community	0	1	2	3	4
2. Believing that my infant is getting the best care possible.....	0	1	2	3	4
3. Seeking as much information about the situation as possible.....	0	1	2	3	4
4. Trying to understand why this happened to my infant.....	0	1	2	3	4
5. Trying not to think too much about my infant's problem.....	0	1	2	3	4
6. Asking questions of the staff about my infant.....	0	1	2	3	4
7. Talking with other parents in the waiting room.....	0	1	2	3	4
8. Getting prepared to expect the worst	0	1	2	3	4

		Not Used	Not Helpful	Minimally Helpful	Moderately Helpful	Extremely Helpful
		0	1	2	3	4
9.	Taking drugs to calm me.....	0	1	2	3	4
10.	Having hope that all would be well..	0	1	2	3	4
11.	Sharing my concerns and feelings with staff.....	0	1	2	3	4
12.	Refusing to believe in my own mind the seriousness of the situation.....	0	1	2	3	4
13.	Drinking.....	0	1	2	3	4
14.	Being near my infant as much as possible.....	0	1	2	3	4
15.	Praying.....	0	1	2	3	4
16.	Crying and expressing my feelings with others.....	0	1	2	3	4
17.	Going home to rest.....	0	1	2	3	4
18.	Trying not to let myself get too emotional.....	0	1	2	3	4
19.	Accepting my infant's illness as fate or as God's will.....	0	1	2	3	4
20.	Making sure my infant is getting proper care.....	0	1	2	3	4
21.	Keeping busy.....	0	1	2	3	4

APPENDIX E

PARENTAL COPING SCALE: PEDIATRIC ICU - COPING CATEGORIES WITH THEIR DEFINING ITEMS

Appraisal-focused coping
- Believing that my infant is getting the best care possible
- Trying to understand why this happened to my infant
- Trying not to think too much about my infant's problem
- Having hope that all will be well
- Refusing to believe in my own mind the seriousness of the situation

Problem-focused coping
- Seeking as much information about the situation as possible
- Asking questions of the staff about my infant
- Talking with other parents in the waiting room
- Going home to rest
- Keeping busy
- Being near my infant as much as possible
- Making sure my infant is getting proper care

Emotion-focused coping
- Seeking help or comfort from family, friends, or others from my community
- Getting prepared to expect the worst
- Sharing my concerns and feelings with the staff
- Crying and expressing my feelings with others
- Trying not to let myself get too emotional
- Accepting my infant's illness as fate or as God's will
- Praying
- Taking drugs to calm me
- Drinking

Appendix F

PROTOCOL FOR IN-PERSON CONTACT WITH POTENTIAL SUBJECTS

"Hello my name is Alison Bertram Farough. I am a student in the Master of Nursing Program at the University of Manitoba. I am conducting a study that examines the stresses, coping style and helpfulness of nursing interventions as perceived by fathers ofinfants in NICU. Have you seen the disclaimer regarding this study? If not, I will explain the study to you. (See appendix I). Would you like to discuss this study further with me? Would you like to participate in this study?

APPENDIX G

DISCLAIMER

LETTER OF INVITATION AND EXPLANATION OF THE STUDY

Dear

My name is Alison Bertram Farough, R.N., B.N. I am a graduate student in nursing at the University of Manitoba. I am writing to invite you to participate in a research study being conducted as part of the graduate program in nursing. I am very interested in the father's experience of having a baby in the neonatal intensive care unit. While there are no immediate benefits to participating in the study, the information you provide may assist nurses and health care professionals gain a better understanding of this experience from the unique perspective of the father.

All fathers who read and understand English, have their child admitted to the neonatal intensive care unit (NICU) for more than 3 days and not more than 50 day are being asked to participate. Participating in the study will not affect the care of your baby in any way. If you decide to participate in the study you will be asked to complete 2 questionnaires within 120 hours of your baby's transfer or discharge from NICU. Although there will be no immediate benefits to you or your infant, the study may produce information that will improve the care for fathers and families of infants in NICU in the future.

The questionnaires will take approximately 45 minutes to complete. There are no right or wrong answers to the questions you will be asked. I am interested in what this experience has been like for you. In addition to these questionnaires you will be asked a few background questions about yourself. While participating in the study you may refuse to answer any question.

Your name will not appear on any of the questionnaires. All participants in the study will remain anonymous. The questionnaires and consent form will be kept in a locked filing box accessible only to the investigator. Only the investigator, her thesis committee (Annette Gupton, Maureen Heaman, Joe Kuypers) and a research colleague Dr. M. Miles of Chapel Hill, North Carolina will have access to the individual responses.

The results will be used on a group basis, so no individual identities will be revealed. This means that no one will ever know how you as an individual, answered the questions. The study results may be used for publication ina journal article. A copy of the study results will be provided to you if you so request.

You may decide not to participate in the study and if you decide not to, your baby's care will not be affected. You may withdraw from the study at any time without it affecting the care of your baby.

If you have any further questions, you can reach me at 864-2028.

Thank you for taking the time to read this explanation.

Sincerely,

Alison Bertram Farough

I am interested in participating in this study.

_____ _____

Date Name

_____

Phone Number

Please print your name and address if you wish to receive a copy of the result of this study.

_____

_____

_____

_____

_____

APPENDIX H

NUMBER OF FATHERS RATING ITEM AS STRESSFUL INDICATED BY A SCORE OF 2 OR MORE

RANK	ITEM		FREQUENCY
1	AP2	Bruises, cuts or incisions on my baby	24
2	SS3	The sudden noises of monitors alarms	23
4.5	AP1	Tubes and equipment on or near my baby	22
4.5	PF2	Trying to juggle work, home, responsibiliteis and visiting the hospital	22
4.5	SI1	Being uncertain about my infant's condition	22
4.5	PF4	Difficulty concentrating at work	22
7	R8	Feeling helpless and unable to protect my baby from pain and painful procedures	21
8	AP4	My baby's unusual or abnormal breathing patterns	20
11	AP9	Having a machine (respirator) breath for my baby	19
11	AP11	My baby being fed by an intravenous line or tube	19
11	R1	Being separated from my baby	19
11	R11	Feeling helpless about how to help my baby during this time	19
11	R4	Not being able to hold my baby when I want	19
15	AP3	The unusual color of my baby	18
15	AP7	The small size of my baby	18
15	PF5	Coping with housework	18
19	SS2	The constant noises of monitors and equipment	17
19	AP10	Seeing needles and tubes put in my baby	17
19	R7	Not being able to share my baby wth other family members	17
19	SI3	Feeling powerless	17
19	PF3	Dealing with the responses of other family members	17

APPENDIX H

(CONTINUED)
NUMBER OF FATHERS RATING ITEM AS STRESSFUL INDICATED BY A SCORE OF 2 OR MORE

RANK	ITEM		FREQUENCY
23	AP12	When my baby seemed in pain	16
23	PF8	Worrying about finances	16
23	AP17	Jerky or restless movements of my baby	16
25.5	AP16	The limp and weak appearance of my baby	15
25.5	PF6	Assuming an increased role in family functioning	15
27.5	SS1	The presence of monitors and equipment	14
27.5	R9	Being afraid of touching or holding my baby	14
30	SS4	The other sick babies in the room	13
30	AP6	Seeing my baby stop breathing	13
30	R2	Not feeding my baby myself	13
33	AP18	My baby not being able to cry like other babies	11
33	PF1	Having to take time off work	11
33	R6	Not being alone with my baby	11
36.5	BC5	Not talking to me enough	10
36.5	R10	Feeling staff was closer to my baby than I am	10
36.5	BC4	Not telling me enough about tests and treatments being done to my baby	10
36.5	R3	Not being able to care for my baby myself	10
40	AP15	When my baby looks sad	9
40	BC3	Telling me different (conflicting) things about my baby's condition	9
40	PF10	Difficulty relating or talking to my wife/girlfriend	9
44.5	SS5	The large number of people working in the unit	8
44.5	AP5	Seeing my baby suddenly change color	8

APPENDIX H

(CONTINUED)
NUMBER OF FATHERS RATING ITEM AS STRESSFUL INDICATED BY A SCORE OF 2 OR MORE

RANK	ITEM		FREQUENCY
44.5	AP14	When my baby looked afraid	8
44.5	BC2	Staff using words I don't understand	8
44.5	BC9	Staff looking worried about my baby	8
44.5	BC8	Not feeling sure that I will be called about changes in my baby's condition	8
48.5	AP8	The wrinkled appearance of my baby	7
48.5	R5	Sometimes forgetting what my baby looks like	7
51	BC6	Too many different people...talking to me	6
51	BC10	Staff acting as if they did not want parents around	6
51	SI2	Being unsure that the staff will respond quickly to my child's alarms	6
55	AP13	My baby crying for long period	5
55	AP19	Clapping on baby's chest for chest drainage	5
55	BC1	Staff explaining things too fast	5
55	BC7	Difficulty in getting information	5
55	PF9	Reliving previous hospital experiences	5
58	BC11	Staff acting as if they did not understand my baby's behavior or special needs	0
59	PF7	Feeling that I am less of a man since my baby is sick	0

APPENDIX I

NUMBER OF INTENSITY SCORES OF STRESSORS FROM MOST TO LEAST STRESSFUL

RANK	ITEM		(MEAN) INTENSITY SCORE (OUT OF 5)
1	PF2	Trying to juggle work, home responsbilities and visiting the hospital	3.40
2	SI1	Being uncertain about my infant's condition	3.16
3	R8	Feeling helpless and unable to protect baby from pain and painful procedures	3.16
4	SS3	The sudden noises of monitor alarms	3.13
5	AP2	Bruises, cuts, or incisions on my baby	3.08
6	PF4	Difficulty concentrating at work	3.04
7	AP1	Tubes and equipment on or near my baby	2.96
8	R11	Feeling helpless about how to help my baby during this time	2.88
9	R1	Being separated from my baby	2.84
10	AP4	My baby's unusual or abnormal breating patterns	2.80
11.5	SI3	Feeling powerless	2.72
11.5	AP10	Seeing needles and tubes being put in my baby	2.72
13	AP9	Having a machine breathe for my baby	2.64
14	R4	Not being able to hold my baby when I want	2.56
15	AP11	My baby being fed by an intravenous line or tube	2.48
16	AP3	The unusual color of my baby	2.36
17	SS2	The constant noises of monitors and equipment	2.33
19	AP7	The small size of my baby	2.32
19	AP12	When my baby seemed to be in pain	2.32
19	PF5	Coping with housework	2.32

APPENDIX I

(CONTINUED)
NUMBER OF INTENSITY SCORES OF STRESSORS FROM MOST TO LEAST STRESSFUL

RANK	ITEM		(MEAN) INTENSITY SCORE (OUT OF 5)
21	R7	Not being able to share my baby with other family members	2.28
22	PF3	Dealing with the responses of other family members	2.20
23	PF1	Having to take time off work	2.04
24	AP16	The limp and weak appearance of my baby	2.04
25.5	PF8	Worrying about finances	2.00
25.5	SS4	The other sick babies in the room	2.00
27.5	AP17	Jerky or restless movements of my baby	1.96
27.5	SS1	The presence of monitors and equipment	1.96
29	R9	Being afraid of touching or holding my baby	1.92
30	AP6	Seeing my baby stop breathing	1.88
31	PF6	Assuming an increased role in family functioning	1.84
32	BC4	Not telling me enough about tests and treatments being done to my baby	1.72
32.5	R2	Not feeding my baby myself	1.72
34.5	R3	Not being able to care for my baby	1.60
34.5	R10	Feeling staff was closer to my baby than I am	1.60
36	AP18	My baby not being able to cry like other babies	1.56
38	BC2	Staff using words I don't understand	1.44
38	BC8	Not feeling sure that I will be called about changes in the baby's condition	1.44
38	R6	Not being alone with my baby	1.44
40	BC9	Staff looking worried about my baby	1.40

APPENDIX I

(CONTINUED)
NUMBER OF INTENSITY SCORES OF STRESSORS FROM MOST TO LEAST STRESSFUL

RANK	ITEM		(MEAN) INTENSITY SCORE (OUT OF 5)
41.5	AP15	When my baby looks sad	1.36
41.5	BC5	Not talking to me enough	1.36
43	SS5	The large number of people working in the unit	1.29
44	BC3	Telling me different (conflicting) things about my baby's condition	1.28
44.5	BC6	Too many different people..talking to me	1.24
45.5	PF10	Difficulty relating or talking to my wife/girlfriend	1.24
47	AP14	When my baby looked afraid	1.20
48	AP8	The wrinkled appearance of my baby	1.16
49	AP5	Seeing my baby suddenly change color	1.12
50.5	SI2	being unsure that the staff will respond quickly to my child's alarms	1.04
50.5	BC1	Staff explaining things too fast	1.04
52	R5	Sometimes forgetting what my baby looks like	1.00
53	BC10	Staff acting as if they did not want parents around	0.92
54	PF9	Reliving previous hospital experiences	0.88
56	BC7	Dificulty in getting information when I visit or telephone...	0.80
56	AP19	Clapping on my baby's chest for chest drainage	0.80
56	AP13	My baby crying for long periods	0.80
58	BC11	Staff acting as if they did not understand my baby's behavior or special needs	0.60
59	PF7	Feeling that I am less of a man since my baby is sick	0.36