EASING THE TRANSITION TO
THE MATERNAL ROLE

By

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Abstract

This study was conducted to determine if a nursing intervention designed to teach primiparas about their infants' behaviors and abilities would ease their transition to the maternal role. Data were collected at three days and three weeks postpartum from a relatively homogeneous sample of 16 control mothers and 15 experimental mothers. The intervention was presented to each experimental participant on the third postpartum day. Effectiveness of the intervention was determined by measuring maternal anxiety, using the State-Trait Anxiety Inventory (Spielberger et al., 1970) and concern about infant care and adjustment to the maternal life style, using the Postnatal Research Inventory (Schaefer & Mannheimer, 1960) revised by Ellis and Hewat (1982). Additional data were also collected from hospital records, a demographic questionnaire, and an informal interview conducted at three weeks postpartum. Although the outcome measures demonstrated no statistically significant differences, the conclusions support the need for a predictive framework which would help nurses identify mothers who may have difficulty during role transition and therefore may benefit from role supplementation.

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CHAPTER ONE

Introduction

Background to the Problem

The role transition from nonparent to parent has been the focus of considerable research attention for a number of years. Many reseachers have stated that the transition to parenthood is difficult (Hobbs, 1965; Hobbs & Cole, 1976) while other investigators have been more emphatic and stated that this transition constitutes a crisis situation for the majority of first-time parents (Dyer, 1963; LeMasters, 1957). The term role transition, as it has been used in this study, is defined as "a change in role relationships, expectations, or abilities" which "require the person to incorporate new knowledge, alter his behavior, and thus change his definition of himself in his social context" (Meleis, 1975, p.265).

The investigator has observed that many new mothers experience stress and discomfort during the role transition period. In the investigator's opinion, some of this stress may occur because new mothers must quickly become acquainted with and learn about the abilities and behaviors of their infants who are little

more than strangers to them. Frequently, new mothers demonstrate their unfamiliarity with their infants by asking behaviorally related questions such as: Can my baby see or hear me? Why is my baby so sleepy? What can I do to comfort my baby? An important role for nurses is to provide new mothers with an explanation and, where appropriate, a visual demonstration of their infants' behaviors and abilities. This type of information is not generally provided in most prenatal or postnatal programs.

In recent years, nurses have developed many programs to help new mothers. These programs include prenatal classes, in-hospital classes, and postnatal groups. The content of prenatal classes focuses on the concerns of pregnancy, labor, and delivery but does not seem to "decrease postpartum concerns which are still abstract and in the future" (Harrison & Hicks, 1983, p.328). Following the infant's birth, the emphasis during the short postpartum hospitalization period has been on teaching mothers physical care-taking skills such as bathing, feeding, and changing. Postnatal groups offer support and information to new mothers but women frequently do not attend them until their infants are at least one month old. However, in the investigator's opinion, it is also important for new

mothers to learn about the behavior and capabilities of their newborns early in the postpartum period so that they can "tune in" to and understand the meanings of the behavioral cues given by their infants. As far back as 1961, Caplan noted the importance of educationally assisting the inexperienced mother "to learn the behavioral cues of the baby which can be used instead of communication to determine that all is progressing well" (p.109). The investigator believes that if mothers can accurately perceive their infants' responses and are aware of newborns' protective abilities, they will be less anxious and adjust more easily to the mothering role. This is particularly important for primiparous women who are in the process of taking on the new role of mother.

Problem

This study was conducted to evaluate the effect of a nursing intervention designed to teach primiparas about their infants' behaviors and abilities early in the postpartum period. This knowledge is considered helpful for these women in easing the transition to the mother role. It was hypothesized that:

1. Primiparas who receive specific information about their infants' abilities and behaviors by means

of a nursing intervention will report less maternal anxiety at three weeks postpartum than primiparas who do not receive this information.

2. Primiparas who receive specific information about their infants' abilities and behaviors by means of a nursing intervention will report less maternal concern about infant care at three weeks postpartum than primiparas who do not receive this information.

3. Primiparas who receive specific information about their infants' abilities and behaviors by means of a nursing intervention will report a more positive adjustment to the maternal lifestyle at three weeks postpartum than primiparas who do not receive this information.

Purpose

The purpose of this study was to determine if a nursing intervention designed to teach primiparas about their infants' behaviors and abilities would ease role transition during the first three weeks postpartum as evidenced by:

1. decreased maternal anxiety as measured by the State-Trait Anxiety Inventory (see Appendix A).

2. decreased maternal concern about infant care as measured by the Postnatal Research Inventory (see Appendix B).

3. a more positive adjustment to the maternal lifestyle also measured by the Postnatal Research Inventory.

Assumptions

1. Respondents answered questionnaires honestly and to the best of their ability.

2. Respondents have the ability to assess their current feeling state.

3. The majority of first-time mothers want to learn more about their infants' abilities and behaviors.

Limitations

1. Factors other than knowledge of infant behaviors and abilities may influence transition to the maternal role and the reduction of anxiety. No attempt was made to assess these other influencing factors.

2. The dependent variables used in this study rely on self-report measures and therefore are subject to the limitations of this measurement technique.

3. The sample size was small and therefore the results are not generalizable except to a population with similar characteristics.

4. Subject selection was not randomized and no effort was made to match the experimental and the control groups.

Ethics and Human Rights

Following a written and verbal explanation of the purpose of this study (see Appendix C), subjects were asked to sign a consent letter (see Appendix D). A copy of this consent letter was retained by the participant. All subjects were informed that their participation was voluntary, that questions regarding any procedures would be answered, and that they could withdraw at any time during the study. They were informed that their refusal or withdrawal would in no way affect their care or the care of their infants. Subjects were assured that questionnaires would be destroyed after the information was analyzed in order to protect their anonymity. To provide the control group with information similar to that received by the experimental group, the teaching intervention and a handout (see Appendix E) was offered to them when all questionnaires were completed.

CHAPTER TWO

Conceptual Framework and Literature Review

Overview

This chapter describes the conceptual framework chosen to structure this study. Following an explanation of this conceptual framework, pertinent literature, focusing on the transition to the maternal role, is selectively reviewed. The literature review is divided into three sections. The first section focuses on studies which provide evidence for viewing maternal role transition as a critical period. The second section examines some of the variables that influence the transition process and may lead to maternal role insufficiency. The final section reviews studies that assess interventions designed to ease maternal role transition.

Conceptual Framework

The conceptual framework which has been chosen to structure this study was developed by Meleis (1975). It is a predictive and prescriptive paradigm based on the concepts of role transition, role insufficiency,

and role supplementation. This framework has been specifically designed to provide nurses with a theoretical basis for nursing diagnosis and intervention when working with clients experiencing role transition.

Meleis (1975) states that roles stem from the interaction of actors in a social system. "Role transition denotes a change in role relationships, expectations, or abilities" (p.265). A transition requires "the person to incorporate new knowledge, alter his behavior, and thus change his definition of himself in his social context" (p. 265). During the time of the role transition, social factors such as social mobility and technological and cultural changes can affect the person undergoing the role change. If the role transition is congruent with the individual's expectations and the role is well defined, it appears that the transition is accomplished with less psychological discomfort (Meleis, 1975).

However, during a role transition, the individual may experience role insufficiency. This is defined as "any difficulty in the cognizance and/or performance of a role or of the sentiments and goals associated with the role behavior as perceived by the self or

significant other" (Meleis, 1975, p.266). Role insufficiency may result from a lack of knowledge of expected role behaviors, poor role definition, or when perceptions of role behavior cues are impaired or absent. Role insufficiency can occur during developmental transitions, situational transitions, and health-illness transitions. Meleis (1975) views the transition from non-parent to parent as a situational transition that demands major interpersonal and personal shifts by the individual in relation to society and to his/her smaller social system. When role insufficiency is experienced by the individual, "anxiety, depression, irritability, lack of confidence, and a general lack of well-being" (Meleis, 1977, p.309) may occur.

Nurses are in a position to ease this role insufficiency and help the individual adjust to a new role by a process Meleis (1975) calls role supplementation defined as:

any deliberative process whereby role insufficiency or potential role insufficiency is identified by the role incumbent and significant others.... Role supplementation is further defined as the conveying of information or

experience necessary to bring the role incumbent and significant others to full awareness of the anticipated behavior patterns, units, sentiments, sensations, and goals involved in each role and its complement. (p.267)

Communication is the central process used in role supplementation "because it is through open and clear communication of symbols that roles evolve" (Meleis, 1975, p.269). Thus, the nurse must use appropriate communication skills when providing role supplementation. The nursing interventions that operationalize role supplementation include role clarification, role taking, role modeling, and role rehearsal. Roles are clarified by providing specific information or cues needed to perform the role. During role taking, the individual imaginatively assumes the role of the other person. Role taking assumes that the actor can imagine how the other is understanding the communication of significant symbols. The nurse can serve as a role model by using the behaviors, knowledge, and values that are expected in a role. Through role rehearsal, the individual tries out his role either by imagining and/or physically enacting it

and then anticipating the responses of the significant other.

The goal of role supplementation is role mastery. Role mastery is the integration or internalization of a role. Meleis (1975) states that role insufficiency is minimized and role mastery maximized "when early preventive and early therapeutic supplementation are offered without interruption before role transition occurs and during the early stages of the transition" (p.270).

Meleis (1975) suggests the need to develop and test hypotheses arising from this framework. Because the investigator believes that new parenthood is a critical period for primiparas and that these new mothers may experience role insufficiency, this study tests the effects of preventive and therapeutic role supplementation during the early stages of the transition to the mother role. In order to ease role transition and decrease the risk of role insufficiency, role supplementation has been offered to new mothers early in the postpartum period using the strategies of role clarification and role modeling as suggested by this conceptual framework. The aim of this nursing intervention is to assist the new mother to achieve

role mastery. In this study, decreased maternal anxiety, decreased concern about infant care, and a more positive adjustment to maternal lifestyle are used as evidence of the progress towards role mastery.

Literature Review

Maternal Role Transition as a Critical Period

A classic, often quoted study undertaken by LeMasters (1957) and a similar one conducted by Dyer (1963) have concluded that the addition of the first child to the family constitutes a crisis event for many couples since it forces a major reorganization of many of their roles and relationships. Both studies used Hill's (1949) definition of crisis which states that a crisis is "any sharp or decisive change for which old patterns are inadequate" (p.51). LeMasters interviewed 46 middle-class urban couples who had had a baby within five years of being interviewed. A five-point scale with the following categories was used in coding the interview data: no crisis, slight crisis, moderate crisis, extensive crisis, and severe crisis. The findings of the study revealed that 83% of middle-class urban couples experienced extensive or severe crisis in adjusting to the first child. Among other findings,

mothers reported feeling chronically tired and guilty about not being better mothers.

Dyer (1963) used a questionnaire with items "drawn from areas of marriage and family life upon which the advent of the first child was felt most likely to have disruptive effects, according to previous studies and professional opinions" (p.197). The responses were measured using a Likert-type scale. The scores from this questionnaire were then used to measure the amount of crisis experienced by the couples on a five-point scale similar to the one used by LeMasters (1957). The questionnaire was administered to 32 couples who had had their baby within two years of the study period. The findings supported those of LeMasters in that 58% of the couples experienced extensive or severe crisis while 38% experienced moderate crisis. Dyer also reported that 58% of the mothers in the study felt inadequate and uncertain about being able to fill the mother role. Couples whose children were under six months of age were still experiencing a greater degree of crisis and more problems than parents whose children were six months or older. As a result of these findings, Dyer suggests the need for preparation for parenthood through education.

Hobbs (1965) attempted to generalize LeMasters' findings to a randomly selected sample of first-time parents. He administered an objective questionnaire to a sample of 53 white urban first-time parents. The questionnaire was administered when the average age of the infants was 9.8 weeks. Hobbs does not define the term crisis but his definition appears to focus on feelings and attitudes rather than patterns of behavior as suggested by Hill's definition. Items used on this questionnaire were selected from the range of difficulties reported by parents in LeMasters' study (1957) and by other clinicians. Subjects could indicate to what degree they had been "bothered" by each item as: not at all, somewhat, or very much. Subjects were classified "into one of two or more categories for each of 15 variables" (p.369) which might be predictive of crisis and their crisis scores were then tabulated into either a slight-moderate or extensive-severe category. The selected variables included: "parents' pre- and postbirth ratings of their marriage, parents' age, parents' education, family income, whether pregnancy was desired and/or planned, whether pregnancy was postmarital, number of additional children desired, parents' preference for sex of baby,

extra help to care for baby, baby's age, baby's health, method of feeding, and hours baby slept out of 24" (p.369). Hobbs found that 86.8% of the couples experienced slight-moderate crisis while only 13.2% experienced extensive-severe crisis and that the only variable which might be used to predict difficulty with the first child was family income. These findings differ significantly from those of LeMasters (1957) and of Dyer (1963). Hobbs suggests that these differences may have resulted from parents' ability to "more readily acknowledge negative feelings about their child in retrospect than they can during the time that they are experiencing the event" (p.371). In addition, different rating scales may also have accounted for the variations in findings.

The study was replicated by Hobbs and Cole (1976) except that the data collection took place when the mean age of the infant was 25.9 weeks. They found that 68.4% of the 65 couples questioned experienced slight crisis, 22.3% experienced moderate crisis, while only 2.3% experienced severe crisis. Hobbs and Cole conclude that "it is more accurate to think of beginning parenthood as a transition, accompanied by

some difficulty, than a crisis of severe proportions" (p.730).

Russell (1974) focused on the positive as well as the negative outcomes involved with the arrival of the first child. Her sample included 296 wives and 272 husbands. The average age of the infants at the time of the investigation was 29 weeks. Crisis was defined in this study "as a change in self, spouse, or relationships which the respondent defined as 'bothersome'" (p.296). Like that of Hobbs (1965), this definition focuses on feelings and attitudes. Results of the analysis of the mothers' responses indicated that 57.5% experienced slight crisis, 39.1% moderate crisis, and 3.1% extensive crisis. The findings of the study indicated that the variables which seem to be "more relevant to adapting to the first year of parenthood may be (1) a pattern of communication which has resulted in effective family planning and increased marital adjustment, (2) high commitment to the parenthood role, and (3) good maternal health and a calm, nonproblematic baby" (p.299).

Other researchers have also found that transition to the maternal role is difficult. For example, Shereshefsky, Liebenberg, and Lockman (1974), using the

definition of crisis as a turning point or transitional period, found that the 57 new mothers in their study "were indeed involved in a crisis" (p.245). Sumner and Fritsch (1977) suggest that the postpartum period is probably one of the most difficult periods in a woman's life because she must identify with her infant, establish a relationship with the infant, and alter her lifestyle patterns in order to accommodate the infant. Sheehan (1981) found that the six mothers in her qualitative study "substantiated the theory that the maternal adjustment period during the first six weeks after delivery constitutes a potential crisis in women's lives" (p.20).

Despite the lack of a consistent definition of the concept of crisis, all studies point to the fact that the arrival of the first baby causes some difficulty for new parents.

Variables that Influence Role Transition and May Lead to Role Insufficiency

Many variables that affect role transition have been identified in the family literature. For example, Burr (1972) identified these variables as: 1) the amount of anticipatory socialization, 2) the role

clarity or the definition of the reciprocal behavior that is expected in a role, 3) the value of the role, 4) the amount of normative change to be made in assuming the role, and 5) the length of time to be spent in the role. He defines ease of role transition "as the degree to which there is freedom from difficulty and the availability of resources to either begin or stop a role in a social system" (p.407). Nye and Gecas (1976) identified the following as variables which may affect role transition: 1) the level of commitment to the role, 2) competency in the role, 3) strain and conflict with the role, and 4) the power inherent in the role enactment.

Many of these same variables have been discussed in the literature related to concerns of the primipara. Many mothers have no experience caring for newborns. Although our educational system prepares young people for a career, it does little to help them learn to be parents (Gruis, 1977; LeMasters, 1957; Rossi, 1968). Adams (1963) discovered that only 25% of the 40 mothers in her study had cared for an infant under three months of age. Such care-taking activities as feeding, bathing, and consoling concerned these mothers most. They viewed the infants' behavior as an indicator of

their care or lack of care. Adams recommends that mothers be given help to recognize the infant's behavioral cues so that they can more easily understand the meaning of the behavior.

In today's society women may have more difficulty during the transition period because of the lack of available resources. This may be due in part to the lack of cohesion in family units and the increase in the mobility of families (Briggs, 1979; Clark, 1966; Gruis, 1977; Linde & Englehardt, 1979; Melchior, 1977; Shaw, 1974). The nuclear family is now replacing the extended one and grandparents, aunts, or cousins are no longer close at hand to offer advice and support to the new mother (Rossi, 1968). Compounding this problem is the transient nature of our society. New mothers may not have the opportunity to develop close ties with neighbors and thus may not be able to depend on other families for guidance. Unfortunately, society provides minimal alternative resources. Gruis (1977) states "existing support systems are inadequate to meet the needs of the postpartum mother" (p.187).

Although this lack of societal support seems to be a major concern, it seems that the intimate support provided by a husband or significant other can help to

reduce the maternal stress associated with role transition (Crnic, Greenberg, Robinson, & Ragozin, 1984; Shereshefsky & Yarrow, 1974). However, the spouse or significant other is also undergoing a transition which makes it difficult for him to fulfill the supportive role needed by the new mother unless he also has some means of support (Briggs, 1979; Broom, 1984; Hall, 1980).

The new mother may experience role strain and conflict during the transition to parenthood. Burr (1972) defines role conflict as the presence of incompatible expectations for a social role. With increasing role conflict, role strain is experienced. The new mother must fit the demands society has for her with the expectations she has for herself and the child (Carlson, 1976; Clark, 1966; Sheehan, 1981). For many women, having a child may mean a reduction of their career pursuits, social roles, and nonfamily interests (Gruis, 1977). Rossi (1968) questions whether the gratifications of motherhood are enough to compensate for the decrease in diversified interests and social roles many women have come to expect. As well, the new mother must relinquish the fantasy image she had of her infant and accept the real baby in a short period

of time (Carlson, 1976; Grace, 1978; McKenzie, Canaday, & Carroll, 1982; Mercer, 1981).

Parenthood is an irrevocable experience and therefore the length of time to be spent in the role and commitment to the role are important variables to consider. Burr (1972) states that if the length of time in a role is expected to be short, it is easier to accept the frustrations imposed by the role. Since parenthood is a long-lasting experience, it may be more difficult to cope with the frustrations that occur within this role especially if one is not totally committed to or ready for the role. Dyer (1963) found that less crisis is experienced with a planned pregnancy than an unplanned one.

Age is another variable that may influence role transition. Jones, Green, and Krauss (1980) found in their study of 40 primiparas that mothers 19 years or older demonstrated significantly more maternal responsiveness toward their infants than women 18 years or younger and suggest that this may be due to a lack of role readiness. Mercer (1981) reports from a case study involving a teenage mother that "although the teenager demonstrated considerable growth in the mothering role over one year, she was hampered by her

psychosocial maturity in cueing into her infant's needs and in responding consistently to her infant" (p.74). As well, it has been suggested that women in their thirties may have more difficulty adjusting due to higher expectations for themselves in the maternal role (Mercer, 1981). The twenties seem to be the ideal age for parenting.

The Infant's Influence on the Role Transition Process

A widely held assumption is that infants are asocial and unable to interact with the world around them. Current research refutes this assumption. Following Wolff's (1965) categorization of the six different states of infant arousal, the infant is now regarded as a complex responsive being rather than a simple reflexive organism (Lozoff, Brittenham, Trause, Kennell, & Klaus, 1977). Korner (1971) states that "the newborn is neither the unorganized nor the passive receptive organism he is commonly believed to be" (p.611). Past research has demonstrated that "newborn infants, with their relatively sophisticated sensory systems, respond preferentially to stimuli that occur in human social interaction" (Lozoff et al., 1977 p.2). As well, neonates exhibit behavioral differences

(Korner, 1971; Korner & Grobstein, 1967; Korner & Thoman, 1970). For example, infants differ in the amount and frequency of crying, in their consolability, and in their thresholds for auditory and visual stimuli. The uniqueness of each infant may then affect the amount of interaction the infant initiates, how much mothering he elicits, and his response to that mothering. The infant is seen "as an active participant in a feedback system with his caretaker" (Nugent, 1981, p.18). That is, the care an infant receives affects his behavior and his behavior influences that of his care taker (Nugent, 1981; Sander, 1975). Mercer (1981) states that "characteristics of and behaviors of each partner, thus, interact in the role-taking process, and each partner's behavior reflects the progression of the process" (p.74).

It seems that among the variables cited as factors influencing role transition, the relationship between infant behavior and ease of role transition has been somewhat neglected. Roberts (1983) found a negative correlation with the ease of role transition, role competency, and the care giver's perception of the infant if mothers perceived their infant's behavior as

demanding more action than the "average infant" demands. Shereshefsky et al. (1974) suggest that transition to motherhood and confidence in the maternal role depends upon, among other factors, the infant's physiological functioning as well as his psychological adjustment. Ventura (1982) examined the relationship between parent coping behaviors, parent functioning, and infant temperament characteristics. She found that parents who were depressed and anxious saw their child as being less soothable and more distressed when faced with limitations. It seems that "parents of fussy infants can develop feelings of guilt, anxiety, and helplessness, and cope less effectively" (Ventura, 1982, p.270).

The gender of the infant has been linked to the type of maternal concerns. Sumner and Fritsch (1977) observed that mothers of males asked more feeding questions regardless of parity and more questions related to sleeping and crying behaviors if a male was first-born. Mothers of first-born females asked more questions related to the gastrointestinal system.

Role Supplementation During the Transition Period

Numerous studies have assessed interventions designed to assist the new mother during the transition period. Many of these interventions have been specifically designed to provide role clarification for the new mother in order to help her master her new role.

Rooming-in, which provides for role rehearsal, was evaluated by Schroeder (1977) with a sample of 20 mothers. Using an open-ended questionnaire to investigate maternal thoughts and beliefs, she found that new mothers who room-in with their infants feel closer to them and demonstrate greater competence in care-taking abilities.

Broussard (1976) postulated that televised anticipatory guidance directed toward acceptance of mothers' feelings and an understanding of common child-care problems would positively influence the mother-child relationship. The content of the television programs focused on the mother's feelings and infant behavior. Data were obtained from 318 subjects. She found that these programs had a beneficial effect on the mothers' perception of their infants as measured by the Neonatal Perception

Inventory (NPI) developed by the investigator. The NPI measures the mother's perception of infant feeding, elimination, sleeping, crying, spitting up, and the establishment of a predictable schedule. There are two NPI questionnaires, the NPI I for use in the immediate postpartum period and the NPI II for use when the infant is one month of age. Broussard argues that in our culture the emphasis has been placed on being average or better than average. Thus, she states "it seemed logical to assume that the new mother with a favorable attitude toward her baby would expect him to be better than average" (p.205). Infants who are perceived by their mothers as being more difficult to care for than the "average" infant as measured by the NPI may constitute "a population at high risk for subsequent emotional disorder" (Broussard, 1976, p.209).

Hall (1980) used a structured plan designed to teach new mothers about infant crying, feeding, spitting up and vomiting, sleeping, elimination, and predictability. The items of the tool correlated with the items on the NPI. There were 15 mothers in the experimental group who received the teaching intervention and 15 mothers in the control group who

did not. Hall found no significant difference between the control group and the experimental group in responses to NPI I but a significantly positive difference in perception as indicated by the responses on NPI II.

Although the NPI has been widely used for research and assessment purposes, it has been criticized by Palisin (1981), who questions the predictive validity of this instrument. She states that mothers may be in fact accurately perceiving their infants when rating them as below the average infant. Since new mothers have more contact with their infants than they did when the NPI was developed due to current postpartum practices such as rooming-in, they have more knowledge of their infants' behavior. Palisin also states that the "ratings reflected a maternal attitude that manifested itself in the child's behavior as a self-fulfilling prophecy" (p.285).

Brazelton (1973) has developed a neurological and behavioral assessment tool which is based on the concept that the infant "is adapted to the environment in order to interact with it and elicit from it the stimulation necessary for his species' specific motor, emotional, and cognitive development" (Als, Tronick,

Lester, & Brazelton, 1979, p.186). The 26 behavioral items that comprise the tool have been grouped together into four dimensions of newborn organization: interactive capacities, motoric capacities, organizational capacities in respect to state control, and organizational capacities in respect to physiological responses to stress (Als et al., 1979).

A number of studies have used the Brazelton Neonatal Assessment Scale (BNAS) to demonstrate infant behaviors to new mothers and help them become more familiar with their infants. Ryan (1973) used an adapted version of the BNAS, the Mother's Assessment of the Behavior of Her Infant (MABI), with a sample of 11 mothers and their infants, in order to try to positively influence maternal perception of neonatal behavior. There were no statistically significant differences in perception between the mothers who received a demonstration of the MABI two days following birth and the mothers who did not when compared at one month post-partum as measured by the NPI II.

Kang (1974) demonstrated infant behavior using the MABI in the home with both parents when the infant was two weeks old. Significant differences in the mothers' perceptions of their infants were found between the

experimental group of 5 mothers and the control group of 6 mothers at one month follow-up as measured by the NPI II. Kang concluded that it was worthwhile sharing this behavioral information with parents by saying, "the ability to perceive the infant not as a 'buzzing mass of confusion' but as 'organized with unique behaviors' may help the parents to recognize their infant as a person -- an individual" (p.40).

These exploratory studies by Ryan and Kang are important but there are limitations to their generalizability. The differences between the groups identified in Kang's study may be due to the opportunity of the experimental subjects to ask questions related to their concerns and expectations in the comfort of their home after they had cared for their infant for two weeks rather than being due to the information contained in the MABI. Ryan intervened with mothers only while Kang intervened with fathers as well. These variations in methodology may have accounted for the different results.

Davidson (1977) conducted a study similar to Kang's with 25 mothers assigned to either an experimental or control group. The purpose of the study was to investigate the effect of a nursing

intervention on the mother's postpartum adjustment and her perception of her infant. The intervention was designed to give information about infant behaviors and abilities and was conducted with the experimental mothers when the infant was twelve days old. Fathers were also present. Using the NPI II and the Postnatal Research Inventory developed by Schaefer and Mannheimer (1960), Davidson found that the 12 experimental mothers had a more positive perception of their infants than the 13 mothers in the control group. These findings were statistically significant. In addition, the experimental mothers reported less depression, irritability, and fewer negative feelings towards caring for their infants.

Perry (1983), with a sample of 57 married couples and their infants, used the BNAS to teach either mothers, fathers, or both parents about their infants' behavior. A control group received no instruction. The purpose of the study was to determine if parental perceptions of their infants would be influenced by this teaching as measured by the NPI. No statistical differences were noted. Perry suggests that this may be due, in part, to the lack of relationship between measuring tools used. As mentioned previously, the NPI

measures the mother's perception of infant feeding, elimination, sleeping, crying, spitting up, and establishment of a predictable schedule while the BNAS measures interactive behaviors and neurological responses.

Riesch (1979), studying a sample of 30 mothers, found that new mothers observed and expected behaviors which indicate interactive capacities on the BNAS but were unaware of the purposes and functions of these behaviors until they were demonstrated to them. She recommends that "nurses assess and demonstrate infants' interactive behaviors to mothers to facilitate meaningful interaction between mother and infant.... [and perhaps] strengthen the maternal-infant bond" (Riesch, 1979, p.245).

Widmayer and Field (1981) used the BNAS and the MABI in a study of preterm infants with a total of 30 mothers assigned to one of three equal groups. One group observed the BNAS being used to assess their infants and then were asked to complete the MABI. Another group were asked only to complete the MABI and the third, the control group, received no intervention. At one month of age, the infants in both experimental groups performed optimally on the interactive item. At

four months of age, the same infants performed better on the Denver Developmental Screening Test and at twelve months these infants scored higher on the Mental Development Index of the Bayley Scales of Infant Development. The investigators concluded that, "the mother, via observation of the Brazelton scale, may become more sensitized to the unique abilities of her infant, more interested in observing his or her development, and more active in providing stimulation to facilitate this development" (p.713-714).

Anderson (1981) divided a sample of 30 mothers into three equal groups to study the influence on maternal responsiveness of teaching mothers about their neonates' capacities and behaviors. One group received a class on infant furnishings. The second group received feedback about the individuality of their infants following the administration of the BNAS but did not observe the BNAS examination. Subjects in the third group observed the examination while receiving an explanation of their infants' performance. Measurement was done using the Price Adaptation Scale. Although clear-cut consistent results were not obtained across all clusters of this scale, Anderson concluded that informing mothers about their infants' behavior is an

effective means of facilitating the interaction between a mother-child dyad.

Furr and Kergis (1982), studying a sample of 40 primiparas, demonstrated that teaching new mothers about their infants' behavior using the BNAS had a statistically significant effect on maternal adaptive behavior during mother-infant feeding interactions, as measured by the University of Washington Nursing Child Assessment Project Feeding Scales. The 20 mothers in the teaching group were more sensitive to their infants' cues, more responsive to their infants' distress, and more likely to provide growth-fostering situations for their infants than the 20 mothers in the control group. A limitation of this study, suggested by the investigators (1982) was the lack of an independent observer to determine the effect of investigator bias. The investigator may have influenced the post-test measurement because of previous contact with the mother and personal time investment with the mothers who received the teaching.

Riesch and Munns (1984) compared the results of two studies they had conducted. In one study, their sample consisted of 108 mothers of full-term infants. The second sample consisted of 32 mothers of pre-term

infants. Both samples had similar demographic characteristics. They were taught about their infants' behavior using the BNAS as a teaching tool. Similar control groups received no nursing interventions. An audiotape which the experimental mothers could listen to in the privacy of their hospital rooms described neonatal protective reflexes, attending behaviors, the ability to habituate, and consoling measures. The mothers in the two treatment groups differed significantly from the mothers in the control groups in their ability to report more of their own behavior and that of their infants when measured by a Behavioral Checklist. This checklist, developed by Riesch, Wright, Linde, and Maynard (1978) was representative of the four behavioral dimensions of the BNAS. Post-test measurement occurred during a feeding session while in hospital for the term infant group and at home for the pre-term infant group.

As evidenced by the results of these studies, using the BNAS to teach new mothers about their infants' behaviors appears to influence mothers' perceptions of their infants as measured by a tool with dimensions corresponding to those of the BNAS.

There has been some controversy regarding the appropriate timing of a nursing intervention designed to teach mothers about infant behavior. Rubin (1961) examined the behaviors the new mother exhibits following delivery and classified them into two stages. The first stage, the taking-in phase, characterized by the new mother's need for dependency, occurs during the first three days postpartum. The second stage is the taking-hold phase during which time the new mother strives for independence. This phase occurs during the third to tenth day postpartum. Rubin felt that it was during this phase that the new mother was ready to focus on learning mothering skills.

The results of a study by Martell and Mitchell (1984) demonstrate that, although new mothers exhibit some of the same behaviors described by Rubin (1961), the specific time aspects are not supported. Their subjects "show decreasing amounts of 'Taking-in' and increasing amounts of 'Taking-hold' during their hospital stay" (p.148). They suggest that the "many changes in medical care, societal attitudes, prenatal education, and theories of parent-interaction have influenced the attitudes and behaviors of postpartum women in hospital settings" (p.145). It seems, then,

that new mothers have a need to learn about mothering at an earlier time than was once believed. However, Gruis (1977) asserts that "before the mother can focus on infant care activities, she must first get to know her baby" (p.188). Therefore, a nursing intervention which teaches primiparas about their neonates' behaviors and abilities in the early postpartum days may facilitate this acquaintance process.

Summary

The studies and theories reviewed in this chapter suggest that the transition to the maternal role is accompanied with some difficulty depending on a wide range of influencing variables. The interventions that have been used in the past illustrate that the nurse has an important role in assisting mothers toward mastery of their new role. It seems that this can be accomplished by providing the information or experience necessary to help the new mother perform her role and become aware of the behavioral patterns of her infant.

CHAPTER THREE

Research Design

Overview

The purpose of this study was to test the effect of a nursing intervention designed to ease the transition to the maternal role as measured by the level of maternal anxiety, concern about infant care, and adjustment to the change in lifestyle associated with the maternal role. The intervention was designed to give information to the new mother with her infant present and, where appropriate, to provide a visual demonstration of the infant's behaviors and characteristics. It was also designed to assist primiparas in identifying the behavioral abilities and reflex behaviors of their individual infants. To avoid the possibility of other nurses on the postpartum unit using the same teaching intervention, data were collected from the control subjects first. The experimental subjects were recruited and the teaching intervention was provided following completion of all questionnaires by the control group. The subjects in the experimental group participated in the nursing intervention on the third postpartum day. Data were

obtained from the mothers' hospital records and through the use of three questionnaires administered at three days postpartum. Data were again collected at approximately three weeks postpartum through the use of two questionnaires. All data were subsequently analyzed using appropriate statistical procedures.

Setting

This study took place on a 32-bed postpartum unit of a suburban hospital. This acute care hospital primarily serves the residents of the North Shore of Vancouver, British Columbia. The postpartum unit is designed to allow mothers to have their infants at their bedsides as much as possible. The intervention and the data gathering took place at each mother's bedside in rooms with one, two, or four beds. Following discharge, additional data were collected in the mothers' homes at approximately three weeks postpartum.

Selection of Subjects

Permission was obtained from the Assistant Director of Nursing, the Head Nurse, and appropriate medical staff of the hospital prior to beginning the study.

Over a period of three months, a sample of 31 mothers and their infants was obtained from the postpartum unit of the hospital. The control group consisted of 16 mothers and their infants and the experimental group consisted of 15 mothers and their infants. The investigator visited the postpartum unit approximately twice a week and invited any primipara who met the criteria for selection to participate in the study. Prior to obtaining each mother's consent, the nursing staff was asked if there was any reason why the mother should not participate.

In order to obtain consent from the mother, an informal meeting was held between the mother and the investigator. The study was explained by means of an explanatory letter (see Appendix C) and any questions were answered verbally by the investigator. Written consent was obtained (see Appendix D). Two forms were signed; one was retained by the mother and the other by the investigator.

Criteria for Selection

In order to be selected for this study, the mother and infant were required to meet certain criteria.

Criteria for the Mother

1. Primipara
2. Vaginal delivery
3. Is eligible for discharge on the fourth postpartum day
4. Lives with significant other
5. Understands and reads English
6. Lives in the Greater Vancouver area

Criteria for the Infant

1. Gestational age of 37 to 42 weeks
2. Minimal Apgar rating of seven at five minutes after delivery
3. Obvious congenital abnormalities not apparent
4. Admitted to normal newborn nursery following delivery

Independent Variable

The independent variable was a nursing intervention that was designed to teach primiparas about the behavioral abilities and reflex behaviors of their infants. On the third postpartum day, the investigator presented the intervention to each experimental subject with her infant present. A visual demonstration of the behaviors and abilities exhibited

by her infant during the presentation was provided and additional information regarding expected behaviors and abilities was discussed. The information provided included:

Infant States: deep sleep, light sleep, drowsy, quiet alert, active alert, and crying.

Behavioral Abilities: visual and auditory abilities, smiling, cuddliness, and consolability.

Defensive Abilities: crying, sneezing, gagging, yawning, and blinking.

Reflex Behaviors: startle, rooting, sucking, stepping, grasp, and hiccuping.

During this intervention, mothers were encouraged to discuss their infants' responses with the investigator. As well, the mothers were shown how to recognize their infants' state and how to interact with their infants. For example, ways of maintaining the quiet alert state were demonstrated. The format of this intervention was interactive and therefore varied somewhat from mother to mother. The intervention took between 30 and 45 minutes.

Following the intervention, a handout which included most of this information was given to each experimental subject (see Appendix E). The control subjects were given this verbal and written information at approximately three weeks postpartum following completion of the questionnaires.

Dependent Variables

Three dependent variables were used to measure the effect of the teaching intervention. The first was maternal anxiety as measured by the State-Trait Anxiety Inventory (Speilberger, Gorsuch, & Lushene, 1970) (see Appendix A). The second and third were maternal concern about infant care and maternal lifestyle adjustment as measured by a version of Schaefer and Mannheimer's Postnatal Research Inventory (1960) which had been revised by Ellis and Hewat (1982) (see Appendix B).

1. State-Trait Anxiety Inventory (Speiberger et al., 1970). (STAI).

This inventory consists of two self-report scales designed to measure two separate anxiety concepts: state anxiety and trait anxiety. The higher the score,

the higher is the anxiety level with the highest possible score being 80. State anxiety is defined as:

a transitory emotional state or condition of the human organism that is characterized by subjective, consciously perceived feelings of tension and apprehension, and heightened autonomic nervous system activity.

A-States may vary in intensity and fluctuate over time. (Spielberger et al., 1970, p.3).

The essential characteristics measured by the A-State scale "involve feelings of tension, nervousness, worry, and apprehension" (Spielberger et al., 1970, p.3).

Trait anxiety is defined as "the relatively stable individual differences in anxiety proneness, that is, to differences between people in the tendency to respond to situations perceived as threatening with elevations in the A-State intensity" (Spielberger et al., 1970, p.3).

It is hypothesized that people exhibiting high A-Trait will also exhibit A-State elevations more often than low A-Trait individuals "because they tend to react to a wider range of situations as dangerous or threatening" (Spielberger et al., 1970, p.3).

Speilberger et al. (1970) reported that test-retest correlations of the A-Trait component are relatively high ranging from .73 to .86. Because of the transitory nature of anxiety states, the test-retest correlations of the A-State component are low, ranging from .16 to .54. However, internal reliability using Cronbach Alpha coefficients is high ranging from .83 to .92. Construct validity and concurrent validity have been established by the test developers.

The A-State and the A-Trait were administered to the two subject groups on the third postpartum day. The A-State was administered again at approximately three weeks postpartum. Because the A-Trait component is used to measure how anxious individuals generally feel and is therefore relatively stable, it was not administered at three weeks postpartum.

2. Shaefer and Mannheimer's Postnatal Research Inventory (1960) revised by Ellis and Hewat (1982).

The original Inventory consisted of eight subscales and was designed to measure postpartum adjustment. It has since been revised by Ellis and Hewat (1982) to measure maternal concern about infant

care and maternal lifestyle adjustment. This revised 25-item Inventory is composed of a 13-item scale related to maternal concern about infant care and a 12-item scale related to maternal lifestyle adjustment. The highest possible score on the concern about infant care is 52 and the highest possible score on the maternal lifestyle adjustment scale is 48. Higher scores indicate less concern about infant care and a more positive adjustment to the maternal lifestyle. The internal consistency of these scales has been established with coefficients (Cronbach's Alpha) of .83 for the maternal concern about infant care at one month postpartum and .80 for maternal lifestyle adjustment at one month postpartum with a sample of 130 mothers. Content validity has also been established (Ellis & Hewat, 1982).

This Inventory was administered to both the control group and the experimental group at approximately three weeks postpartum.

Intervening Variables

No attempt was made to control for maternal age or education. In addition, the length of labor and the

amount of analgesia or anaesthetic during both labor and the delivery were not controlled.

Data Collection Procedure

Control Group

Data were collected initially on all 16 control group mothers and their infants in an interview which took approximately 30 minutes. The study was explained to the mothers and their consents were obtained at three days postpartum. Demographic data were then collected using a demographic data form (see Appendix F) developed by the investigator. This form was designed to collect descriptive information related to the subject's age, education, occupation, prenatal history, delivery experience, postpartum support, and both the mother's and father's experience with newborns as well as information about the infant's gestational age and birthweight. Information about the type of analgesia used during labor and delivery and the infant's Apgar rating was obtained from the mother's hospital record. The STAI questionnaires were then administered. Arrangements were made to visit each mother within three weeks postpartum. In some cases, appointments had to be re-arranged to accommodate the

mother's schedule. At this three week visit, the A-State component of the STAI questionnaire and the revised version of the Postnatal Research Inventory were administered. As well as collecting this information, an informal interview was conducted with each mother. The interview focused on the mother's concerns in relation to caring for her infant, her physical and psychological well-being as well as that of her significant other. After completion of the questionnaires and the interview, the new mother was offered the teaching intervention and a copy of the teaching handout. This visit varied in length from one-half hour to one hour.

Experimental Group

When all the data had been collected from the control group and they had been discharged from the postpartum unit, recruitment of the experimental subjects began. The 15 experimental subjects were recruited in the same manner as the control subjects. Consent was obtained and the demographic information and the STAI questionnaires were completed. The teaching intervention was done in the subject's hospital room and took between 30 and 45 minutes. Each

mother had the opportunity to ask questions related to her infant's behavior. As with the control group, each experimental subject was visited in her home at approximately three weeks postpartum to complete the A-state component of the STAI and the revised Postnatal Research Inventory questionnaires and to participate in an informal interview.

Data Analysis

Descriptive and nonparametric statistical procedures were used to analyze the data obtained from the demographic data form, the STAI, and the adapted version of the Postnatal Research Inventory. Means, range of scores, and standard deviations were used to describe the sample. The Chi Square procedure was used, where appropriate, to measure the differences between the experimental and the control groups. The data from the STAI and the Postnatal Research Inventory were analyzed by calculating the means, range of scores, and standard deviations. A Mann-Whitney U test was also performed on the scores obtained from these inventories to determine group differences. A significance level equal to or less than .05 was used.

CHAPTER FOUR

Presentation and Discussion of Findings

Overview

The purpose of this chapter is to present and discuss the findings of this study. The findings will be presented in three sections. The first section provides demographic and descriptive information about the subjects and their infants. The second section describes the statistical findings in relation to the hypotheses of the study. Descriptive information collected from the mothers at the three week postpartum visit is included in the third section. A discussion of the findings follows.

Presentation of the Findings

Demographic and Descriptive Information

The Mothers

A total of 36 mothers, who met the sampling criteria, were asked to participate in this study. Five mothers refused, giving reasons such as, "I just can't take in any more information" or "I'm too tired

right now." All of the mothers who agreed to participate completed the study; 15 mothers and their infants were in the experimental group and 16 mothers and their infants were in the control group. Information was collected about their age, education, pregnancy, labor and delivery experience, past experience with infants, and help during the postpartum period.

Information regarding maternal age and education levels for both groups is summarized in Table 1 and indicates that the groups of mothers were similar in both characteristics. It is interesting to note, however, that 12 out of the 16 mothers in the control group were in their twenties while only eight out of the 15 experimental mothers were in this age group. Six of these mothers were in their thirties.

Information regarding the occupation of the mothers was collected. The majority of mothers in both groups had been employed in secretarial or sales jobs. Two women in each group had been employed as health professionals. Twelve out of 16 of the mothers in the control group and 11 out of 15 mothers in the experimental group were planning to return to work by the time their infants were six months old.

Table 1

Mothers' Ages and Educational Levels

	Groups		
	Experimental	Control	Total
	(<u>n</u> = 15)	(<u>n</u> = 16)	(<u>n</u> = 31)
Age			
Range	19-32	20-37	19-37
Mean	26.66	26.06	26.36
Standard			
Deviation	4.53	4.04	4.28
Education (in years)			
Range	12-16	11-16	11-16
Mean	13.8	13.06	13.43
Standard			
Deviation	1.78	1.76	1.77

Pregnancy, Labor, and Delivery Information

Mothers were asked if they had planned their pregnancies. This information is reported in Table 2.

Table 2

Planned or Unplanned Pregnancy

	Groups	
	Experimental	Control
	(<u>n</u> = 15)	(<u>n</u> = 16)
Planned	8	13
Unplanned	7	3

$$\chi^2 = 2.78 \quad \text{d.f. } 3 \quad p = \text{n.s.}$$

Although there appears to be a difference between the groups, using the Chi Square procedure, a statistical difference was not found. However, it is surprising to note that approximately one-third of the pregnancies were unplanned.

Only three of the mothers in the control group stated that they had any prenatal complications. They considered these complications to be minor. The complications were: elevated blood pressure, fluid retention, and elevated blood glucose level. In contrast, seven of mothers in the experimental group stated they had had some prenatal complications. Five

reported mild complications such as: elevated blood sugar, varicose veins, nausea, and elevated blood pressure. Two other mothers had more serious complications. One mother was placed on bedrest for two months due to elevated blood pressure. The second mother was also placed on bedrest when she was six months pregnant due to vaginal bleeding. However, neither of these mothers experienced any complications during labor and delivery and their infants met the sampling criteria.

Mothers were asked about their attendance at prenatal classes. Although two of the mothers in the control group did not attend any, most mothers attended at least five of the six classes offered by the agency conducting the classes. All mothers who attended the prenatal classes stated that they found them helpful preparation for the labor and delivery experience.

Information about the duration of labor and the type of analgesia used during labor and delivery is summarized in Table 3.

Table 3

Duration of Labor and Type of Analgesia

	Groups	
	Experimental	Control
	(<u>n</u> = 15)	(<u>n</u> = 16)
<hr/>		
Duration of Labor		
(in hours)		
Range	3-36	1-20
Mean	10.7	9
Standard Deviation	8.8	5.3
Type of Analgesia		
None	5	1
Demerol	3	5
Entonox	2	2
Demerol + Entonox	4	1
Epidural	0	3
Demerol + Epidural	1	1
Pudendal Block	0	1
Nisentil + Entonox	0	1
<hr/>		

Mothers were asked to report the duration of their labor. The mothers' hospital records were used to obtain information about the type of analgesia used during labor and delivery. The reported means indicate that the duration of labor was similar for both groups. All mothers were awake and aware of the delivery of their infant. There was no apparent effect from the analgesia on either the mothers' or infants' conditions following delivery.

All of the fathers in both groups were present during their partners' labor and the delivery of their infants and mothers reported that this was a positive experience for both of them. However, mothers also stated that the infants' fathers had reported that they felt helpless during both the labor and delivery even though they were glad to be present.

Information regarding the mothers' past experience with infants is tabulated in Table 4. Although it appears that the mothers in the experimental group had more past experience with infants, there was no statistically significant difference. As well, the majority of women stated that they did not think that their husbands or significant others had had past experience with newborns. This supports the

conclusions of LeMasters (1957), Gruis (1977) and Rossi (1968), who suggest that today's parents, especially fathers, have little preparation for parenthood.

Table 4

Maternal Experience with Newborns

	Groups	
	Experimental (<u>n</u> = 15)	Control (<u>n</u> = 16)
Very little	5	12
Some	5	2
A Great Deal	5	2

χ^2 6.6 d.f. 5 $p = n.s.$

All of the mothers and their infants were eligible for discharge on the fourth or fifth day postpartum. Mothers were asked if they would have help when they went home and if so, who this person would be. This information is summarized in Table 5. These data indicate that the majority of new mothers had assistance at home following discharge, most often from

the infants' fathers and grandmothers. In most cases, the fathers planned to remain home from work for at least one week while grandmothers stayed for as long as they were needed. In addition, many mothers had friends or other relatives who provided additional support.

Table 5

Postpartum Assistance

	Groups	
	Experimental	Control
	(<u>n</u> = 15)	(<u>n</u> = 16)
None	1	0
Baby's Father	8	6
Mother/Mother-in-law	6	10

All but one of the mothers had visited their doctors at least once during the first three weeks following delivery. All of the mothers had been visited by the community health nurse during the first or second week postpartum.

The Infant

All infants met the sampling criteria. Gender and birth weight information are summarized in Table 6. There is no obvious difference between the groups.

Table 6

Gender and Birth Weight of Infants

	Groups	
	Experimental	Control
	(<u>n</u> = 15)	(<u>n</u> = 16)
<hr/>		
Gender		
Male	9	10
Female	6	6
Birth Weight (in grams)		
Range	2778-4125	2160-5245
Mean	3286	3430
Standard Deviation	383	578
<hr/>		

It is interesting to note that approximately two-thirds of this sample of infants were males. As well, the smallest and largest infant were in the

control group. Although none of the infants had any obvious congenital abnormalities, approximately one-half of the infants had elevated bilirubin levels and were diagnosed as having physiological hyperbilirubinemia. Two of the infants, one from each group, were given phototherapy for 24 hours when they were four days old.

Most mothers elected to breastfeed their infants. Of the 15 infants in the experimental group, 12 were breastfed while 14 of the 16 control group infants were breastfed. When the mothers were visited in their homes three weeks later, they were still breastfeeding their infants.

Findings in Relation to the Hypotheses

Hypothesis One

Primiparas who receive specific information about their infants' abilities and behaviors by means of a nursing intervention will report less maternal anxiety at three weeks postpartum than primiparas who do not receive this information. Maternal anxiety was measured by the State-Trait Anxiety Inventory (Spielberger et al., 1970). The Trait and State components were administered at three days postpartum.

At three weeks postpartum, only the State component was administered because of the relative stability of the Trait Anxiety component. These findings are presented in Table 7 and do not support the hypothesis. There is no statistically significant difference between the experimental group and the control group. The findings, however, indicate a difference between the groups for the Trait and State scales that were completed on the third postpartum day. The mean of the Trait anxiety score for the control group is higher (37.81) than that of the experimental group (35.68), but the mean for the State anxiety score for the control group is slightly lower (33.68) than that of the experimental group (35.07). According to Speilberger et al. (1970), subjects with a high Trait anxiety score should also have a high State anxiety score. There seems to be no logical explanation for why the group who has the higher Trait anxiety score should feel somewhat "less anxious" as indicated by the State anxiety scale at three days postpartum. In addition, it should be noted that there is a greater reduction in the mean of the State anxiety score for the experimental group (35.07-30.73) than for the control group (33.68-31.81) at three weeks postpartum.

Table 7

Summary of Scores on the State-Trait Anxiety Inventory

	Groups	
	Experimental	Control
	(<u>n</u> = 15)	(<u>n</u> = 16)
<hr/>		
Trait (3 days) ^a		
Mean	35.73	37.81
Standard Deviation	4.35	9.57
Range	30-44	24-52
State (3 days) ^b		
Mean	35.07	33.68
Standard Deviation	6.23	8.51
Range	25-44	21-51
State (3 weeks) ^c		
Mean	30.73	31.81
Standard Deviation	7.28	8.02
Range	22-48	21-44

^a Mann-Whitney U Value 262 d.f. 30 p= n.s.

^b Mann-Whitney U Value 252 d.f. 30 p= n.s.

^c Mann-Whitney U Value 248 d.f. 30 p= n.s.

Hypothesis Two

Primiparas who receive specific information about their infants' abilities and behaviors by means of a nursing intervention will report less maternal concern about infant care at three weeks postpartum than primiparas who do not receive this information.

Hypothesis Three

Primiparas who receive specific information about their infants' abilities and behaviors by means of a nursing intervention will report a more positive adjustment to the maternal lifestyle at three weeks postpartum than primiparas who do not receive this information.

Maternal concern about infant care and maternal lifestyle adjustment were measured by the Postnatal Research Inventory (Schaefer & Mannheimer, 1960) as revised by Ellis and Hewat (1982). This Inventory was administered at three weeks postpartum in the mothers' homes. The findings are presented in Table 8 and do not support hypotheses two or three. A high score indicates less concern about infant care and a more positive adjustment to the maternal lifestyle.

Table 8

Summary of Scores on the Postnatal Research Inventory

	Groups	
	Experimental	Control
	(<u>n</u> = 15)	(<u>n</u> = 16)
<hr/>		
Concern about Infant Care ^a		
Mean	40.15	44.23
Standard Deviation	5.99	7.49
Range	26-45	24-46
Adjustment to Lifestyle ^b		
Mean	41.42	46.33
Standard Deviation	5.26	5.42
Range	24-43	25-43
<hr/>		

^a Mann-Whitney U Value 257 d.f. 30 p= n.s.

^b Mann-Whitney U Value 256 d.f. 30 p= n.s.

There is no statistically significant difference between the experimental group and the control group.

It is interesting to note, however, that the experimental group's mean scores were lower in both the concern about infant care and the adjustment to lifestyle scale. This may be due, in part, to the fact that the investigator spent more time with the experimental mothers, and therefore, they may have felt more comfortable to respond openly on this self-report inventory.

Descriptive Information Related
to Ease of Role Transition

Although it was not intended at the inception of this study, the investigator began to ask a pattern of similar open-ended questions during the third week postpartum interview. These questions focused on the mothers' concerns about themselves, their infants, and the infants' fathers. A sample of the type of questions asked during this visit follows:

1. How are you feeling?
2. Can you tell me what it's been like for you since you came home from the hospital?
3. Are you able to get enough rest?
4. What has been your biggest concern?
5. Can you tell me a little bit about your baby's

schedule?

6. Do you feel that you can meet your own needs and those of your baby?
7. How has your husband been doing?
8. Who has given you the most help since you have been at home?

The responses were analyzed in order to categorize the mothers' comments according to their concerns, the concerns they expressed about their infants, and their perception of their partners' adjustment to the paternal role.

Maternal Concerns

The mothers' concerns were similar in both groups and, therefore, are reported as generalized concerns for the whole group. Most of the mothers stated that they had begun to adjust to their new role after the second week postpartum. It is interesting to note that seven mothers felt that the second week was worse for them than the first week. They felt this was because they were trying to do too much and not getting enough rest. About one-third of the mothers stated that they felt tired, disorganized, and frustrated. Most of the new mothers were glad to have had help at home during

the first week. The infants' fathers and the participants' mothers or mothers-in-law provided a great deal of support to these women. However, several mothers stated that they could not establish control of their time and adjust their schedules until they were left on their own. Four mothers complained about too much company and said that visitors made it difficult to establish a routine.

Most of the breastfeeding mothers were experiencing no difficulty and were enjoying the experience. All but two of the mothers stated that they felt their babies were getting enough milk. These two mothers were considering giving supplemental bottles. Two other mothers felt tied down, wanted their husbands to be able to feed the baby and so were thinking about discontinuing breastfeeding.

Approximately one-third of the mothers were concerned about their weight gain and several stated this was more upsetting than anything else. However, these mothers were aware of the need to avoid unhealthy dieting practices when breastfeeding.

A number of mothers were worried about returning to work because they had not yet arranged for day-care. Two of the women in their thirties stated that their

husbands did not want them to go back to work. This was causing some conflict since they wanted to resume their careers. However, most mothers said that they were content and glad to stay at home for at least three months.

Mothers' Concerns about their Infants

It is important to note that approximately two-thirds of the mothers stated that caring for their infant was easier than they had anticipated. Most subjects said that their babies slept well between feedings and appeared content. Crying and fussy periods seemed to cause the most concern for the other mothers. Approximately one-third of the babies had fussy periods, usually in the evening, which both mothers and fathers found frustrating. Mothers of these infants asked the investigator about ways to deal with this problem. Two mothers stated that their infants cried frequently and only slept for short periods of time during the day. It was observed that these mothers seemed more anxious and frustrated with the mothering experience than mothers of less fussy infants.

Another concern for two mothers was the possibility of sudden infant death syndrome. Because of this concern, they were reluctant to leave their babies or have their babies sleep in a separate room. It seems that this concern stemmed from reading about sudden infant deaths

Comments about the Infants' Fathers

Most mothers relied on their husbands for emotional support and, when no other help was available, to help with maintenance of the household. Fathers often prepared the evening meals and cleaned the house so that the mothers could rest or care for the infants. Some of the mothers were concerned that their partners were not getting enough rest and were finding it difficult to function at work. Most of the mothers said that the fathers enjoyed caring for their babies. Although many of them had had little previous experience with infants, all were actively participating in such care-taking activities as bathing, changing, and consoling. None of the mothers felt that the fathers felt left-out or jealous of the infant, but one mother stated that she felt a little

jealous of the amount of time and attention the father was giving the new baby.

Discussion of the Findings

In studying a process as complex as the transition to the maternal role, many variables independent of the experimental manipulation influence the outcome. Most of these extraneous variables were beyond the control of the investigator and some may have accounted for the absence of significant results. This discussion focuses on the variables and the methodological limitations that may have led to the absence of statistically significant findings.

The literature has suggested that a multiplicity of variables affect the transition to parenthood (Burr, 1972; Nye & Gecas, 1976). Mercer (1981) has hypothesized that there is a connection between the relative form and strength of these variables and that these factors may interact with one another to facilitate or hinder role attainment. The investigator believes that many of the variables that have been correlated with role insufficiency are not present in this sample of primiparas. Each of these factors will be discussed in turn.

A variable that has been identified as being essential for successful role transition is the availability of informal and formal support systems (Briggs, 1979; Gruis, 1977). Briggs (1979) suggests that support systems offer:

1. Validation of parental perceptions regarding their role change.
2. Release from the duties and stress in the home situation.
3. Concrete information regarding care of the child, care of the self, and resources available in the community.
4. Promotion of the growth potential and joys of parenthood from the sharing of experiences.
5. Emotional support provided by listening to parental concerns and fears as well as the feelings of adventure many new parents want to share.

The literature states that today's families are lacking support because they are more transient and less cohesive than they were in the past (Clark, 1966; Linde & Englehardt, 1979; Melchior, 1977; Shaw, 1974). This was not the case with this sample. Most of the new mothers had support from other family members,

usually their mothers. About one-half of the participants had lived in Vancouver, British Columbia all of their lives and had a wide network of friends and family to call upon when needed. Of the mothers not born in Vancouver, many had lived here long enough to have established an informal support network. In addition, all of the new mothers emphasized the positive support given to them by the infants' fathers.

The more formal support offered by the health care system may also be unique to this sample. Most doctors saw the mother and infant at two weeks postpartum and were readily available to answer questions at other times. Mothers stated that they had a good relationship with their doctors and called them whenever they had the need. As well, the community health nurse visited between the first and second week postpartum and would visit again if requested. Mothers stated that it was helpful to have the community health nurses visit since they were able to knowledgeably answer a variety of questions. It seems that the health care professionals in this suburban area provided a great deal of reassurance and support to these new mothers. Other communities may not be as fortunate.

Two other important variables considered to affect role transition are role conflict and role strain (Nye & Gecas, 1976). Although these women were taking on a new role, most were not going to relinquish their other roles. Thus, having a child did not decrease the number of diversified roles and interests these women had come to expect. This suggests that they may not be experiencing excessive role conflict. Most mothers stated that they were looking forward to staying at home with their babies for a short period of time but that returning to work was important to them.

The literature has suggested that less crisis is experienced with a planned pregnancy than with an unplanned pregnancy (Dyer, 1963). Although a surprising number of these pregnancies were unplanned, having the baby was not creating any problems for these mothers. In fact, these women seemed as pleased about having a baby as the mothers who had planned for their babies.

Age was previously mentioned as a factor influencing role transition. The majority of these mothers were in their twenties which is considered the ideal age for parenting (Mercer, 1981). Comments made by several mothers in their thirties and one 19 year

old mother seem to support this finding. During the interviews conducted in the mothers' homes, more of these mothers stated that they were experiencing frustration and fatigue than did those who were in their twenties.

The criteria for the selection of mothers and infants in this study led to the selection of a homogeneous sample. Many of the variables such as lack of support, a complicated delivery, or a premature infant which may negatively correlate with maternal role attainment were not present. This may have inadvertently decreased the chance of finding a positive relationship between the experimental intervention and a more positive transition to the maternal role.

There were methodological limitations in the study which may have also the findings. As the study progressed, it became clear to the investigator that spending time with each mother also constituted a nursing intervention since mothers were given the opportunity to share their feelings and concerns. Questions about intrapartal complications usually elicited an entire history of the labor and delivery. This is not surprising in the light of Rubin's (1961)

findings that one of the main needs for the mother is to resolve the labor and delivery experience. Although it was not the intent of the study to pursue these issues beyond the need to gather demographic data, it was clear to the investigator that the mothers had a need to verbalize their experiences and thus it was difficult for the investigator not to allow these descriptions. Thus, a Hawthorne effect may have improved all the mothers' outcome measures, decreasing room for improvement based on the teaching intervention.

The investigator spent approximately one-half hour with the mothers in the control group and one hour with the experimental mothers while they were in the hospital. As a result of the additional time spent with the experimental mothers, more of a trusting relationship could have been developed between the experimental mothers and the investigator than with the mothers in the control group. Consequently, these mothers may have felt more comfortable to answer the questionnaires more openly. The teaching intervention addressed the fact that the mothers may feel concern about caring for their infants. This may have given

the experimental mothers permission to admit by means of the questionnaires that they did indeed feel this concern.

While it was the intent of this study to be as consistent as possible in the delivery of the teaching intervention, physiological, psychological, and situational factors affecting both the mother and the infant made this impossible. For example, some mothers were very receptive to the intervention and seemed to take it in readily. However, other mothers were more difficult to engage and seemed to need more attention directed to themselves, without the demand of paying attention to their infants. It seems to the investigator that the mothers' physical condition as they recovers from the delivery, their overall emotional development, and their state of mind at the time of the intervention are factors which may have affected the outcome of this study. Fatigue, the initiation of breastfeeding, and the discomfort from an episiotomy made it difficult for some mothers to concentrate on the intervention. It is also unrealistic to either negate or measure the influence of the mothers' unstable hormonal balance upon their physical and emotional states.

Since mothers are usually discharged on the fourth postpartum day from the institution where the study was conducted, it was necessary to provide the intervention on the third day. Seven of the experimental infants experienced some degree of physiological hyperbilirubinemia and therefore may have been more lethargic or irritable in their reactions. It was noted by the investigator that several of these infants were difficult to arouse from the deep sleep state.

All these variables may have equally influenced each group of mothers. However, what has become apparent to the investigator is that the transition to the maternal role is affected by a number of variables which seem to be interactive and cumulative in nature. Even if the results of the study had demonstrated significantly positive results, it would have been difficult to attribute these effects to the teaching intervention alone. What was rewarding, and perhaps serves as a justification for incorporating this type of teaching intervention into postpartum nursing care, is the positive comments made by the mothers after having the opportunity to observe and discuss their infants' behaviors and abilities with a nurse. Most mothers were unaware of their infants' interactive,

visual, and auditory abilities until they were demonstrated. Some mothers had made intuitive assumptions about their infants and they were delighted when these assumptions were confirmed during the intervention. In the investigator's opinion, this teaching intervention served to provide role supplementation and was a useful and positive experience for the experimental mothers even though the measurement techniques failed to demonstrate this.

CHAPTER FIVE

Summary, Conclusions, Implications and Recommendations for Further Study

Summary of the Study

The purpose of this study was to determine if a nursing intervention designed to teach primiparas about their infants' behaviors and abilities would ease role transition during the first three weeks postpartum. It was hypothesized that mothers who participated in the teaching intervention would exhibit: 1) decreased maternal anxiety, 2) decreased maternal concern about infant care, and 3) a more positive adjustment to the maternal lifestyle than mothers who did not participate.

The conceptual framework used to structure the study was a predictive and prescriptive paradigm developed by Meleis (1975) and based on the concepts of role transition, role insufficiency, and role supplementation. A review of selected literature revealed that the transition to motherhood is stressful for most primiparas, that many variables influence the transition process, and nursing interventions can facilitate this transition.

The nursing intervention in this study was designed to teach new mothers, with their infant present, about certain infant behaviors and abilities. Most of these infants' behaviors and abilities were visually demonstrated to the new mothers. A quasi-experimental design was used. Data were collected on the third postpartum day and again during the third postpartum week from a sample of convenience that consisted of 16 mothers in a control group and 15 mothers in an experimental group. The control group completed the study before the experimental group. The subjects in the experimental group participated in the nursing intervention on the third postpartum day. Data collection tools were: hospital records, a demographic questionnaire, the State-Trait Anxiety Inventory (Spielberger et al., 1970) and a version of Schaefer and Manheimer's (1960) Postnatal Research Inventory revised by Ellis and Hewat (1982). Descriptive information regarding the mothers' concerns was gathered from informal interviews conducted in the mothers' homes during the third postpartum week.

Analysis of the data indicated that the mothers were similar in demographic characteristics. Approximately one-third of the pregnancies were

unplanned. The data indicated that more of the experimental mothers had had prior experience with newborns although the difference was not statistically significant. The mothers reported that the fathers in both groups had little or no past experience with newborns. Most mothers elected to breastfeed their infants and were continuing to breastfeed them successfully at three weeks postpartum.

There were no statistically significant differences between the control group and the experimental group in relation to maternal anxiety, concern about infant care, or adjustment to the maternal lifestyle. Nevertheless, there were some interesting findings. At three days postpartum, the mean score for the Trait anxiety scale for the control group was slightly higher than that of the experimental group and the mean score for the State anxiety scale was slightly lower than that of the experimental group. In addition, there was a greater decrease in the mean score on the State anxiety scale for the experimental group than for the control group at three weeks postpartum. The experimental mothers had a lower mean score than the control group on the concern about infant care scale and on adjustment to lifestyle scale

which indicates more concern about infant care and a less positive adjustment to the maternal lifestyle. In spite of the lack of statistically significant findings, most experimental mothers made positive comments after having the opportunity to learn more about their infants' behaviors and abilities. This serves as a reward and possible justification for incorporating the teaching intervention into postpartum nursing care.

A content analysis of the informal interviews conducted in the mothers' homes at three weeks postpartum indicated that there were no major differences between the concerns of the experimental and control mothers. Most of the mothers said that caring for their infants was easier than they had anticipated. Although some mothers stated that they felt tired and frustrated at times, the majority said that they had little difficulty adjusting to their new role. Infant crying and fussy periods caused mothers most concern. It is important to note that most mothers had support from their family and friends as well as their physicians and community health nurses.

Conclusions

The findings of this study are consistent with the theoretical underpinnings of the conceptual framework. That is, "when social conditions permit congruent role definitions, role transitions... are accomplished with relatively little friction and psychosocial discomfort" (Meleis, 1975, p.264). This relatively homogeneous sample of mothers appeared to experience little role insufficiency. This may be due to the fact that many of the variables past research has associated with difficult role transitions were absent in this population. For example, these mothers had well-developed support networks, most were of the ideal age for parenting, and the majority seemed to feel little role conflict. The investigator proposes that future research focus on developing a predictive framework which would help nurses identify mothers who are more likely to experience role insufficiency so that time and resources may be used efficiently to facilitate role mastery.

Implications for Clinical Practice

Although the aim of this study was to teach new mothers about their infants' behaviors and abilities in

an attempt to ease role transition, the time spent allowing mothers to share feelings and concerns also constituted an intervention. What surprised the investigator was the urgent need of many mothers to discuss their pregnancy and delivery experience. It seems that the challenge for nurses on busy postpartum units lies in providing time for interactions with mothers that encourage them to describe their experiences and feelings. To facilitate this, nurses need good communication skills.

The investigator believes it is essential that nurses be aware of current research into the needs of new mothers. The provision of comprehensive nursing care is dependent on the professional's knowledge base and, therefore, it is important that postpartum nurses have knowledge about infants' behaviors and abilities. These nurses have the most contact with the infants and therefore can observe their behaviors and abilities and relay their observations to the new mothers.

Although it has been stated in this study that this sample was homogeneous with respect to many demographic characteristics, this was not meant to imply that all the mothers had similar needs. In fact, as the study progressed, it became apparent to the

investigator that all mothers had individual concerns and learning styles. Use of any teaching intervention, then, should take place in the context of the assessed needs of the mother-infant dyad. Postpartum nurses are in the best position to perform this individual assessment and to time interventions so that they will occur when mothers are best able to concentrate on them. Postpartum nurses are also in the best position to refer mothers who seem to be having more difficulty to the resources available in the community such as community health nurses and postpartum support groups.

In recent years, fathers have been much more actively involved in the prenatal, intrapartal, and postnatal period. However, the focus of most postpartum units is on the mother-infant dyad and the emotional needs of fathers are often ignored. Nurses should assess the emotional needs of fathers and intervene, where necessary and feasible, to assist in meeting them. Because many fathers are actively involved with their infants, the investigator also recommends that nurses spend time teaching fathers about their infants' abilities and behaviors.

Recommendations for Future Research

Based on the findings of this study, the investigator recommends that studies be done that will more accurately predict the relative strength and interaction of the variables associated with role transition. For example, are teenage mothers with an established support network likely to experience more difficulty with role transition than mothers who are considered at the ideal age for parenting but missing this support network? As well, studies that identify the presence or absence of cumulative or interactional effects of these variables would be useful. For example, among groups at risk, do teenage primiparas experience more role strain than primiparas in their thirties?

Prior to the study, the investigator believed that the first few weeks after delivery is the most difficult period. Thus, the teaching intervention was done before the mother was discharged from the hospital. However, a few of the mothers had difficulty attending to the teaching intervention at three days postpartum for a variety of reasons. As well, many infants were functioning at a less than optimal level due to physiological factors. Therefore, the

appropriate timing of the intervention is an important factor for future investigation. In view of the fact that mothers and their infants are often being discharged before the third postpartum day, research should be conducted to determine if there are other methods of relaying this information at a more appropriate time as well as to determine the effect of the practice of early discharge on maternal role transition.

During the informal interviews, mothers of fussy infants made comments which suggested that they were more frustrated and anxious than mothers of calmer, more content infants. Past research has found that infant temperament does indeed affect the ease of role transition (Roberts, 1983). However, this investigator believes more research is needed to identify infant characteristics which most affect maternal role transition. It may be useful to assess newborns for such factors as irritability and consolability with the intent of intervening with parents of especially "high risk" infants. Because the maternal-infant dyad is a partnership, research is also needed to assess maternal temperament and its effect on the infant. It has been assumed in the past that anxious mothers transmit their

anxiety to their infants. How this affects the infant has not been conclusively determined. Are these infants fussier or less content than infants who have less anxious mothers? Or does increased crying and irritability of infants increase maternal anxiety?

Many of the mothers in the study relied on their husbands or significant others for emotional and physical support. Some of these mothers said that their partners were finding it difficult to function at work due to fatigue and emotional stress. Society is now expecting fathers to take a more active role during the prenatal, intrapartal, and postnatal period. Therefore, the investigator recommends that more research be done to determine fathers' needs during the transition period and ways to meet these needs.

In conclusion, the investigator believes that helping new mothers become confident and competent in their new role is an important nursing intervention. Role supplementation provides an assessment and intervention framework for nurses to use when assisting new mothers towards mastery of their new role.

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Appendixes

Appendix A

Self-Evaluation QuestionnaireStai Form X-1

Developed by C.D. Spielberger, R.L. Gorsuch,
and R. Lushene (1970)

Code # _____

Date _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

1=Not at all 2=Somewhat 3=Moderately so 4=Very much so

1. I feel calm.....	1	2	3	4
2. I feel secure.....	1	2	3	4
3. I am tense.....	1	2	3	4
4. I am regretful.....	1	2	3	4
5. I feel at ease.....	1	2	3	4
6. I feel upset.....	1	2	3	4
7. I am presently worrying over possible
misfortunes.....	1	2	3	4

8.	I feel rested.....	1	2	3	4
9.	I feel anxious.....	1	2	3	4
10.	I feel comfortable.....	1	2	3	4
11.	I feel self-confident.....	1	2	3	4
12.	I feel nervous.....	1	2	3	4
13.	I am jittery.....	1	2	3	4
14.	I feel "high strung".....	1	2	3	4
15.	I am relaxed.....	1	2	3	4
16.	I feel content.....	1	2	3	4
17.	I am worried.....	1	2	3	4
18.	I feel over-excited and "rattled".....	1	2	3	4
19.	I feel joyful.....	1	2	3	4
20.	I feel pleasant.....	1	2	3	4

Appendix A

Self-Evaluation QuestionnaireStai Form X-2

Developed by C.D. Spielberger, R.L. Gorsuch and
R. E. Lushene (1970)

Code # _____

Date _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you generally feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

1=Almost Never 2=Sometimes 3=Often 4=Almost Always

1. I feel pleasant.....1 2 3 4
2. I tire quickly.....1 2 3 4
3. I feel like crying.....1 2 3 4
4. I wish I could be as happy as others
seem to be.....1 2 3 4
5. I am losing out on things because I
can't make up my mind soon enough.....1 2 3 4

6. I feel rested.....1 2 3 4
7. I am "calm, cool, and collected".....1 2 3 4
8. I feel that difficulties are piling
up so that I cannot overcome them.....1 2 3 4
9. I worry too much over something that
really doesn't matter.....1 2 3 4
10. I am happy.....1 2 3 4
11. I am inclined to take things hard.....1 2 3 4
12. I lack self-confidence.....1 2 3 4
13. I feel secure.....1 2 3 4
14. I try to avoid facing a crisis
or difficulty.....1 2 3 4
15. I feel blue.....1 2 3 4
16. I am content.....1 2 3 4
17. Some unimportant thought runs through
my mind and bothers me.....1 2 3 4
18. I take disappointments so keenly that
I can't put them out of my mind.....1 2 3 4
19. I am a steady person.....1 2 3 4
20. I get in a state of tension or turmoil
as I think over my recent concerns and
interests.....1 2 3 4

Appendix B

Postnatal Research Inventory

Developed by Schaeffer and Mannheimer (1960). Revised, with permission, by R.J. Hewat and D.J. Ellis (1982), School of Nursing, University of British Columbia, Vancouver, British Columbia.

Date:_____

Age of Baby:_____

Code#:_____

Directions: Please mark (x) the response which most clearly describes your feelings about each statement.

1. I worry about whether my baby is getting the right amount of food.

often () sometimes () rarely () never ()

2. I miss my freedom since having a baby.

often () sometimes () rarely () never ()

3. When the baby cries a lot, I worry about what I'm doing.

often () sometimes () rarely () never ()

4. I've wished that I could have someone to tell me if I am doing a good job in caring for my baby.

often () sometimes () rarely () never ()

5. I have often felt unhappy and in low spirits since having the baby.

often () sometimes () rarely () never ()

6. I worry about how much clothing or how many blankets the baby should have.

often () sometimes () rarely () never ()

7. I haven't had the time to rest or relax since I came home.

strongly agree () mildly agree ()

strongly disagree () mildly disagree ()

8. Taking care of the baby leaves me on edge and tense.

often () sometimes () rarely () never ()

9. I'd feel encouraged if people would tell me my baby looks strong and healthy.

strongly agree () mildly agree ()

strongly disagree () mildly disagree ()

10. Since having the baby, I've had crying spells.

often () sometimes () rarely () never ()

11. I worry that something might happen to the baby when I bathe him.

strongly agree () mildly agree ()

strongly disagree () mildly disagree ()

12. We can't manage to go out since having the baby.

strongly agree ()

mildly agree ()

strongly disagree ()

mildly disagree ()

13. I've wished a doctor would see my baby so that he could tell me if he or she was all right.

often () sometimes () rarely () never ()

14. I've often been discouraged about not being able to care for the baby.

often () sometimes () rarely () never ()

15. I am concerned whether the baby is growing as he should.

strongly agree ()

mildly agree ()

strongly disagree ()

mildly disagree ()

16. I blame myself for problems the baby has.

often () sometimes () rarely () never ()

17. Cleaning, diapering, and caring for a baby can get a woman down.

strongly agree ()

mildly agree ()

strongly disagree ()

mildly disagree ()

18. I've felt that it would help if an experienced woman would tell me if my baby was all right.

often () sometimes () rarely () never ()

19. I had the "baby blues" (was depressed and discouraged).

for more than a week () for several days ()
for one or two days () for less than a day ()
not at all ()

20. I've worried that something was wrong with my baby.

often () sometimes () rarely () never ()

21. Taking care of a young baby keeps me from doing other things I would like to do.

often () sometimes () rarely () never ()

22. If I tried to learn more about caring for my baby, I wouldn't have as many problems with him.

strongly agree () mildly agree ()
strongly disagree () mildly disagree ()

23. I've been nervous and jumpy since having the baby.

often () sometimes () rarely () never ()

24. I've needed more help in caring for the baby and doing my housework.

strongly agree () mildly agree ()
strongly disagree () mildly disagree ()

25. I'm unhappy and discouraged about the things I can't do since I've had the baby.

often () sometimes () rarely () never ()

Appendix C
Explanatory Letter
(Control Subjects)

My name is Jenise Brouse. I am a registered nurse and a graduate student at the University of British Columbia. I would like to invite you to participate in a study I am doing which focuses on helping new mothers adjust to their babies.

I would like you to complete two questionnaires while you are in the hospital and again when your baby is three weeks old. Both will take about thirty minutes of your time. I will bring the questionnaires to you in the hospital and at your home. When I visit you at your home, I will be happy to offer you some information about infant behavior in the form of a written handout if you desire.

You may choose not to participate in this study or refuse to answer any questions at any time. Doing so will in no way affect your care or the care of your baby.

If you are interested in participating in this study, please sign the attached consent form.

Thank you for your time,

Jenise Brouse, R.N., B.S.N.

Appendix C

Explanatory Letter

(Experimental Subjects)

My name is Jenise Brouse. I am a registered nurse and a graduate nursing student at the University of British Columbia. I would like to invite you to participate in a study I am doing which focuses on helping new mothers adjust to their babies.

The study will involve about an hour of your time while you are in the hospital. I will ask you to fill out two questionnaires and then give you some information about your infant's behavior and abilities. When your baby is about three weeks old, I will visit you in your home and ask you to fill out two more questionnaires. This visit will take approximately one half hour.

You may choose not to participate in this study or refuse to answer any questions at any time. Doing so will in no way affect your care or the care of your baby.

If you are interested in participating in this study, please sign the attached consent form.

Thank you for your time,

Jenise Brouse R.N. B.S.N.

Appendix D
Consent Form
(Control Subjects)

I understand how this study entitled "Easing the Transition to the Maternal Role" and being conducted by Jenise Brouse will involve my baby and me. I understand that this study will take approximately one and one half hours of my time. I will be asked to complete two questionnaires in the hospital and again at my home when my baby is three weeks old. I will have the opportunity to receive some information about infant behaviors and abilities after the questionnaires have been completed. The results of the study will be written in such a way that the baby's and my identities will remain anonymous.

I understand that I may choose to withdraw from this study at any time and it will in no way affect my care or the care of my baby. I may also refuse to answer any questions at any time during the study. I will be able to ask questions at any time about any procedure.

Mother's Signature

Copy Received

I would like a summary of the results of the study.

Yes ____ No ____

Appendix D

Consent Form

(Experimental Subjects)

I understand how this study entitled "Easing the Transition to the Maternal Role" and being conducted by Jenise Brouse will involve my baby and me. I understand that this study will take approximately one and one half hours of my time. I will be asked to complete two questionnaires in the hospital and then I will receive some information about infant behaviors and abilities. When my baby is about three weeks old, I will be visited in my home and asked to fill out two questionnaires. The results of this study will be written in such a way that the baby's and my identities will remain anonymous.

I understand that I may choose to withdraw from this study at any time and it will in no way affect my care or the care of my baby. I may also refuse to answer any questions at any time during the study. I will be able to ask questions at any time about any procedure.

Mother's Signature

Copy Received

I would like a summary of the results of the study.

No ____ Yes ____

Appendix E

Your Infant's Behavior and Abilities

This informational handout is designed to help you become familiar with some of the behaviors and abilities of your new baby. It will describe infants' sleep and awake behaviors, ways to comfort them, seeing and hearing abilities, and reflexes. Many people believe that infants are helpless and unable to interact with the world around them but I am sure you have already noticed ways in which your baby is trying to communicate with you. As you become more familiar with your baby, you will find it easier to understand her messages.

Sleep Behaviors

Each baby has six levels of awareness. These levels are known as states. Learning to recognize these states will help you care for your baby.

The first state is called deep sleep which usually makes up about one third of your infant's sleep time. When your baby is in this state of deep sleep, you will notice that she appears very quiet and peaceful. Her breathing is regular and deep. Your baby may startle

occasionally causing her body to shudder but she will quickly return to this state of quiet sleep.

When deeply asleep, babies are usually able to shut out the world around them. During this time, you may find it interesting and useful to observe how your baby reacts to noise or light. Briefly shine a flashlight over your baby's closed eyelids or ring a small bell, wait 15 seconds and then repeat several times. At first, babies usually blink and startle but return to sleep without rousing. After several times of shining the light or ringing the bell, your baby may not respond at all. This means that your baby can easily "turn-off" or "tune-out" environmental stimuli. Some babies have more difficulty shutting out environmental disturbances than others. If you find that your baby is easily disturbed by noise or light, you may wish to provide a quiet dark place for her to sleep. If she is able to shut out the stimulation, you will not have to be as concerned about noise and light in her sleeping environment.

Deep sleep is interspersed with periods of light sleep, another sleep state. During light sleep, you will notice that your infant has some body movements, she may grimace or yawn, and flutter her eyes beneath

closed eyelids. Her breathing pattern may be irregular. Some parents are tempted to feed their babies when they notice these behaviors without realizing that their babies are actually asleep and not ready for feeding. This is a state in which babies are more easily disturbed.

Another state is called drowsy. From this state, babies may either wake up or go back to sleep. Their eyes have a heavy lidded and glazed appearance and their breathing patterns are also irregular. If you wish to arouse your baby to more awareness, you may provide something for her to see, hear, or suck. Babies left alone without any stimulation, often return to sleep.

Awake Behaviors

Babies can be in any of three levels of awake states: quiet alert, active alert, and crying. The quiet alert state is the most sociable state for your baby to be in. At this time, you will notice that your baby's eyes are bright and widely open. Her face looks intent and aware and she will focus on your face, voice, or moving objects. Giving your baby something to see, hear, or suck will help your baby to remain in

this state. This is also the optimal period to feed your infant.

In the active alert state, your baby squirms more and does not seem to have the same ability to concentrate. She may have brief periods of fussiness and be more sensitive to hunger, fatigue, noise, and excessive handling.

The final awake state is crying which is a communication signal that lets you know that your baby has reached her limit. Babies cry for many reasons, some of which are more apparent than others. As you become familiar with your baby's behavior, you will be able to distinguish a hunger cry from a cranky or tired cry. It will take time for you to learn what situations are likely to cause your baby to cry and recognize the various cries.

Ways to Comfort Your Baby

Infant crying is frustrating and challenging for most parents. It may help you to know that most babies cry much less after they are six weeks old. It is usually a good idea to comfort your baby when she cries because babies seem to quieten more easily if they are not left to cry for a long time. You do not

need to worry about spoiling your baby during early infancy. Sometimes babies can quieten themselves, but at other times they need help from another person to become calm. Babies quieten themselves by sucking their fingers or fists, by changing position, or by paying attention to voices or faces.

If your baby is unable to console herself, there are a variety of activities you may try to help comfort her. Try just placing your face over her crib and speaking quietly. You could try placing a hand on her tummy or swaddling her arms in a blanket. Holding or rocking your baby may console her. Sometimes if you hold her over your shoulder, she will stop crying because she can notice more of the things around her. Babies need to suck and giving her a pacifier or a feeding can also help her quiet down. Different methods of consoling work at different times. As you become more acquainted with your baby, you will find the best ways to console her.

Included in this acquaintance process is observing how your baby likes to be held. Some babies snuggle and mold to your body while others seem to stiffen and feel uncomfortable being held this way. This is an indication of your baby's individuality and does not

mean your baby does not like you. Look at the way your baby reacts to being held and then decide which method of holding is best for the baby and you.

Seeing and Hearing Abilities

Many people think that babies cannot see until they are about six weeks old. However, it is now known that shortly after birth, newborns are able to focus and follow a face or object that is approximately seven inches from their faces. Babies seem to prefer human faces, bright patterns, and moving objects. They will watch your face best when they are in the quiet alert state.

Babies also hear quite well and prefer sounds within the human voice range. When a sound is heard, newborns become quite still, brighten their eyes, and move them in the direction of the sound. Some newborns will turn their heads and search for the sound.

Reflexes

Very little is known about the tentative smiles that babies make. It was thought that the first smiles were just a reflex but today, many feel that early smiles could be sociable smiles. Your baby quickly learns that smiling pleases you. You may have trouble

getting your baby to smile at first but soon your baby will smile in response to you.

Your baby's nervous system is immature meaning that it is not yet fully developed. That is why you may notice she trembles after she cries or when she is cold. This immaturity is also why babies hiccup frequently. I am sure that you have already observed these behaviors. As your baby matures, they will decrease. Hiccuping can be helped by trying to burp your baby, giving her a little to drink, or putting her to bed on her tummy. Hiccuping usually stops by itself in about ten minutes.

Even though the baby's nervous system is immature, there are some reflexes that babies use to protect themselves. The ability to cry and communicate displeasure is one of the best methods of protection. Other methods include coughing or sneezing to clear the airway, blinking if something approaches the eyes, and gagging so that nothing goes into the lungs. If you place your baby on her tummy on a firm surface with her face against the surface on which she is lying, you will notice that she lifts her head and turns it to one side to protect herself from smothering. If something covers your baby's face , she will try to remove it

with her hands. This protective reaction probably explains why babies do not like to have clothing pulled over their heads.

You have probably noticed that your baby will turn her head in the direction of your touch on her cheek. This is called the rooting reflex and is helpful when feeding, since your baby will turn towards the nipple that touches her cheek. The strong need to suck is another reflex. If you touch your baby's lips, she will make sucking and swallowing motions.

The startle reflex is one of the most notable reflexes. Sudden movement and loud noises will cause your baby to fling her arms and legs away from her body and then bring them back. Your baby may cry after being startled to show her displeasure. This reflex disappears when your baby is about four months old.

Newborns are so unique that it will take you some time to become familiar with and understand your baby's behavior. At times, you may feel frustrated. Remember that most new mothers feel the same way. Time and patience will help you adjust to your new role as mother. I am sure you will find it truly exciting to discover your baby's capabilities and the way she is able to communicate her needs to you.

Appendix F

Demographic Data Form

Data to be obtained from mother and hospital record

Code #

Mother:

Age:

Marital Status:

Grades Completed at School:

1. less than 8

2. 8-10

3. 11-12

4. community college or technical school

5. university

6. post baccalaureate degree

Occupation Prior to Pregnancy:

Prenatal History:

Gravida ____ Para ____

Planned / Unplanned Pregnancy ?

Prenatal Complications: _____

Labor and Delivery History:

Length of Labor:

Analgesia / Anaesthesia:

Labor Support:

Delivery Complications: _____

Infant:

Sex:

Birthdate:

Gestational Age:

Birthweight:

Apgars: 1:___ 5:___

Breast:___ Bottle:___

Mother's Experience with Newborns: _____

Help for Mother at Home? If yes,

who? _____

For how long? _____

Prenatal Classes?

Father's Experience with Newborn: _____

Intervention Date:

Follow-up:

Date scheduled:

Date done:

Anecdotal Notes: