NURSE-INITIATED TELEPHONE FOLLOW-UP
OF POSTPARTUM WOMEN

by

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ABSTRACT

The purpose of this study was to determine whether or not a nurse-initiated telephone contact with postpartum women at home is an effective means by which well postpartum families can receive continued professional care, guidance and support. The 99 subjects were selected at one U.S. Air Force Base hospital. Both groups consisted of multiparae and primiparae; women who had Cesarean sections were included.

It was hypothesized that mothers who receive nursing follow-up by telephone two days after hospital discharge would identify fewer concerns and less intensity of concerns than a group of mothers who received no nursing follow-up in the postpartum period.

The research method used was an experimental design utilizing a treatment group and a control group. A pretest questionnaire was completed on all subjects in the hospital. The 62 subjects in the treatment group received a nurse-initiated telephone contact two days after hospital discharge. The phone call was made for the purpose of answering mothers' questions and offering information and anticipatory guidance about postpartum adjustment. The 37 control subjects received no phone contact. At six weeks, all subjects completed an interview and questionnaire developed by the investigators related to postpartum concerns and adjustment.

Data analysis revealed one significant difference between the two groups of mothers in the hospital--control subjects tended to
score higher on physical adjustment than did experimental subjects. This initial difference may have given control subjects an advantage in postpartum adjustment and may have suppressed the effect of the nursing intervention on the experimental subjects. Analysis of numbers and intensity of concerns at six weeks revealed only one significant difference between the groups. Multiparous women in the experimental group had significantly greater intensity of concern with family planning than did multiparae in the control group. Correlations found in the data analysis indicated that women who received the phone contact may have become more comfortable asking questions and expressing concerns. The data also suggested that the telephone contact had a cumulative effect with existing home support systems and with the mother's education in reducing the concern with depression at six weeks. The data indicated that new mothers, both multiparae and primiparae, identify a major focus on self care and infant care at two days after delivery with a dramatic shift to focus on psycho-social concerns at six weeks.

Recommendations for further investigation and for postpartum care are included.
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CHAPTER I

REVIEW OF THE LITERATURE AND INTRODUCTION

Maternity care in the United States at present focuses primarily on provision of antepartal and intrapartal care. That care has become increasingly more family centered in an attempt to provide more relevant maternity services. However, while advances have been made in antepartal and intrapartal care, the provision of care in the postpartum period has been neglected. The postpartum period is today the most vulnerable one for the health of mothers and infants, for beginning mother-child relationships, and for development of other relationships and roles within the family unit. Mothers and infants are often discharged from the hospital with no resources available to help them and their families cope with the problems that commonly arise at home. Development of innovative care and support systems for the postpartum family should be a high priority challenge for maternity care providers.

The puerperium is a time of many physical, psychological, and social changes for the mother. She must come to terms with body changes as organs return to normal, muscles regain tone, lactation is established and tissue healing is completed. If the woman has a postpartum complication such as mastitis, endometritis, or thrombophlebitis, the symptoms are likely to occur after the third postpartum day (Hellman & Pritchard, 1971), a time most normal postpartum women
are already at home. As the mother tends her infant she may experience feelings of inadequacy in her new mothering role. She may struggle with a sense of emptiness as she adjusts to her infant as a person apart from her own body. She is confronted with the baby’s surprising otherness and must adjust to a child who may be quite different from the fantasy baby (Caplan, 1961). Feelings of maternal love may not be immediate, and this is a source of concern to many mothers. They need to know that it is normal if they do not feel motherly love for their infants as soon as they are born (Caplan, 1961; Kitzinger, 1975).

Commonly reported problems at this time are sleep deprivation, chronic exhaustion, extensive confinement to the home, additional housework, and decline in sexual response (LeMasters, 1965). Other studies of postpartum women show their high concern with the proper care of their babies and with the characteristics and behaviors of their infants (Adams, 1963; Clark, 1966; Dilworth, 1965; Evans, 1968; Melchior, 1975; Rice, 1964; Wilson, 1973). Primiparae and multiparae alike express needs for explanation of physical condition, and physiological and emotional changes within themselves (Dilworth, 1965; Evans, 1968; Melchior, 1975; Wilson, 1973). Anxiety about resumption of sexual activity after delivery is also common (Falicov, 1973; LeMasters, 1965). Other psychosocial involvements which are a source of concern to the new mother are coping with critical attitudes of family and friends, and adjustment of older children and spouse to the new baby (Evans, 1968; Melchior, 1975; Wilson, 1973). Women may also experience conflict over giving up a satisfying career in order
to bear and tend their infants (Walker, 1974).

Along with these problems, transient depression (the so-called "baby blues") often occurs, probably more frequently than is generally thought. Robins (1962) reported that transient depression was identified in about 80% of the population of normal postpartum women. Mild depression, fatigue and tearfulness occurring for one or two days during the early puerperium are very common. Pitt (1968) in a study of 100 postpartum women from the maternity wards of the London Hospital found that 50% were suffering from "maternity blues." Of these, 66% developed the condition within four days of delivery and 26% developed it on the third day. Most women described tearfulness and despondency lasting from one hour to most of the day on one to three days. Anxiety, poor concentration, and forgetfulness were also listed as significant symptoms. Chase (1976), in her study of 55 home births in Salt Lake County, Utah, noted a 38% incidence of postpartum depression, lasting from one to seven days.

The new father also experiences changes during the puerperium. He is likely to feel a very strong attraction to the new infant, as though he is totally engrossed in the newborn (Greenberg & Morris, 1974). An "engrossed" father is not likely to feel excluded or pushed out by the infant, but he may be confused by his own tender and affectionate feelings toward the child. Although there is a trend toward recognition of the nurturing role of the father, he may need permission to be involved in such a way with his child. The new father may be secretly jealous of the infant, and depressed and anxious about his own inadequacy as protector and provider for his family (Duvall,
1971). Fathers are also concerned about their ability to perform infant care skills (Obrzut, 1976).

Together, the new parents experience adjustment periods in their relationship with each other. Parenthood changes the way a man and woman relate to each other; aspects of personality not previously revealed in their relationship may surface with the new roles of parenthood. Spouses may fear possible displacement of affection from mate to child and therefore have difficulty accepting their parenthood (Caplan, 1961; Donner, 1972).

Parents have increased difficulty sharing outside social life. Their time together at home is changed also. This seems especially true with their sexual relationship. They come to realize that no other relationship than the family relationship requires that its members place themselves so continuously and unreservedly at the disposal of the others (Bowlby, 1953).

Economically the family may experience increased stress because of added expenses incurred upon arrival of the new baby. If the woman was working before the birth of the baby, the family faces at least temporary loss of the second income.

In adjusting to new roles as parents, spouses, especially the mothers, undergo phases described by Rubin (1961, p. 754) as taking-in, taking-hold, and letting-go. Taking-in (birth to about three days) includes the couple's efforts to absorb the experience of labor and delivery and the woman's efforts to regain a sense of control over her own body. In the taking-hold phase (third day until the task is accomplished), mothering tasks and infant care tasks take priority.
The father and other children may feel left out during this time. Throughout the puerperium, the mother must cope with acceptance of the new infant as a separate, unique individual and must formulate new family relationships which include the new baby. This acceptance and formulation of roles is a letting-go of what has been the norm in the past and the taking on of the new maternal and family roles. These phases make up some of the psychological tasks of maturation as the parents accept their new responsibilities and roles.

Cultural conflicts over the parenting role are a source of problems for the new parents. Our culture romanticizes parenthood but provides little preparation for the realities of a baby (Aguilera, Messick, & Farrell, 1970; Brazelton, 1974; Caplan, 1961; Donner, 1972; Jones, 1975; LeMasters, 1965; McBride, 1973; Walker, 1974). There are few guidelines for young mothers to reassure them about how well they are mothering. The traditional supports of an extended family who could show young parents how they did it and on whom they could rely for support and guidance, have not been replaced by neighbors, health-care professionals, or child-rearing literature. In other cultures, the postpartum period is a time when social customs serve stabilizing purposes. The knowledge about parenting is secure within the older generation who quietly hands it on to the new young parents when they need it. Most of the young parents in America's small families face unnecessary tension during the puerperium because of lack of strong extended family support, and, as a result, find themselves being forced apart rather than being bound more firmly together (Brazelton, 1974).
Although the support of the extended family is seen as a positive force, it can also be a source of conflict. America has become such a "melting pot" of cultures that it is common for spouses to have completely different cultural backgrounds, each with its own desirable manner of raising children. Thus, young parents often receive conflicting advice from their families, and from the media. One school of thought encourages the parents to rely on their own feelings and knowledge while another advocates reliance and dependence on advisors (Jones, 1975).

Although it is expected that parents will choose among competing and conflicting sources of child care advice, it is important that they choose the "right" advice. Mothers especially experience pressure to be "good mothers" (McBride, 1973), for mothers in contemporary American culture are regarded as the major determiners of their children's subsequent adjustment (Fischer & Fischer, 1963). Although women must select among competing advice, with life-long guilt over the child's problems as the result of making a "mistake," women are expected to discharge their child care responsibilities by themselves without the assistance of their own parents and without prior preparation for assuming the maternal role (Lopata, 1971).

It is often thought that because they live in isolated nuclear families, women in contemporary America are isolated from contact with their extended family and are unable to call upon relatives for assistance. The problem is not one of physical isolation; women do often maintain extensive contact with their own parents (Cohler, Grunebaum, Weiss, & Moran, 1971). Clark (1966) and Rappoport (1965)
observed that problem situations in the postpartum period had a very positive effect on the woman's utilization of significant others. The problem is that even when the mother's family lives near, it is not considered desirable after the first few postpartum weeks for a new mother to ask her family to help with the care of her child (Fischer & Fischer, 1963).

There are several other factors which are sources of conflict in the postpartum period. Consumers of health care are dissatisfied with fragmented and depersonalized systems they must use (Adamson & Watts, 1976; Arms, 1975; Haire, 1972; Shaw, 1974; Stewart, 1976). The obstetrician seems to relinquish responsibility for the infant and the pediatrician seems equally unconcerned about the mother's needs. The mother may experience no continuity in the personnel who provide maternity services to her (Arms, 1975; Haire, 1972). As a result, the family becomes frustrated trying to obtain satisfying health care, or they decide to opt out of the system and choose no care at all (Arms, 1975; Chase, 1976; Stewart, 1976).

With the redefinition of femininity and masculinity there is a concurrent redefinition of sex roles in parenting. Emphasis on human liberation has led many women to reconsider to what extent they are willing to have their lives dominated by the responsibilities of motherhood. For many fathers, it has meant new freedom to enjoy and nurture their children (Walker, 1974). Uncertainty about changing roles may make it difficult for new parents to comfortably establish their own family relationships.

Due to the number of changes in the puerperium, families are
more susceptible to crisis at this time than at other periods of life (Adams, 1963; Baird, 1976; Caplan, 1961; Clark, 1966; Donner, 1972; Dyer, 1965; Kitzinger, 1975; Melchior, 1975; Rice, 1964; Rubin, 1975). The essential factor influencing the occurrence of crisis is an imbalance between the difficulty and importance of the problem and the resources the family has immediately available to deal with it (Caplan, 1964). In crisis, the family faces a problem that cannot readily be solved by using the coping mechanisms that have worked for them before. As a result, emotional strain and anxiety increase and the family becomes less able to find a solution (Aguilera, Messick, & Farrell, 1974; Caplan, 1961; Hill, 1965). A period of disorganization follows during which many unsuccessful attempts at solutions are made. Eventually some kind of adaptation is reached, which may or may not be in the best interests of the people involved. Thus, a crisis does not last longer than about four to six weeks (Caplan, 1961). Crisis intervention theory and practice have shown that the way people handle any significant stress situation in a crisis will have far-reaching effects on their future mental health.

The view of crisis as a transitional period presenting an individual both with an opportunity for personality growth and with the danger of increased vulnerability to mental disorder, the outcome of which in any particular instance to some extent depends on his way of handling the situation, is to be contrasted to earlier views of stress or trauma as etiological factors in mental disorder. According to such views, stress was never helpful. The best that could be hoped was that it would do no harm. This theory did not account for the common experience that individuals who succeed in mastering a distressing experience in particular ways often appear strengthened by this and better able to deal effectively in the future not only with the same stress but also with other difficulties. (Caplan, 1964, p. 36)
A developmental crisis is a stage of the normal life cycle in which periods of physical, psychological and social changes are accompanied by disturbances of thought and feeling (Caplan, 1961). The new family, especially one with a first child, undergoes a developmental crisis during the puerperium. LeMaster's data (1965) on postpartum families with a first child revealed that 83% of the study group reported extensive or severe crisis. Normally the family is seen as living in a dynamic state of emotional equilibrium with the goal always to return to, maintain, or improve that state. In a crisis the family members experience a lack of success with old problem-solving responses and anxiety increases. The members call upon reserves of strength and emergency problem-solving mechanisms to return them to a state of equilibrium. The problem may be solved at this point and tension reduced. If the problem continues and can neither be solved or avoided, tension mounts further and a major disorganization of the family may occur (Caplan, 1961). During crisis, the family is more susceptible to influence by others than at times of stable functioning. Help offered by significant others may have a major effect in determining choice of coping mechanisms, which in turn will influence the outcome of the crisis (Caplan, 1964). Rubin (1963) found that postpartum women are especially open to the influence of significant others three to four days after delivery. The mother and the whole family are emotionally accessible to help; this makes the timing of intervention in the postpartum period of strategic importance.
The more prepared a couple is for parenthood, the smaller the crisis they experience (Gordon, Kapostin, & Gordon, 1965; LeMasters, 1965). Simple instructions showing how to reduce role conflict with the motherhood role can have profound and lasting beneficial effects upon the social adjustment and mental and physical health of parents and child (Gordon, Kapostin, & Gordon, 1965).

If mothers have received support and help through their childbearing, they have more positive attitudes about their mothering role and are more successful with breast feeding and care of their infants (Newton & Newton, 1950). Most failures with breast feeding are attributed to psychological factors (Call, 1959), a situation which could be alleviated if adequate support were received. Support which facilitates the maternal-infant interaction has profound effects on maternal-infant bonding, on the infant's subsequent psychosocial development (Bell & Ainsworth, 1972; Klaus, Jerauld, Kreger, McAlpine, Steffa, & Kennell, 1972), and possibly on the infant's developing linguistic behaviors (Ringler, Kennell, Jarvella, Navojosky, & Klaus, 1975).

If a history of anxiety and depression is elicited during pregnancy, there is a likelihood that this will continue and become more evident during the postpartum period and be associated with an infant developmental distress syndrome (Lewis, Ironside, McKinnon, & Simons, 1974). Careful follow-up of postpartum depression is needed for these women. Mothers should know that it is common to experience transient postpartum depression (Hatrick, 1975; LaLima, 1976), because such guidance helps them to anticipate depression and to cope with it.
if it occurs (Hatrick, 1976). While still in the hospital, mothers sometimes identify anxiety about what support system they will find at home. In one study (Carey, 1968), three out of five mothers expecting poor family support had colicky babies and identified high anxiety in themselves at the six-week postpartum check-up. All these studies point out the need for postpartum support of the new family.

Outcome of a crisis may depend to a significant degree upon ready availability of appropriate help. Health care providers who help parents at the point when the new family is initiated are taking on a challenge in preventive psychiatry which can have benefits for the whole family. Parents should be helped to express their feelings of frustration and guilt associated with parenthood in healthy and constructive ways (Walker, 1974). Professionals should offer support, encouragement, and information, and should assist parents to identify and clarify feelings and values related to parenthood.

The aspects of crisis that are significant for primary prevention are outlined by Caplan (1964):

1. The outcome of a crisis is in most cases not determined by its antecedent factors, such as the nature of the hazard or the personality or biopsychosocial experience of the individual. . . . What actually occurs depends on the interplay of endogenous and exogenous forces in the course of the crisis. External intervention during the disequilibrium of crisis may . . . lead to an unexpected result—good or bad.

2. During the crisis, an individual experiences a heightened desire for help, and the signs of his distress evoke a helping response from those around. . . .

3. During the disequilibrium of the crisis, a person is more susceptible to influence by others than during periods of stable functioning. (pp. 53-54)
Crisis therefore presents care-giving persons with a remarkable opportunity to influence the mental health of others.

Recommendations for follow-up support during the puerperium have been made by many authors (Adams, 1963; Aguilera, Messick, & Farrell, 1974; Baird, 1976; Caplan, 1961; Clark, 1966; Donner, 1972; Evans, 1963; Kitzinger, 1975; LaLima, 1976; LeMasters, 1965; Melchior, 1975; Peck, 1960; Rhode, 1974; Rice, 1964; Rubin, 1975; Wilson, 1973). The most commonly reported methods of support are referral to public health agencies, and home visits and/or telephone contact with the new mother by members of the hospital staff (Ament, 1973; Ernst & Forde, 1975; Rising, 1975; Wilson, 1973; Yanover, Jones, & Miller, 1976). A few reports indicate that telephone hot-lines have been established to serve childbearing families (Anstice, 1972; Diamond, 1972; Smith, 1975). An approach known as crisis intervention has been developed in which techniques are used to offer the immediate help a person in crisis needs to re-establish equilibrium. This approach has been advocated by a number of authors in follow-up support of the new family (Aguilera, Messick, & Farrell, 1974; Baird, 1976; Caplan, 1961; Donner, 1972; Halstead, 1974).

The goal of crisis intervention is the resolution of an immediate crisis. Its focus is on the present and on restoration of the individual to at least his pre-crisis level of functioning. The average length of treatment is one to six sessions. The intervention approach can be individual or generic. The individual approach places emphasis on the professional's assessment of the interpersonal and intrapsychic processes of the person in crisis and is used by mental
health professionals when the generic approach doesn't help. The
generic approach focuses on the characteristic course of the parti-
cular kind of crisis rather than on the psychodynamics of the individ-
ual person. This intervention is well suited for use by non-mental
health professionals. Methods used are direct encouragement of adapt-
ive behavior, general support, environmental manipulation, and antici-
patory guidance (Aguilera, Messick, & Farrell, 1974). This approach
seems well adapted to helping people through the crisis of new par-
enthood.

The steps in crisis intervention (Aguilera, Messick, &
Farrell, 1974) are:

1. Assessment of the individual and his problem. Referral
to a more skilled professional is made if deemed necessary.
2. Planning the therapeutic intervention, and investigation
of coping skills and support systems.
3. Intervention--helping the individual gain an intellectual
understanding of his crisis, helping him express present feelings,
exploration of past coping methods used, and suggestions for new
coping methods.
4. Resolution of the crisis and anticipatory guidance. (p. 16)

Nurses have a role in crisis intervention that is not open to
any other health care specialist (Caplan, 1961). The nurse is closer
to the patient, both in terms of time spent with the patient, and in
terms of a social and psychological closeness. Patients see nurses
more as social equals and, as a result, will more freely relate to the
nurse. Yet, the nurse is still an authority figure whose advice is
taken seriously. The people who most strongly affect a person under-
going crisis are those linked to him by the bonds of his basic needs
for love and interaction and those who fit in with his needs for
authority and dependence (Caplan, 1964). Nursing education's emphasis
on care-giving, supportive techniques, and appropriate social behavior are essential in crisis management (Baird, 1976).

Home visits by public health nurses or by staff of the postpartum hospital unit have been used somewhat successfully for follow-up of postpartum families. Due to large caseloads and the time required for home visits, "problem" postpartum families receive the follow-up and "normal" families receive minimal, if any, contact (Day, 1963). One author noted that home visits may not be as effective as hoped in providing emotional support to families (Dilworth, 1965). Chart review indicated that public health nurses consistently recorded physical needs of mothers and babies but few recorded any psychological or emotional needs or counseling done in those areas during home visits. Support given via the telephone may be as effective as support given by home visiting (Wilson, 1973). In an experimental study with a sample of 20 postpartum women, Wilson (1973) demonstrated no significant difference in concerns at six weeks between women followed by home visit and those followed by telephone.

The telephone has been used by nurses and other professionals to provide information and support to patients. Crisis intervention centers make themselves available by telephone to people under stress (Anstice, 1972; Diamond, 1972; Smith, 1975). The telephone has also been used as a primary tool in the delivery of nursing care. Tripp (1971) and Murphy and Dineen (1975) describe nurses' use of the telephone to give information and support to clinic populations. These telephone services save time and money for both the patient and the health care agency and serve to make health care more accessible to
patients. In these telephone services, the patient makes the initial contact.

Psychiatric professionals have used the telephone in their out-patient psychotherapy (Chiles, 1974; Miller, 1973). Calls may be initiated either by the client or by the professional. The telephone is a good medium for giving support and structure to an insecure patient; it allows the gathering and giving of a large amount of information quickly. By making use of telephone contact, the professional has an expanded capacity to listen, to introduce new ideas, to suggest courses of action, and generally to help the patient re-establish equilibrium (Miller, 1973).

Several authors have suggested use of the nurse-initiated telephone call as a device to provide follow-up nursing care to postpartum families (Ament, 1973; Rhode, 1974; Rising, 1975; Wilson, 1973). It seems appropriate that such nurse-initiated contact could provide support and crisis intervention to postpartum families at a minimum of time and cost.

Several techniques used in crisis intervention are especially well suited to delivery via the telephone. These include:

1. The giving of needed information;
2. helping the person to express present feelings; and,
3. the giving of anticipatory guidance.

In giving anticipatory guidance, the therapist stresses the realities of a situation the client will experience at some time in the future. Thus, the client is afforded an opportunity to anticipate some of the problems he may encounter and can begin to formulate ways of handling
them. It is important that before a threat situation occurs, people should worry, but only as much as reality demands and only in the presence of support and hope of a successful outcome (Caplan, 1961). People who are helped with such anticipatory worry come through crises with much less anxiety and are more prepared to handle the problems when they arise (Janis, 1958).

Nurse-initiated follow-up could serve as a resource available to most families. Obvious disadvantages of telephone follow-up are: (a) Some people do not have home telephones; (b) a language barrier would prevent adequate telephone communication; and, (c) the nurse is unable to see the client, his appearance and his visual reactions.

Despite the disadvantages, nurse-initiated contact would make nursing support, information and crisis intervention more available to many more families than are presently receiving any type of postpartum follow-up at home. Rhode (1974) has proposed that such a contact would make provision of nursing care in the postpartum period more satisfying to nurses also.

A review of the literature produces only one experimental study of the effect of nurse-initiated telephone contact on the postpartum families who received the follow-up. This study (Wilson, 1973) was a preliminary study with a small sample and, while the data indicated a lower postpartum anxiety score for women who received telephone follow-up, no conclusive proof of the beneficial effects of the telephone follow-up was advanced. In order to determine whether telephone follow-up is an effective nursing intervention, this study proposes to investigate the influence a nurse-initiated telephone call
has on the number and intensity of concerns identified by women in the postpartum period.

It is hypothesized that nurse-initiated telephone follow-up will reduce the number and intensity of concerns identified by the new mother, thereby enabling her to better cope with her situation. If telephone follow-up can be identified as a significantly successful nursing intervention, it may influence more existing health care services to initiate similar follow-up services in order to better meet the needs of their postpartum clients.
CHAPTER II

METHOD

Subjects were selected from women who delivered their infants at Hill Air Force Base Hospital, Hill Air Force Base, Utah, during the spring and summer of 1976. A sample of 99 women who met the following criteria was used to establish the experimental and control groups. Each mother: (a) Delivered her baby at Hill Air Force Base Hospital, (b) spoke English, (c) had a home telephone, (d) delivered a normal infant, (e) consented to be interviewed and to participate in the study, and, (f) was discharged home from the hospital with her infant.

Both primiparae and multiparae were included in the study. Women who had stillborn infants, premature infants, infants with severe medical problems, or infants with congenital anomalies were excluded from the study. Infants with medical problems which limit their contact with their mothers pose special problems with development of the mother-child relationship; this study did not propose to deal with those complications. Women who delivered by Cesarean section were included if mother and baby were discharged from the hospital together. Women who had Cesarean sections were included because they comprise a significant percentage of the new mothers at this and other hospitals. As such, they also comprise a significant portion of the postpartum mothers in need of follow-up for "normal" concerns, as well as for concerns related to recovery from surgery. With random assignment of
subjects to each group, approximately the same number of Cesarean sections were expected in the two study groups.

The delivery type would be one of the variables analyzed with regard to numbers and intensity of concerns in the postpartum period.

The subjects were assigned to the experimental or control groups in the following manner: Each woman, on admission to the unit, was assigned a subject number. Each subject number was previously assigned to either the experimental or control group by use of a table of random numbers. It was expected that approximately 10% of the sample would be foreign-born women. Adjusting to motherhood in a foreign culture may produce added problems for the new mother. It was decided to group these women separately for study. Foreign-born women were first identified as belonging to this sub-group and were then separately assigned to groups. Again, the subject numbers received prior assignment by use of a table of random numbers. By use of this assignment method, 62 subjects were assigned to the experimental group and 37 to the control group. Of the potential 116 subjects, 17 were excluded from the study because of the following reasons: Five were non-English speaking; three were discharged from the hospital before their infants; three had premature infants; two had no home telephone; one infant died prior to the six week period; one mother was followed at home by a nurse not involved with this study; one gave her infant up for adoption; and, one refused to participate in the study.

Both experimental and control groups received the hospital's routine intrapartum and postpartum care from the obstetric unit's
regular staff. Members of the staff did not know to which group the patients were assigned. The routine care included opportunity for fathers to be present in the delivery room, rooming-in for mothers and infants, and a hospital stay of three to four days. Although there was no ongoing system of follow-up of new mothers between the time of hospital discharge and the scheduled six week postpartum visit, mothers were told they could call the postpartum unit at the hospital for help, and a few mothers did.

During the hospital stay, demographic data were collected on all subjects. Within 48 hours of delivery, staff nurses completed a Utah Test Appraising Mothers (UTAM), Form I (see Appendix A) on each subject. Staff nurses received instruction concerning completion of this form from the investigators. The UTAM I was developed by John Sullivan, Ph.D., and associates at the University of Utah to measure the level of stress a postpartum woman manifests through her behavior (Yeomans, Sullivan, Merrifield, & Praeger, 1976). The instrument was used in this study with the permission of Dr. Sullivan. Factor analysis of the UTAM I, completed prior to use in this study, identified clustering of items into two factors. Factor 1 included items which measure relations of psychological disposition (infant feeding and interaction with infant, behavior toward self, and reactions toward others). Factor 2 measures physiological disposition (reported discomfort, physical activity, and eating behavior). This instrument was used in order to establish a baseline postpartum adjustment level for each subject and also as a pretest to compare the experimental and control groups on in-hospital postpartum adjustment.
On the morning of hospital discharge, subjects in the experimental group were asked for their consent to participate in the study (see Appendix B) and were given a letter explaining when they would receive a telephone call from the investigators (see Appendix C). All experimental subjects were asked not to discuss this proposed phone call with other patients. This was done to avoid alerting the control subjects to a nursing follow-up that would not be available to them. All subjects were given the telephone number of the obstetric unit and were encouraged to call the staff at any time if they had questions or problems.

Experimental subjects were called on their second day at home following hospital discharge; the discharge date was counted as day "zero." This day was chosen based on some indication from the literature that it is a time of high concern for postpartum women, especially for mothers with their first infants (Adams, 1963; Evans, 1968; Yanover, Jones, & Miller, 1976). The calls were made at times least likely to conflict with family meal times. The calls were geared to discussion of any problems or questions the women had. The investigators offered information needed, suggested action to alleviate problems, and referred the women to other resources for help as indicated. If the women volunteered no concerns, the investigators questioned them about categories of needs according to a standard protocol (see Appendix D). The protocol included categories of needs found significant in other studies of postpartum women (Adams, 1963; Evans, 1968; Rice, 1964; Tanner, 1971). No time limit was placed on the phone call. Opportunity for the subject to reach the investigators by phone
was offered. The investigators made a second call if the women indicated a need or desire for it. The control group received no telephone contact.

The investigators who contacted subjects by phone were a graduate student in the parent-child/nurse-midwifery program at the University of Utah College of Nursing, and a certified nurse-midwife on the faculty of the same program. In order to establish interrater reliability, each investigator tape-recorded five telephone sessions with subjects. These tapes were reviewed by an assistant professor of nursing at the University of Utah. The approaches of the two investigators were judged comparable in the following areas: (a) open-ended questions asked in common need areas, (b) listening, (c) explanation giving, (d) validation that what the client identified was normal, (e) suggestions for management of problems, (f) content and discussion of care of self and baby, (g) positive reinforcement given, and (h) resources suggested to the client.

At the postpartum clinic visit all study subjects were interviewed and were asked to complete a questionnaire. Consent for participation in the study was obtained from control subjects at this time. The format for the interview was prepared by the investigators and consisted of open-ended questions and demographic data (see Appendix E). Each investigator interviewed those experimental subjects telephoned by the other investigator at the two-day telephone contact. This was done in order to avoid investigator bias from recall of concerns the subject may have identified in the phone call. The subject was
asked to rate the intensity of each concern she identified using the following scale:

- 0 = no problem
- 1 = slight problem, solved on my own
- 2 = small problem, solved with a little help
- 3 = fairly difficult problem, solved with some help
- 4 = difficult problem, solved with much help
- 5 = overwhelming problem, unable to solve even with much help

During the interview the subject had a card before her which listed the problem rating scale as presented above. The subject was asked to identify concerns and rate the concerns as she was experiencing them at the present time. The rating scale used is similar to a crisis-rating scale used by Dyer (1965) in his study of new families.

In an attempt to establish reliability of the interview instrument, 10 mothers in the study were contacted by telephone one day after being interviewed and were again asked to respond to the items concerning baby care and depression. All 10 subjects responded with slightly different concerns in the area of baby care, probably reflecting the problems they were encountering that day. Half of the group responded to the item on depression as they had done at the interview; the other five identified either greater or fewer problems with depression than stated at the interview. Thus, reliability of the tool was not established due to its subjective content.

The questionnaire administered was the UTAM II, an instrument prepared by the investigators to elicit self-rated levels of postpartum adjustment in physical, nurturant, and psychosocial categories (see Appendix F). It was based on the UTAM I, but was modified for self-scoring by the subject. For scoring, questionnaire items were grouped
into three areas, based on factor analysis of the test. The resulting factors were: Factor 1, which included feelings toward self, infant feeding, and reaction to being a mother; factor 2, which included reaction toward others, and family and friend visits; and factor 3, which indicated physical activity. Correlations between the factors for the sample population indicated that the factors were relatively independent; that is, they were measuring different aspects of the postpartum mother's status. The questionnaire has face validity, meaning that professional health care providers perceive the items as meaningful and appropriate for use with a sample of postpartum women. However, reliability and validity were not mathematically established.

The questionnaire, interview form, and instructions for completing them were mailed to eight women who did not keep their postpartum visits and could not arrange for another clinic visit because their husbands were transferred to another city before time for the six week appointment. Return rate of the mailed questionnaire was 38%.

Following are definitions related to the study:

1. Nurse-initiated telephone call--operationally this is defined as a phone call made to subjects in the experimental group by the investigators.

2. Immediate postpartum period--postpartum period refers to the puerperium, the period elapsing between the termination of labor and the return of the uterus to its normal condition, about six weeks in length. The immediate postpartum period is operationally defined as the second full day at home following discharge from the hospital.
postpartum unit, counting discharge day as day "zero."

3. Concerns--this concept refers to matters which engage a person's attention, interest or care, or that affect his welfare or happiness. Operationally defined, concerns are questions or stated problems of the postpartum women included in this study.

4. Intensity--this concept is operationally defined as a rating on a scale of 0 to 5, given to each identified problem by the study subject herself. A list of the rating scale is found on page 23 of this thesis.
CHAPTER III

RESULTS AND DISCUSSION

The data were statistically analyzed using the UNIVAC 1108 computer at the University of Utah Computer Center; the program used was the Statistical Package for the Social Sciences (SPSS). Using this program, the statistical procedures completed were frequencies, means, standard deviations, chi-squares, Pearson Product-moment correlations, and Spearman rank correlations ($r_s$). Factor analysis was performed on the questionnaire posttest data. Statistical significance was established at the .05 level.

The Mantel-Haenszel chi-square (Mantel, 1963) was used to analyze the ordinal data. This procedure was performed on a Monroe 1860 calculator programmed for the Mantel-Haenszel chi-square at the University of Utah Medical Center, Department of Biostatistics. The Mantel-Haenszel procedure for determining statistical significance yields chi-squares with one degree of freedom with a number of advantages over the usual chi-square statistic. Where ordinal data are available, it provides greater power to test for progressive association between factors. The procedure also allows one to control for other factors, which otherwise might bias the results.

Spearman rank correlations were used in reporting correlations because the data analysis indicated that the sample population was not normally distributed over all the variables, an assumption required for
application of the Pearson Product-moment correlation procedure. Therefore, Spearman rank correlations were chosen as the most conservative and valid correlation measure for the data.

**Demographic Data**

The study sample was composed of 99 subjects: 62 experimental subjects and 37 control subjects. Demographic data were collected on age, parity, mother's education, and husband's military status. Demographic data collected on each subject's infant included sex, weight, Apgar scores and gestational age. Delivery type was also noted for each subject. The two subject groups included six foreign-born women, three in the experimental group, and three in the control group. This was not a sufficiently large sample to investigate data on foreign-born women apart from the larger groups as planned. Therefore, these subjects were included in the larger experimental and control groups and were analyzed only as members of those groups.

As shown in Tables 1 and 2, chi-squares performed on the demographic data showed no statistically significant differences between the groups. This suggests that the two groups were comparable and that responses to the questionnaire items and the interviews would not be significantly influenced by a difference in demographic factors.

Possible intervening variables considered for each group were delivery type, attendance at prenatal classes, amount of prior experience in caring for newborns, and amount of information on self care and baby care obtained from reading and from friends or relatives. Chi-squares performed on this data also indicated no significant differences between the groups.
Table 1
Demographic Data on Experimental and Control Groups: Means, Ranges;
Chi-squares: Demographic Variables by Group Membership

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Group 1 Experimental</th>
<th>Group 2 Control</th>
<th>Chi-square: Variables by Group Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Range</td>
<td>Mean</td>
</tr>
<tr>
<td>Mother's age</td>
<td>24.52</td>
<td>16-42</td>
<td>24.49</td>
</tr>
<tr>
<td>Term pregnancies</td>
<td>.89</td>
<td>0-4</td>
<td>1.08</td>
</tr>
<tr>
<td>Premature pregnancies</td>
<td>.00</td>
<td>0</td>
<td>.03</td>
</tr>
<tr>
<td>Abortions, miscarriages</td>
<td>.21</td>
<td>0-2</td>
<td>.19</td>
</tr>
<tr>
<td>Living children</td>
<td>.90</td>
<td>0-4</td>
<td>1.13</td>
</tr>
<tr>
<td>Baby's weight (grams)</td>
<td>3369.8</td>
<td>2580-4309</td>
<td>3304.8</td>
</tr>
<tr>
<td>Baby's gestational age (weeks)</td>
<td>39.5</td>
<td>36-44</td>
<td>39.4</td>
</tr>
<tr>
<td>One-minute Apgar</td>
<td>8.24</td>
<td>5-10</td>
<td>8.00</td>
</tr>
<tr>
<td>Five-minute Apgar</td>
<td>9.02</td>
<td>7-10</td>
<td>9.00</td>
</tr>
</tbody>
</table>
Table 2
Demographic Data: Experimental and Control Groups Percentage

Frequencies:* Chi-squares: Demographic Variables
by Group Membership

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Group 1 (Experimental)</th>
<th>Group 2 (Control)</th>
<th>Chi-square: Variables by Group Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
</tr>
<tr>
<td>Delivery type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vaginal</td>
<td>56</td>
<td>90</td>
<td>35</td>
</tr>
<tr>
<td>Cesarean section</td>
<td>6</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Baby's sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>25</td>
<td>40</td>
<td>22</td>
</tr>
<tr>
<td>Male</td>
<td>37</td>
<td>60</td>
<td>15</td>
</tr>
<tr>
<td>Mother's education**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 years</td>
<td>5</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>High school graduate</td>
<td>25</td>
<td>40</td>
<td>12</td>
</tr>
<tr>
<td>Four years college</td>
<td>12</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>College graduate</td>
<td>7</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Postgraduate work</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Husband's military status**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enlisted</td>
<td>41</td>
<td>66</td>
<td>23</td>
</tr>
<tr>
<td>Commissioned</td>
<td>12</td>
<td>19</td>
<td>9</td>
</tr>
<tr>
<td>Retired</td>
<td>5</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Dependent daughter</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

*Percentages based on group totals.
**Missing data accounts for remaining percentage in this category.
The scores of the experimental and control groups on the pre-test (UTAM I) were analyzed using chi-square and Spearman rank correlations. As shown in Table 3, chi-square indicated no significant differences between the groups, but the Spearman rank correlation showed a small but significant relationship which indicated that control subjects tended to have higher scores than did experimental subjects ($r_s = 0.216, p < .05$) on Factor 2 (items relating to physical postpartum adjustment).

The Hypothesis

The investigation was conducted in order to determine any significant differences in the number and intensity of concerns identified at six weeks by two groups of post-partum women. One group received telephone follow-up at home; the other did not receive follow-up. It was hypothesized that women who received the telephone follow-up would identify significantly fewer concerns and express significantly less intensity of concerns than women who had received no follow-up.

Chi-squares and Spearman rank correlations were done on the responses of both groups to the questionnaire and interviews completed at the six week visit to the postpartum clinic. Chi-squares, shown in Tables 4 and 5, revealed no significant relationship between group membership and questionnaire or interview responses except in intensity of concern with family planning (chi-square $\chi^2 = 3.88, p < .05$). This result indicates a higher intensity of concern with family planning among the experimental subjects. Cross-tabulations controlling for parity and for mother's education also indicated only one
Table 3
Pretest: UTAM I Scores Within 48 Hours of Delivery

Chi-squares and Spearman Rank Correlations:

Group Membership by Score

<table>
<thead>
<tr>
<th>Scores on UTAM I Factors*</th>
<th>Group 1 Experimental</th>
<th>Group 2 Control</th>
<th>Spearman Rank Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range</td>
<td>Mean</td>
<td>Range</td>
</tr>
<tr>
<td>UTAM I (F₁)</td>
<td>0-33</td>
<td>22.97</td>
<td>15-29</td>
</tr>
<tr>
<td>UTAM I (F₂)</td>
<td>0-20</td>
<td>16.67</td>
<td>14-21</td>
</tr>
</tbody>
</table>

*Factors: F₁ = nurturing and self-esteem (psychological factors).

F₂ = physical activity and nutritional intake (physical factors).
Table 4

Posttest: UTAM II Scores at Six Weeks: Chi-squares:

<table>
<thead>
<tr>
<th>Factors on UTAM II*</th>
<th>Group 1 Experimental</th>
<th>Group 2 Control</th>
<th>Chi-square: Group Membership by Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range</td>
<td>Mean</td>
<td>Range</td>
</tr>
<tr>
<td>UTAM II (F₁)</td>
<td>11-24</td>
<td>19.24</td>
<td>14-24</td>
</tr>
<tr>
<td>UTAM II (F₂)</td>
<td>4-16</td>
<td>10.66</td>
<td>7-16</td>
</tr>
<tr>
<td>UTAM II (F₃)</td>
<td>1-8</td>
<td>6.19</td>
<td>3-8</td>
</tr>
</tbody>
</table>

*Factors: F₁ = feelings toward self, infant feeding, and reaction to being a mother.
F₂ = reaction toward others, family and friend visits.
F₃ = physical activity.
Table 5

Six Week Concerns: Mean Number of Concerns; Chi-squares:
Group Membership by Number of Concerns

<table>
<thead>
<tr>
<th>Concerns</th>
<th>Group 1 Experimental Mean</th>
<th>Group 2 Control Mean</th>
<th>Chi-square: Group Membership by Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td># concerns re:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infant care</td>
<td>0.737</td>
<td>0.471</td>
<td>n.s.</td>
</tr>
<tr>
<td>Rest</td>
<td>0.649</td>
<td>0.706</td>
<td>n.s.</td>
</tr>
<tr>
<td>Visitors</td>
<td>0.140</td>
<td>0.118</td>
<td>n.s.</td>
</tr>
<tr>
<td>Family adjustment</td>
<td>0.509</td>
<td>0.559</td>
<td>n.s.</td>
</tr>
<tr>
<td>Self care</td>
<td>0.667</td>
<td>0.706</td>
<td>n.s.</td>
</tr>
<tr>
<td>Depression</td>
<td>0.737</td>
<td>0.647</td>
<td>n.s.</td>
</tr>
<tr>
<td>Family planning</td>
<td>0.368</td>
<td>0.147</td>
<td>n.s.</td>
</tr>
<tr>
<td>Intensity of concern re:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infant care</td>
<td>0.912</td>
<td>0.353</td>
<td>n.s.</td>
</tr>
<tr>
<td>Rest</td>
<td>1.632</td>
<td>1.235</td>
<td>n.s.</td>
</tr>
<tr>
<td>Visitors</td>
<td>0.316</td>
<td>0.382</td>
<td>n.s.</td>
</tr>
<tr>
<td>Family adjustment</td>
<td>0.947</td>
<td>0.971</td>
<td>n.s.</td>
</tr>
<tr>
<td>Self care</td>
<td>1.053</td>
<td>1.382</td>
<td>n.s.</td>
</tr>
<tr>
<td>Depression</td>
<td>1.544</td>
<td>1.176</td>
<td>n.s.</td>
</tr>
<tr>
<td>Family planning</td>
<td>0.789</td>
<td>0.324</td>
<td>3.88, p &lt; .05</td>
</tr>
<tr>
<td>Total # concerns</td>
<td>3.807</td>
<td>3.353</td>
<td>n.s.</td>
</tr>
</tbody>
</table>
significant difference between the two groups. Controlling for
parity, the intensity of concern with family planning was related to
higher parity (chi-square (1) = -4.56, p .05). This result indicates
that it was the multiparous women in the experimental group that
tended to express the greatest concern with family planning.

It was hypothesized that the experimental group would have
significantly less concerns and intensity of concerns than the control
group at six weeks. The data did not support the hypothesis. After
considering possible explanations for these results, the following
possibilities are advanced:

1. The experimental group may have become more comfortable
expressing concerns as a result of the nursing intervention since they
were encouraged to do so at the telephone follow-up. People often
feel that discussion of minor problems wastes the professional's time
or is a sign of personal weakness, so, many questions are not asked
(Ament, 1973; Disbrow, 1964; Wilson, 1973). Perhaps the experimental
group expressed more minor concerns because they felt free to do so.
This indicates that the nurse follow-up was successful in helping
women to express both major and minor concerns. This is a most de-
sirable outcome for a nursing intervention because questions answered
and information given help individuals to reduce stress and to take
more responsibility for their own health, both physical and psycholo-

2. The difference between the two groups prior to the tele-
phone intervention (on the basis of the UTAM I pretest) may have
influenced the six week results. There was a tendency for control
subjects to have higher scores on the UTAM I Factor 2 \( r_s = .216, p < .05 \) as shown in Table 3. This indicates that the control subjects tended to score higher on physical comfort, physical activity, and eating behavior test items than did experimental subjects. On the basis of that result, the control group should have had the advantage in progress toward good recovery and postpartum resolution of crisis, despite the fact that they received no nursing follow-up. However, this advantage didn't seem to help them achieve a better status than the experimental group at six weeks, as the posttest scores for the two groups were so similar (see Tables 4 and 5). The telephone follow-up may have been a factor in facilitating postpartum adjustment for the experimental group so that at six weeks they enjoyed the same level of adjustment that the control group did.

3. The instruments used in this study were designed by the investigators, and validity and reliability were not previously established. The instruments may not have been sensitive to differences between the groups, if any differences did exist in numbers and intensity of concerns.

4. Medical and nursing intervention may not directly affect the number of concerns expressed. Perhaps there are other variables which more directly influence the questioning behavior of clients. Further research is needed in this area.

5. Multiparous women may have expressed more concern with family planning at six weeks (chi-square \((1) = -4.56, p < .05 \)) because a greater number of multiparous women choose permanent methods of contraception--tubal ligation, or vasectomies for their spouses. Since
they have not themselves dealt with all the ramifications of sterilization before, they may express more concern in the area of family planning. Also, multiparous women who have completed their families but do not choose sterilization as a contraceptive method may have more concern about the reliability of various methods because they wish to avoid future pregnancies. Multiparous women in the experimental group may have tended to express more concern than did those in the control group because they felt more free to express concerns to the nurse, a phenomenon previously discussed on page 34 of this chapter.

6. At six weeks, the perception of concerns and intensity of concerns may have been so similar that there were no differences between the two groups. At six weeks after delivery, the possible crisis caused by addition of a new member to the family may have been resolved. As Caplan (1961) contends, a crisis is temporary in nature and is usually resolved in four to six weeks. At six weeks, the women in the study may have all established a new equilibrium for themselves in their new role.

Additional Findings

Experimental Group at Two Days

Because of the study methodology, data at two days are available only for the experimental group. There may or may not have been differences between the experimental and control groups at this time. Because the subjects were randomly assigned to groups, it may be assumed that data on the control group would have been similar at two
days, prior to the nursing intervention, except for some advantage the control group may have had in physical adjustment as indicated on the UTAM I.

The investigators made an initial phone call to each of the experimental group members. Five subjects received second follow-up calls at their request. The length of the calls ranged from 2 to 45 minutes with a mean of 19 minutes. Three variables were found significantly correlated with the length of the phone call. Inverse correlations were found between length of phone call and number of term pregnancies ($r_s = -.357, p < .01$), mother's age ($r_s = -.326, p < .01$), and husband's military status ($r_s = -.279, p < .05$). These statistical results suggest that the length of the phone call decreased as parity, age, and military status of the husband increased. Since the older subjects tended to be multiparous ($r_s = .636, p < .001$) and married to higher-ranking husbands ($r_s = .341, p < .01$), these correlations all indicate that multiparae had significantly shorter phone contacts than did primiparae. The length of the call was not significantly correlated with mother's education, delivery type, five-minute Apgar, or baby's sex.

The total number of concerns at the telephone contact was inversely correlated with the number of term pregnancies ($r_s = -.357, p < .01$) as shown in Table 6. This suggests that multiparae identified fewer concerns than did primiparae. The number of term pregnancies was inversely correlated with the number of concerns with baby care at two days ($r_s = -.273, p < .05$), and with number of concerns about self care ($r_s = -.311, p < .01$). The more experience a mother has had with
Table 6
Concerns of Experimental Group at Two Days and Spearman Coefficients of Correlation Related To: (a) Term Pregnancies, (b) Mother's Age, and (c) Delivery Type

<table>
<thead>
<tr>
<th>Concerns At Two Days</th>
<th>Term Pregnancies</th>
<th>Mother's Age</th>
<th>Delivery Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant care</td>
<td>-.273*</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>Self care</td>
<td>-.311*</td>
<td>-.316*</td>
<td>n.s.</td>
</tr>
<tr>
<td>Rest</td>
<td>n.s.</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>Visitors</td>
<td>.395**</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>Family adjustment</td>
<td>n.s.</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>Depression</td>
<td>n.s.</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>Family planning</td>
<td>n.s.</td>
<td>-.326*</td>
<td>n.s.</td>
</tr>
<tr>
<td>Total # of concerns</td>
<td>n.s.</td>
<td>-.326*</td>
<td>n.s.</td>
</tr>
</tbody>
</table>

*Significant at .05.
**Significant at .01.
pregnancy and baby care, the fewer questions concerning baby care and self care she is likely to have. These findings are in accord with Evans' (1963) study which found that multiparae had fewer concerns in the area of mothering skills, baby characteristics and behaviors, and their own physical, physiological, and emotional needs than did primiparae during the first few weeks postpartum. These findings also support Caplan (1961), who suggests that prior experience with a problem situation and success at handling it will prepare the individual for more effective coping with the same situation a second time.

At two days, the number of concerns with baby care was significantly correlated with concern for self care ($r_s = .289, p < .05$). This substantiates the focus of concerns on the physical well-being of the women and on infant care in the early postpartum period as identified by Rubin (1963).

The number of concerns with visitors at two days was significantly correlated with number of term pregnancies ($r_s = .395, p < .01$). Multiparae tended to express more problems relating to visitors at two days than did primiparae. Perhaps primiparae were looking to visitors as part of their informational support system while multiparae, who tended to have less need for information, would rather have had more time to themselves for rest or for spending time with their immediate families. This finding is in accord with Evans (1968) who contends that multiparae have more needs in the area of psychosocial health than do primiparae.

The number of concerns with family planning at two days was inversely correlated with mother's age ($r_s = -.326, p < .01$). Younger
mothers tended to have the most concern in this area at two days. This may reflect concerns of younger women who have not used any family planning methods prior to the birth of their first infants. The correlation may also reflect a higher anxiety among young mothers about resuming sexual activity after delivery. Falicov's (1973) study of 19 primiparae found that a great deal of anxiety surrounds the resumption of sexual activities after the birth of the baby. Multiparae may have had less concern with family planning at two days because they have gone through adjustment to postpartum sexuality before. Also, a greater number of multiparae may have used their method of contraception before or are choosing sterilization as a contraceptive method at this time.

Delivery type was correlated with the total number of concerns at two days ($r_s = .251, p < .05$). Women who had Cesarean sections tended to have a greater total number of concerns than did women who had vaginal deliveries, but the concerns were not significantly greater in any one need category. This supports Caplan's (1964) contention that bodily state, and a change in self-image, are influential factors in an individual's ability to cope with a crisis. Women who had Cesarean sections were likely to manifest their slightly more difficult adjustment by expressing more total concerns.

Women expressing concern with depression at two days tended to express that concern again at six weeks ($r_s = .275, p < .05$). This suggests that women identifying the concern in the early postpartum period are candidates for more careful anticipatory guidance about coping with depression during the puerperium.
The total number of concerns identified during the phone contact ranged from 1 to 14 with a mean of 6.67 concerns. Concerns with infant care accounted for 37% of the total concerns while concerns with self care comprised 27% of the total (see the figure). Together, these two categories accounted for 64% of the total needs identified at two days. The remaining five categories together comprised 36% of the total number of concerns. These percentage frequencies compare well with Ament's (1973) study which found that 64% of the total needs identified in the early postpartum period were related to infant care and self care, while 36% were related to psychosocial needs. Adams (1963) also noted a high number of concerns with infant care at one week, but due to differences in research methodology it is not possible to compare numbers of concerns with this study's results.

The emphasis on physical factors and infant care during the first few postpartum days is also indicated by the factor analysis on the pretest (UTAM I). Within 48 hours of delivery, these same concerns accounted for most of the variance on the test (Yeomans, Sullivan, Merrifield, & Praeger, 1976).

**Experimental and Control Groups at Six Weeks**

At six weeks there was a dramatic shift in areas of greatest concern (see the figure). The experimental group identified a mean of 3.8 concerns on the interview; the control group identified a mean of 3.4. Both groups had numbers of concerns ranging from zero to eight. Both groups showed a majority of concerns in categories related to
Categories of Concerns at Two Days and at Six Weeks

- Physical needs (concerns re: infant care, self care)
- Psychosocial needs (concerns re: rest, visitors, family adjustment, depression, family planning)
psychosocial needs. Of the total concerns in the experimental group, 63% were in psychosocial need areas, while 65% of the control group's total concerns were in these areas. The physical needs and infant care needs that were so high at two days accounted for 37% of the total concerns for the experimental group and for 35% of total concerns for the control group. These data support the focus on self and baby in the early puerperium with a gradual shift to focus on family relationships and roles later in the puerperium as identified by Rubin (1963). The data also support Adams' (1963) findings that most questions with infant care occur when the mother first assumes care-taking responsibilities. Thus, the concerns with infant care are greater at two days than at six weeks, when many concerns have been resolved.

This shift in area of concern is also indicated by shift of factors on the UTAM II. At six weeks, the items which accounted for 70% of the variance on scores were items on Factors 1 and 2 related to psychosocial needs (see Appendix G). Factor 3, physical status, accounted for only 16% of the variance.

As stated previously, at the six-week clinic visit, the control group differed significantly from the experimental group only in the intensity of concerns with family planning ($r_s = -.223$, $p < .05$). Chi-square also showed this difference (chi-square (1) = -3.88, $p < .05$), as presented in Table 5. This suggests that control group members had less intensity of concern with family planning. This may be due to the fact that subjects were interviewed after attending a family planning lecture at the clinic which included a question and answer time. The control group may not have felt as comfortable
identifying this concern as did the experimental group who were questioned about family planning problems at two days.

Although the six week data do not support the hypothesis that women who received follow-up will have fewer concerns, several correlations do support the belief that the nursing telephone follow-up was a beneficial intervention. At six weeks, there was a small but significant correlation in the experimental group between the UTAM II Factor 2 score and the number of concerns with depression ($r_s = -0.264, p < .05$). Factor 2 measures reaction toward others, and family and friend interactions. Although the experimental and control groups did not differ significantly in total concerns or UTAM II scores, higher scores for the experimental group on the UTAM II Factor 2 were associated with significantly fewer concerns about depression. In effect, the continued nursing support system available to the experimental group had a combined effect with the family and friend support system at home. Continued nursing support added to the existing support system at home may be associated with less depression in the postpartum period. Perhaps this reflects the experimental group's perception that they were being "cared for," a sign of increased satisfaction with the medical and nursing care during the child bearing experience. This finding also suggests that a questionnaire item concerning home support systems and relationships with others may be useful as a hospital postpartum screening instrument to identify women who may need anticipatory guidance and follow-up for depression. If the woman is anticipating a poor support system at home, suggestions for mobilizing support may assist her with practically
increasing family and friend support and may prevent severe problems with postpartum depression.

Another correlation was found which suggests that the telephone follow-up was beneficial. For the experimental group at six weeks (see Table 7), the mother's education level was inversely correlated with the intensity of concern with depression (r = -.28, p < .05). This correlation suggests that as the mother's education increased, her concern with depression decreased, if she was in the experimental group. It might be expected that increased education alone would account for less concern with depression because of the probable increased knowledge about the occurrence and normality of postpartum depression. However, this correlation was not found among the control subjects, who did not significantly differ from the experimental group in educational level (see Table 2). As the telephone call was seen as exerting a cumulative effect with family and friend support system, the telephone contact again appears to have a cumulative effect when added to the effect of increased educational level for members of the experimental group. This suggests that the anticipatory guidance concerning postpartum depression given during the telephone follow-up was effective in helping women to anticipate such depression realistically, and to cope with it if it occurred. In this case, education is the coping mechanism which was enhanced by nursing intervention. This finding is in accord with the studies done by Janis (1958) and Caplan (1961) which both stressed the importance of anticipatory guidance in preparing a person to cope with a real life situation.
Table 7
Six Week Concerns and Spearman Coefficients of Correlation
Related to: (a) Mother's Education, (b) Mother's Age, and (c) Delivery Type

<table>
<thead>
<tr>
<th>Concerns</th>
<th>Group 1: Experimental</th>
<th>Group 2: Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mother's Education</td>
<td>Mother's Age</td>
</tr>
<tr>
<td># concerns with self care</td>
<td>n.s.*</td>
<td>n.s.</td>
</tr>
<tr>
<td>Intensity of concern with family adjustment</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>Intensity of concern with depression</td>
<td>-.281**</td>
<td>n.s.</td>
</tr>
</tbody>
</table>

*Non-significant
**Significant at p < .05.
In the control group, delivery type was significantly related to intensity of concern with depression ($r_s = .374, p < .05$), and to intensity of concern with family adjustment to the new baby ($r_s = .352, p < .05$). Interpretation of these results must be considered in light of the small number of Cesarean section deliveries in the sample population. The correlations suggest that women who had Cesarean sections had greater concern with depression and with family adjustment if they belonged to the control group. The control group had a Cesarean section rate of 5% while the rate in the experimental group was 10%. Although more experimental group members delivered by Cesarean section, the data did not show a significant correlation between delivery type and intensity of concern with depression or family adjustment. Caplan (1961) contends that change of body image is one important factor in adjustment to a new role. He also states (Caplan, 1964) that bodily status is a factor which influences the outcome of a crisis for the individual. The fact that the experimental group's data showed no correlation between delivery type and concerns suggests that the experimental subjects benefited from anticipatory guidance about physical and emotional recovery after major surgery, and about coping with family adjustment problems they might encounter.

The control group also showed a significant correlation between mother's age and number of concerns with self care as shown in Table 7 ($r_s = .356, p < .05$). Increasing age was associated with increasing numbers of problems in the area of self care. The experimental group did not show this relationship. This suggests again that the nursing intervention was effective in giving anticipatory guidance to the older
women who tended to have more children.

Statements of "thanks" made by the experimental subjects to the investigators at the phone contact were frequent although not recorded for statistical analysis. Subjects were happy to receive the phone call, and many made statements about appreciation for "someone who cares enough to call."
CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to determine whether or not a nurse-initiated telephone contact with postpartum women at home is an effective means by which well postpartum families can receive continued professional care, guidance, and support. It was hypothesized that mothers who received nursing follow-up by telephone two days after hospital discharge would identify fewer concerns and less intensity of concerns than a group of mothers who received no nursing follow-up in the postpartum period.

The research method used was an experimental design utilizing a treatment group and a control group. Ninety-nine mothers, multiparae and primiparae who met the criteria for selection, comprised the study sample. Each subject was randomly placed into one of the two groups. An in-hospital pretest, consisting of a questionnaire completed by a hospital staff nurse, was performed for each subject within 48 hours of delivery. The 62 mothers in the experimental group received a telephone call from the nurse investigators at two days after discharge from the hospital. The control group received no post-hospital nursing contact until the six-week clinic visit. An interview procedure composed of open-ended questions about concerns and self-rated concern intensity scales, and a questionnaire were developed by the investigators for data collection at six weeks postpartum.
Analysis of the demographic data revealed no statistically significant differences between the two groups. Spearman rank correlations of the pretest revealed that the control group had a small but significantly higher mean score on items relating to physical comfort, physical activity, and eating behavior ($r_s = .216, p < .05$). This difference may have influenced the results of this study.

At six weeks, a statistically significant difference between the two groups was found in intensity of concern with family planning (chi-square (1) = -3.88, $p < .05$). This result indicates that the experimental group tended to express more intensity of concern with family planning. Controlling for parity, cross-tabulations of the two groups indicated that multiparae in the experimental group had the greatest concern in the area of family planning (chi-square (1) = -4.56, $p < .05$). Possible reasons for this result were discussed.

Several correlations found in the data analysis support the belief that the telephone follow-up was a beneficial nursing intervention. In the experimental group, women scoring high on the posttest questionnaire tended to have fewer numbers of concerns with depression ($r_s = -.264, p < .05$). Also, in the experimental group, as the mother's education level increased, her intensity of concern with depression decreased ($r_s = -.281, p < .05$). These two findings suggest that the anticipatory guidance and the attitude of caring extended to the experimental group at the telephone contact were effective in decreasing concerns with depression. In both examples given, the telephone contact was seen as having a beneficial cumulative effect along with other support systems available to the postpartum women, i.e., family,
friends, and education.

For the control group, data analysis revealed that delivery type was significantly correlated with intensity of concern with depression ($r_s = .374, p < .05$), and with intensity of concerns with family adjustment ($r_s = .352, p < .05$). These findings indicate that women who had Cesarean sections identified higher intensity of concern in these two areas than did the rest of the control group. This difference was not found among the experimental subjects. There was no significant difference between the two groups on the pretest scores on the basis of delivery type. The difference between the two groups at six weeks suggests that the nursing intervention was beneficial in providing anticipatory guidance to women in the experimental group who had Cesarean sections, and were therefore at greater risk of developing problems due to their physical status.

Results of the study indicate that women who received telephone contact from a nurse in the postpartum period may have felt more comfortable expressing concerns and questions. This is seen as an important effect of a nursing intervention because it allows reduction of anxiety by giving of information and support.

Conclusions

1. The majority of mothers, both primiparae and multiparae, do encounter problems and concerns in the areas of infant care, self care, and psychosocial need areas during the postpartum period immediately following hospital discharge. Therefore, it is recommended that hospitals and communities provide some means of follow-up care for
their postpartum families within a week of hospital discharge.

2. This study seemed to indicate that mothers appreciated a nurse-initiated telephone call after discharge from the hospital and manifested effects of the continued care by identifying less concern with depression at six weeks as they rated themselves higher in postpartum adjustment.

3. Primiparae encounter more concerns with baby care and self care than do multiparae in the first two days following hospital discharge. Nursing support of primiparae should include anticipatory guidance and information especially in these areas. Participation by the mothers in the care of their infants while still in the hospital may lessen concerns encountered after return to the home environment. Primiparae especially need to be encouraged to express their concerns (even seemingly insignificant questions) about newborns and their care. It seems particularly important that a professional nurse initiate a contact for the purpose of offering support and information to all primiparae the first few days at home with a new baby.

4. Primiparae tend to have more concerns in the area of family planning at two days post-hospital discharge than do multiparae. Provision of education in methods of birth control and in aspects of postpartum sexuality for primiparae prior to hospital discharge seems indicated.

5. Multiparae tend to have more concern with adjustment in psychosocial areas at two days than do primiparae. Nursing support for multiparae should include encouragement and information regarding adjustment to the larger family and specific suggestions for coping
with visitors to insure adequate rest.

6. Multiparae and primiparae tend to have more concerns in psychosocial areas at six weeks than they do at two days. Assessment of postpartum women at six weeks should include assessment of support systems and adjustment to the maternal role in addition to the routine physical assessment.

**Recommendations for Further Study**

Additional study is necessary to determine the most effective and economical means of providing continuity of care in the postpartum period. Based on the findings of this study the following proposals for further investigation are presented:

1. The study should be replicated, using a larger sample and refined data collection instruments, and including a measure of satisfaction with care.

2. A replication of the study should be conducted with a hospital over a longer period of time and with utilization of the various community referral services available.

3. The study should be replicated using initial telephone contacts at one through five days post-hospital discharge to determine the time when nursing intervention via the telephone is most effective.

4. A study should be conducted to determine the adjustment problems and the concerns of all members of the family, including the father and other children, with the introduction of a new family member.

5. Further study is needed to investigate what variables directly influence an individual's questioning behavior.
6. Further study is recommended to investigate the specific postpartum problems of women who deliver by Cesarean section.

7. A study of postpartum concerns could be made, categorizing the concerns according to the hierarchy of needs as identified by Maslow (1954); concerns could be noted at weekly intervals after delivery.

8. Identify the postpartum days when concerns are greatest for mothers by having a group of mothers keep a diary of concerns for the first two weeks postpartum.

9. Further study of adjustment of postpartum women should include valid and reliable instruments with which to measure stress and anxiety levels.

**Recommendations for Care**

1. Nursing assessment of the postpartum women in the hospital should include investigation of family and friend support systems at home. Women with high-risk status because of poor home support should receive anticipatory guidance and support in mobilizing at-home resources.

2. Nurse-initiated follow-up should be available to all primiparae within the first few days at home to give information and support regarding infant care and self care. Multiparae who are at risk because of physical status or poor home support systems should receive nurse-initiated follow-up. Option for follow-up should be available to all other multiparous women.

3. It is recommended that a nurse-initiated telephone follow-up be used as a primary health care instrument in provision of
preventive health care and support to postpartum families. This recommendation is made in light of the effectiveness of the phone call, the acceptance of the telephone contact by mothers, and the economical use of nursing time for telephone contact as compared to time needed for a home visit program.

4. Assessment by health care providers at six weeks postpartum should focus on psychosocial concerns in addition to physical concerns in order to identify women who are at risk for continuing postpartum depression.
APPENDIX A

UTAH TESTS APPRAISING MOTHERS (UTAM)

I QUESTIONNAIRE*

*Reprinted with the permission of John Sullivan, Ph.D., University of Utah.
Please Note: This form is to be filled out on the mother on the second day postpartum.

Mother: Mother's Name ___________________________ Age _______ Hospital ___________________________ Subject No. _______

Delivery: Date/Time Entered ______________________ Date/Time Delivered ______________________ Date This Report ______________________

Newborn: Sex _______ Wt _______ Gest. Age (Wks) _______ Apgar_1 Min. _______ 5 Min. _______ Parity – T _______ P _______ A _______ L _______

Name of Nurse Observer ____________________________

<table>
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<tr>
<th>Aspect</th>
<th>Level A (Lower 15%)</th>
<th>Level B (35%)</th>
<th>Level C (35%)</th>
<th>Level D (Upper 15%)</th>
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<td>Physical Activity</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exhusted, Very Weak</td>
<td>Fatigued, Weak</td>
<td>Recovering</td>
<td>May Need To Be Held</td>
</tr>
<tr>
<td></td>
<td>Voluntary Movement</td>
<td>Voluntary Movement</td>
<td>Strength, Gets</td>
<td>Down Energetic</td>
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<tr>
<td></td>
<td>Inappropriate Nervous</td>
<td>Needs Constant</td>
<td>Up On Own</td>
<td>Active, Self-</td>
</tr>
<tr>
<td></td>
<td>Activity</td>
<td>Encouragement To Get Up</td>
<td></td>
<td>Helping</td>
</tr>
<tr>
<td>Reported Discomfort</td>
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<td></td>
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<td>Considerable,</td>
<td>Some Dis-</td>
<td>Very Little, “Feels</td>
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<tr>
<td></td>
<td>Requests Medications</td>
<td>But Tolerable,</td>
<td>comfort, No</td>
<td>“Feels Fine”</td>
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<td></td>
<td>Constantly</td>
<td>Asks For Pain</td>
<td>Real Problems</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Medication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eating Behavior</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Very Small Food</td>
<td>Very Selective</td>
<td>Normal Intake</td>
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</tr>
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<td></td>
<td>Intake, Lacks</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interest</td>
<td></td>
<td></td>
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<td>Behavior Toward Self</td>
<td></td>
<td></td>
<td></td>
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<td>Depressed, Self-</td>
<td>Sad, Some Feelings</td>
<td>Generally</td>
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<td>Rejecting, Iden-</td>
<td>Feelings of Worthlessness,</td>
<td>Positive,</td>
<td>Happy, Excluent,</td>
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<tr>
<td></td>
<td>tiality, Weeps</td>
<td>Gun, etc.</td>
<td>Self-Accepting,</td>
<td>Capt To Share</td>
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<tr>
<td></td>
<td>Frequently,</td>
<td>Occasional Crying</td>
<td>Cheerful,</td>
<td>Joy With Others</td>
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<td></td>
<td>Inappropriate Over</td>
<td></td>
<td>Outward Looking</td>
<td>L &amp; D Seen As A</td>
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<td></td>
<td>Enthusiasm</td>
<td></td>
<td></td>
<td>“Peak Experience”</td>
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<td>Feeding</td>
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</tr>
<tr>
<td></td>
<td>Finds It Un-</td>
<td>Interested and</td>
<td>All OK, Enjoys</td>
<td>Welcomes The</td>
</tr>
<tr>
<td></td>
<td>pleasant, Messy</td>
<td>Conceived For Baby’s</td>
<td>Feeding Baby</td>
<td>Opportunity To</td>
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<tr>
<td></td>
<td>Helpless</td>
<td>Nutrition</td>
<td>Feels Worthwhile</td>
<td>Nourish Her Baby,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Psychologically As</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Well As</td>
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<td></td>
<td></td>
<td></td>
<td>Nutritionally</td>
</tr>
<tr>
<td>Aspect</td>
<td>No Obs.</td>
<td>Level A (Lower 15%)</td>
<td>Level B (35%)</td>
<td>Level C (35%)</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------</td>
<td>----------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Interaction With Infant</td>
<td></td>
<td>None, Little Interest, Rejection, Indifferent Towards Baby</td>
<td>Mildly Interested But Cold, Shows Regard For Basic Sustenance &amp; Maintenance, But Little More, Holds Baby Away From Own Body</td>
<td>Accepting, Warm, Cuddles Baby, Regard For Baby's Comfort &amp; Well-Being As Well As Survival, Seeks Others' Opinions Of Baby</td>
</tr>
<tr>
<td>Family/Friend Support</td>
<td></td>
<td>Has No Visitors Or Phone Calls</td>
<td>Few Calls or Visits, Mostly From Close Family</td>
<td>Frequent Calls &amp; Visits From Many Different Persons</td>
</tr>
<tr>
<td>Response To Family/Friend Support</td>
<td></td>
<td>Accepting The Situation As Her Fate</td>
<td>Wishes For More Concern From Others</td>
<td>Complains About Lack Of Attention, Initiates Calls To Others, Invites Visitors</td>
</tr>
</tbody>
</table>
APPENDIX B

CONSENT FORM
I, ____________________________, hereby agree to participate in the study being conducted by Jean Groenjes, RN, and Mary Ann Rhode, CNM. This study is designed to gather information about the needs of postpartum women at home and aims to improve continuing health services to postpartum women after discharge from the hospital.

The procedures in which I will be a participant are observations of my interactions with my baby in the hospital and an interview by a nurse at my postpartum clinic visit. There are no expected risks.

I hereby authorize access to my medical records for purposes of obtaining information which may help clarify the study's results.

I understand that confidentiality will be protected and that I will obtain the best care available to me whether or not I agree to participate in this study.

I have read and fully understood the above information.

_________________________ (Name)

_________________________ (Date)
APPENDIX C

LETTER TO EXPERIMENTAL SUBJECTS
Dear ________________:

We hope you have enjoyed your stay and that our staff has been of some help to you in these first few days of caring for yourself and your new baby. Other mothers have told us that they had many more questions to ask in the first few days at home. Because of this and because we are interested in how you and your baby are doing at home, we would like to call you several days after you go home. If you have any questions, please keep them in mind or keep a list and the nurse who calls will be glad to answer your questions or just talk.

If we call at an inconvenient time, we will be glad to call back at a better time. You may expect us to call you on ___________. If you are not at home when we call, we will call again later.

You will be receiving another paper asking you to take part in a research project being conducted here at the hospital. This telephone call is a part of that study. Thank you for your cooperation. We'll look forward to talking with you.

Jean Groenjes, RN

Mary Ann Rhode, CNM
APPENDIX D

PROTOCOL FOR TELEPHONE CALL
1. What questions or problems do you have now concerning the care of your baby?

2. How much rest have you been able to get since you have been home?

3. Have you had a problem with too many visitors?

4. Do you have enough help at home?

5. What effect is the new baby in the house having on your family?

6. What questions or problems do you have concerning care of yourself as your body recovers from pregnancy and delivery?

7. Have you noticed any problems with the "baby blues?"

8. Have you thought of any questions about your method of birth control since you left the hospital?
APPENDIX E

SIX WEEK INTERVIEW
1. What problems or questions do you have now concerning the care of your baby?

Problems

Intensity Rating
0 1 2 3 4 5

2. What difficulties do you have in getting enough rest and sleep?

Problems

Intensity Rating
0 1 2 3 4 5

3. Have you had a problem with too many visitors?

Problems

Intensity Rating
0 1 2 3 4 5

4. Do you have enough help at home?

Problems

Intensity Rating
0 1 2 3 4 5

5. What effect is the new baby in the house having on your family?

Problems

Intensity Rating
0 1 2 3 4 5

Siblings:

Husband:

Pets:

6. What questions or problems do you have about care of yourself as your body recovers from your pregnancy and delivery?

Problems

Intensity Rating
0 1 2 3 4 5
7. How have you felt emotionally since the baby was born? Have you felt depressed at all?

Problems

Intensity Rating
0 1 2 3 4 5

8. Have you thought of any questions about your method of birth control?

Problems

Intensity Rating
0 1 2 3 4 5
Name: ___________________________________ Study Number: ______

Study Number: ______

1. How many children do you have at home, including your new baby? __

2. Did your new baby go home from the hospital the same day as you did?
   Yes ___  No ___

3. Do you consider your baby to be a healthy baby?
   Yes ___  No ___

4. Did you attend any prenatal classes?
   Yes ___  No ___

5. If number 4 is "yes," how helpful was the information provided in caring for yourself and your newborn baby?
   None ___  Some ___  A lot ___

6. How much experience did you have before your delivery caring for newborn babies?
   None ___  Some ___  A lot ___

7. How helpful was any reading you did before your delivery regarding self-care and baby-care?
   None ___  Some ___  A lot ___

8. How much information and/or suggestions did relatives or friends give you regarding baby care before your delivery?
   None ___  Some ___  A lot ___

9. How helpful was the information or suggestions they gave you?
   None ___  Some ___  A lot ___
APPENDIX F

UTAH TESTS APPRAISING MOTHERS (UTAM)

II QUESTIONNAIRE*

*Reprinted with the permission of John Sullivan, Ph.D., University of Utah.
Under each of the following main categories, please check only one box. First pick the statement that best describes how you have felt the past few weeks, then mark either the "Lo" or "Hi" box depending on where you see yourself within that level. There are no "right" or "wrong" answers. These are all statements other mothers have made so please feel free to mark whichever fits you best.

<table>
<thead>
<tr>
<th>Category</th>
<th>Level A</th>
<th>Level B</th>
<th>Level C</th>
<th>Level D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Activity</td>
<td>Exhausted, Very Weak, Very Difficult To Move Around</td>
<td>Fatigued, Weak, Have To Force Myself To Move Around</td>
<td>Recovering Strength, Able To Get Around Easily</td>
<td>Energetic, Active, Need To Remind Myself To Take It Easy</td>
</tr>
<tr>
<td>Physical Discomfort</td>
<td>Much Pain, Need To Take Pain Medicine Very Often</td>
<td>Some Pain, But Able To Tolerate It, Need To Take Occasional Pain Medicine</td>
<td>Some Discomfort, No Real Problems</td>
<td>Very Little Discomfort, Feel Fine</td>
</tr>
<tr>
<td>Appetite</td>
<td>Eat Very Little, Not Interested In Food</td>
<td>Very Picky About What I Feel Like Eating</td>
<td>Normal Appetite</td>
<td>Clean The Plate, Look Forward To The Next Meal And Snacks</td>
</tr>
<tr>
<td>Feelings Toward Myself</td>
<td>Depressed, Very Sad, Cry Often, Feel I'm Worthless</td>
<td>Sad, Sometimes Feel I'm Worthless, Occasionally Cry</td>
<td>Cheerful, Outward-Looking, Feel I'm Doing Pretty Well</td>
<td>Very Happy, Feel Motherhood Is A Great Experience</td>
</tr>
<tr>
<td>Category</td>
<td>Level A</td>
<td>Level B</td>
<td>Level C</td>
<td>Level D</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Feeding The Baby</td>
<td>Find It Unpleasant, Messy, Don't Know What To Do</td>
<td>Interested, Want To Make Sure The Baby Is Getting The Proper Kind Of Food</td>
<td>All Of, Enjoy Feeding The Baby</td>
<td>Look Forward To Each Feeding As A Chance To Feed And Cuddle My Baby</td>
</tr>
<tr>
<td>Reacting Towards Others</td>
<td>Don't Feel Like Being With Or Talking To Other People, Sleepy</td>
<td>Having Company In All Right But I Don't Really Care If They Come Or Not</td>
<td>Talkative, Like To Have Company When They Come</td>
<td>Call People To Talk And Ask Them Over, Ready To Rejoin &quot;The Group&quot;</td>
</tr>
<tr>
<td>Family/Friends Visits</td>
<td>Don't Have Any Visitors Or Phone Calls</td>
<td>Have A Few Calls Or Visits, Mostly From Close Family</td>
<td>Frequent Calls And Visits From Many Persons</td>
<td>Many Calls And They Really Keep Me Busy</td>
</tr>
<tr>
<td>How I Feel About All The Attention</td>
<td>Not Much Attention But Guess That Is Normal Now</td>
<td>Wish Others Would Pay More Attention To Me</td>
<td>Don't Like The Lack Of Attention So I Call Others And Invite Them Over</td>
<td>Wish I Had More Privacy, Too Many People &quot;Sharing&quot; My Baby</td>
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<tr>
<td>Reaction To Being A Mother</td>
<td>Being A Mother Is Much Worse Than I Thought It Would Be</td>
<td>Being A Mother Is A Little Worse Than I Thought It Would Be</td>
<td>Being A Mother Is About What I Thought It Would Be</td>
<td>Being A Mother Is Much Better Than I Thought It Would Be</td>
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APPENDIX G

UTAH TESTS APPRAISING MOTHERS (UTAM)

II FACTOR ANALYSIS
UTAM II Variables

Variable 1 = physical activity
Variable 2 = physical discomfort
Variable 3 = appetite
Variable 4 = feelings toward myself
Variable 5 = feeding the baby
Variable 6 = reactions towards others
Variable 7 = family/friends visits
Variable 8 = how I feel about all the attention
Variable 9 = reaction to being a mother

The UTAM II Factors

Factor 1 = Variables 4, 5, and 9
Factor 2 = Variables 6 and 7
Factor 3 = Variable 1

The Percent of Variance by Factors

Factor 1 = 47.8% of variance
Factor 2 = 23.4% of variance
Factor 3 = 16.5% of variance
REFERENCES
Adams, M. Early concerns of primigravida mothers regarding infant care activities. Nursing Research, 1963, 12, 72-77.


Dilworth, S. Identification of selected nursing needs of postpartum patients as recorded by public health nurses. ANA Regional Clinical Conferences, 1965, 5, 34-41.

Disbrow, M. A. Nursing intervention as a factor in successful breast feeding. ANA Clinical Sessions, 1964, 5-12.

Donner, G. Parenthood as a crisis: A role for the psychiatric nurse. Perspectives in Psychiatric Care, 1972, 10, 84-87.


Evans, R. Needs identified among breast feeding mothers. ANA Clinical Sessions, 1965, 162-161.


Hatrick, A. Puerperal mental illness. Nursing Times, 1975, 72, 533-534.


Melchior, L. Is the postpartum period a time of crisis for some mothers? Canadian Nurse, 1975, 71, 30-32.


Newton, N., & Newton, M. Relationship of ability to breast feed and the maternal attitudes toward breast feeding. Pediatrics, 1950, 5, 869-875.


Ringler, N., Kennell, J., Jarvella, R., Navojosky, B., & Klaus, M. Mother-to-child speech at two years--effects of early postnatal contact. The Journal of Pediatrics, 1975, 86, 141-144.


<table>
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<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Birthplace</td>
<td>Lincoln, Nebraska</td>
</tr>
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<tr>
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<td>Professional Positions</td>
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<td>St. Joseph Hospital, Omaha, Nebraska, June 1972-September 1973; Staff Nurse, Archbishop Bergan Mercy Hospital, Omaha, Nebraska, September 1973-January 1975; Public Health Nurse, Visiting Nurses' Association, Omaha, Nebraska, January 1975-September 1975; Staff Nurse, University of Utah Medical Center, Salt Lake City, Utah, January 1976-June 1977.</td>
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