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SOCIAL SUPPORT AND BREASTFEEDING DURATION

By

Jeanette Jacobs

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ABSTRACT

SOCIAL SUPPORT AND BREASTFEEDING DURATION

By

Jeanette Jacobs

Support from professionals and members of one's social network has been found to be associated with breastfeeding duration in the literature. The purpose of this study is to describe the relationship of perceived social support in mothers who continue to breastfeed and mothers who have terminated breastfeeding at eight weeks postpartum. Forty-one women who committed to breastfeed for at least eight weeks comprise the sample, 31 of these women continued to breastfeed and 10 of them stopped by eight weeks postpartum. The results indicate there is no significant difference in social support and the duration of breastfeeding. Implications for future research, including more precise measures of social support are discussed, as well as implications for Advanced Practice Nurses.

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INTRODUCTION

Breastfeeding, once the most accepted method of infant feeding, declined significantly in the United States in the middle of this century. It is estimated that in 1946 the number of U.S. women leaving the hospital breastfeeding was 38%. By 1956 this percentage decreased to 21% and to 18% by 1966 (Guthrie & Guthrie, 1966; Meyer, 1968). Although the 1980s brought an increase in breastfeeding from 1960 rates, the incidence of breastfeeding of newborns declined from 59.7% in 1984 to 52.2% in 1989 (Freed, 1993). In the United States in 1981 and 1988 61% and 54% of women were breastfeeding upon discharge from the hospital respectively; however only 27% and 21% continued to breastfeed for six months (Martinez, 1984). The Healthy People Report of 1988 stated 54% of mothers were breastfeeding at the time of discharge from the hospital. This rate varies considerably with income, ethnicity and cultural factors with 32% of low income mothers breastfeeding at the time of discharge from the hospital; 25% of African-American mothers; 51% of Latino mothers; and 47% of Native American mothers. Overall 21% continued to breastfeed for 5-6 months.

In the Healthy People 2000 report (1990) the U.S. Secretary of Health and Human Services set new goals for breastfeeding in the United States to increase to at least 75% the proportion of mothers who breastfeed their infants in the early postpartum period and to at least 50% the

proportion who continue breastfeeding until their infants are five to six months old. The purpose of this study is to describe the differences in perceived social support measured after delivery and at eight weeks postpartum between mothers who breastfeed and mothers who begin and then terminate breastfeeding.

According to the World Health Organization, the American Academy of Pediatrics, American Public Health Association, and other health care authorities, breastfeeding is the best way to nourish young babies (Hall, 1978). The benefits of this form of infant feeding for at least six months for both the infant and the mother have been widely recognized (Brown, Paige, & Chwalow, 1991). Breastfeeding is one of the most natural and best forms of preventive medicine (Yeung, Pennell, Leung, & Hall, 1981). Breastfed infants have lower rates of hospital admissions, ear and respiratory infections, diarrheal illnesses, and atrophic skin disorders than their bottle fed counterparts (Freed, 1993).

Attempts to identify the multiple, complex and changing variables that are associated with continuation of breastfeeding have resulted in extensive lists of modifiable and nonmodifiable factors (Janke, 1994). Lawrence (1985) states attrition most often occurs during the first six weeks after birth with anywhere from 32 to 58% of breastfeeding women prematurely switching to formula. It is unclear why such a rapid decline in breastfeeding occurs

during the initial postpartum period (Buxton, Gielen, Faden, Brown, Paige, Chwalow, 1991). The American Academy of Pediatrics (1982) has researched the causes of early weaning of infants to formula, such as; mother's perceived inadequacy of milk supply, nipple soreness and hyperbilirubinemia. They have recommended and emphasized the benefits of breastfeeding as the preferred method of infant feeding for the first six months of life.

Other researchers have attempted to identify factors that may influence the continuance of breastfeeding and reduce the attrition rates in the breastfeeding population (Wright & Walker, 1983; Lawrence, 1985; Morgan, 1986; Tulloch, 1995). Among the factors studied is the influence of health care professionals. Page and Goertz (1989) suggest that health care professionals should recognize the importance of timely breastfeeding education and anticipatory guidance in order to help delay a mother's decision to discontinue breastfeeding. In order to increase support of breastfeeding, key people must also provide support. Social support for nurses, physicians, support groups, family, and friends has also been related to breastfeeding continuance (Saunders & Carrol, 1988; Baranowski, Bee, Rassin, Richardson, Brown, Guenther, & Nader, 1983). Social support can be provided by family, friends, and health care professionals. Key people may vary also by ethnic group (Baranowski et al., 1983). Lack of knowledge and lack of support are often cited as the two

biggest hindrances leading to early termination of breastfeeding (Ladas, 1970).

Continuation of breastfeeding has been related to a variety of variables; ranging from social, personal and physiological. Demographic variables such as maternal age, socioeconomic status, occupation, level of education, parity, type of delivery, information and knowledge of breastfeeding and previous breastfeeding experience have all been related to continuation of breastfeeding (West, 1980; Janke, 1988; Wright & Walker, 1983). Problems with breastfeeding in the first few weeks postpartum have also been associated with breastfeeding continuance. Problems investigated have included incorrect latch-on/such, sleepy/fussy baby, infant weight loss, maternal concerns about insufficient milk and nutritional value of breast milk, sore nipples, breast engorgement, fatigue and an unsatisfied infant (Kearney, Cronenwett, & Barrett, 1990).

Although there are many factors associated with the continuance of breastfeeding, this study will examine only one of them, perceived social support and its influence on breastfeeding duration. Many experts have stated that support is essential for successful breastfeeding. However, little agreement exists about what type of support or what amount of support best facilitates successful breastfeeding. Duration of breastfeeding related to social support will be the focus of this study.

Study Purpose and Research Questions

The purpose of this study is to describe the relationship between social support and the early termination of breastfeeding during the first eight weeks postpartum. The primary question addressed is:

Are there differences in perceived social support measured at delivery and at eight weeks postpartum between mothers who breastfeed and mothers who begin and then terminate breastfeeding?

Conceptual Definitions

The terms used in this study are conceptually defined as follows:

Breastfeeding duration. Breastfeeding an infant on demand (which usually means intervals of 2-5 hours between feeds, 8-12 times per day) with complementary bottled milk or water being rarely used and no solid foods being introduced for the first eight weeks of life (Freed, Landers, Schanler, 1991).

Demand feedings encourage breast stimulation for milk production and sufficient infant intake. Supplemental feedings or solid food feedings should be avoided because they can suppress milk production. Newborns demand feedings every 1.5 to 3 hours throughout the day and night (Freed, Landers, Schanler, 1991). Long intervals between feedings should be discouraged in order for mother and baby to practice the techniques of breastfeeding and build an adequate milk supply for the infant's need. As the

breastfeeding experience progresses, longer intervals between feedings will occur.

Social Support. The relative presence or absence of psychosocial support resources from significant others (Kaplan & Cassel, 1977).

Social support is the enduring interpersonal ties to people who can be relied on to provide emotional, instrumental, informational and appraisal support, help and reassurance in times of need (Caplan, 1974). Social support is likely to be useful to the individual only to the extent it is perceived as supportive (Hughes, 1984). Health care practitioners can be sensitive to the existence or availability of people on whom the breastfeeding dyad can rely; people who let them know that they are cared about, valued and loved. Social support can be provided by many sources: family, friends or health care providers.

THEORETICAL FRAMEWORK

The Social Support Theory (House & Kahn, 1985) serves as the theoretical framework of this study. The Social Support Theory is a multidimensional concept which defines people as interpersonal resources who provide gratification of basic human needs in relationships (Figure 1). Social support is sometimes defined conceptually in terms of the existence or quantity of social relationships. House (1981) describes social support as an interpersonal transaction involving one or more of the following: 1) emotional

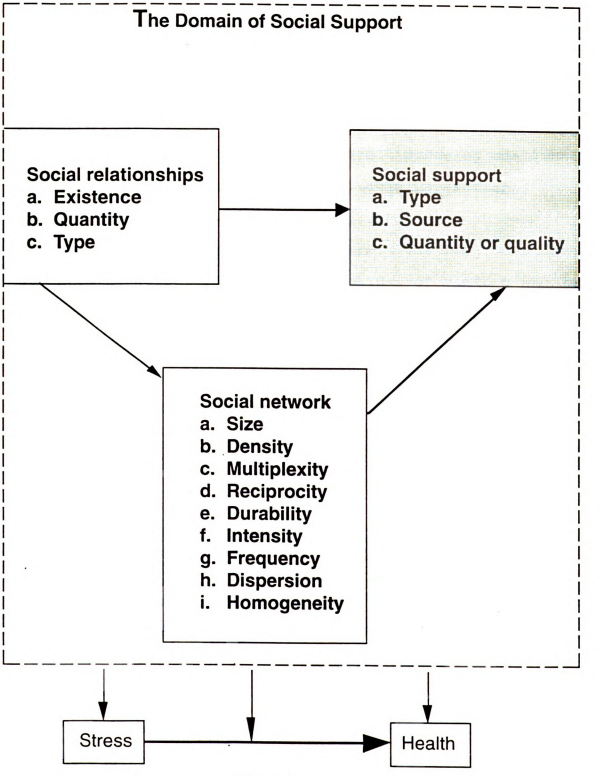
The Domain of Social Support
Social relationships
a. Existence
b. Quantity
c. Type
Social support
a. Type
b. Source
c. Quantity or quality
Social network
a. Size
b. Density
c. Multiplexity
d. Reciprocity
e. Durability
f. Intensity
g. Frequency
h. Dispersion
i. Homogeneity
Stress
Health

Figure 1

support; 2) instrumental support; 3) informational support; and 4) appraisal support.

Emotional support provides empathy, caring, love and trust. This type of support sustains self-esteem by reinforcing an individual's feelings of self-worth. The supportive person acts as an advocate. Offering emotional support includes providing comfort, sharing emotional burdens through sympathy or empathy, providing encouragement, and expressing concern. The desired outcome of these behaviors is to foster feelings of comfort and lead an individual to believe that s/he is admired, respected, and loved, and that others are available to provide caring and security (Jacobson, 1986).

Instrumental support directly helps the person in need by taking over chores or duties. Within this context are activities that provide needed goods and services (House, 1981).

Informational support helps people help themselves by giving them information they can use in dealing with personal and environmental problems. Informational support includes giving advice and gaining access to new knowledge (House, 1981).

Appraisal support is the transmission of information relevant to self-evaluation. Appraisal support is similar to informational support in that it gives information; however, it is more like coaching. By watching goal-related activities, the supporter is able to provide guidance that

includes positive reinforcement and an honest appraisal of shortcomings with appropriate correction or comfort. The intent of all these types of support is to provide a buffer or have a cushioning effect so that the recipient maintains strength or endures (House, 1981).

Social Support Theory provides a general framework for considering breastfeeding interventions which can be used by health care practitioners in attempting to reduce the risk of early weaning and therefore extend the duration of breastfeeding. Recognizing that Social Support Theory is helpful is not to suggest that it is prescriptive in nature. The components of social support are overlapping and dynamic and are therefore difficult to study in isolation from each other.

Aware of this complex dynamic of social support, the health care practitioner can act as an advocate in supporting the breastfeeding mother by reinforcing the mother's feeling of confidence. Encouragement may be given through functional support in the basics of breast functions and expressing concern for success in breastfeeding. The health care practitioner, as a counselor, can also enhance the functioning of the social network by intervening to assess and evaluate the effectiveness of actions that increase breastfeeding duration. Social Support and its relationship to breastfeeding duration is pictured in Figure 2. Antonucci (1986) theorizes supportive behaviors engaged in by different support providers may be differentially

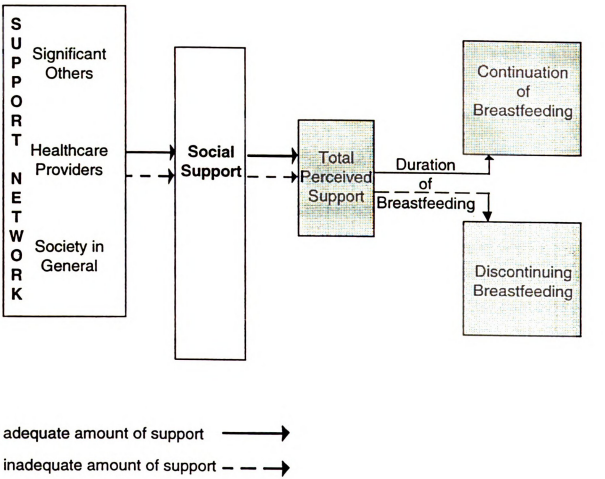

Figure 2. Social Support and Breastfeeding Duration

perceived and differentially effective in the support relationship. Support perceived to be available may be more consistently related to positive outcome measures than support actually received (Cohen & Wills, 1985; Kessler & McCloud, 1984; Wethington & Kessler, 1988). The most active ingredient of social support may be individuals' beliefs that they have people who value and care about them and who are willing to try to help them if they need assistance or other support (Sarason, Sarason & Pierce, 1990). A supportive, accepting environment that encourages new behaviors like breastfeeding is likely to be conducive to the individual developing new skills, enjoying contacts with others, and not catastrophizing when confronted with failure or roadblocks (Sarason, Sarason & Pierce, 1990). The Social Support Theory potentially assists the health care provider in making a more systematic clinical assessment of the breastfeeding mother's social network. Such a social support assessment may lead to clinical judgements about deficits, strengths and untapped resources to move her toward behaviors potentially leading to increased duration of breastfeeding through encouragement to do so from the support network.

Review of Literature

While the recent increase in the incidence of breastfeeding in the United States is encouraging, early termination of breastfeeding remains a problem that is poorly understood (Coreil & Murphy, 1988). Researchers have

found that little attention has been given to supporting breastfeeding women after hospital discharge even though organizations such as The La Leche League has been very active in promoting breastfeeding. Although many authors have recommended support after hospital discharge and a significant number of breastfeeding women indicate a need for breastfeeding assistance, only a few reported studies have addressed the issue of systematically prolonging breastfeeding (Saunders & Carroll, 1988). It is believed that breastfeeding for six months or more is dependent on multiple factors relating to the mother, the infant, and to the supporting environment (Loughlin, Clapp-Channing, Gehlbach, Pollard & McCutchen, 1985).

Increasing evidence suggests that social support provided by one person or group of persons helps the mother breastfeed for a longer time. Familiar and professional support may also be important factors in both the rates of initiation and eventual duration of breastfeeding (Freed, Fraley & Schanler, 1992). Although studies linking particular kinds of social support with breastfeeding are few, Saunders (1988) states consistent support should be provided to breastfeeding mothers so that both the incidence and the duration of breastfeeding can be increased.

The application of Social Support Theory for empirical research has provided insight into the potential impact of specific variables on the breastfeeding experience. The literature in many instances combines the types of support

(emotional, informational, instrumental and appraisal) because one type of support often builds on another type of support which enhances positive outcomes for the breastfeeding dyad. It is difficult to separate these types of support and measure them.

It is also difficult to separate professional from family support. Some studies have attempted to assess the impact of the health care provider's support on duration of breastfeeding. Hall (1978) studied the influences of professionals and education on the breastfeeding success of 40 women who gave birth in one community hospital. The study participants were divided into one of three groups. Group I (n=12) was mothers receiving routine hospital care; Group II (n=13) was mothers receiving the routine care plus a slide/tape presentation on breastfeeding and a pamphlet to take home; and Group III (n=15) was mothers receiving the slide/tape and pamphlet teaching plus expert nursing support. Nursing support was defined as giving guidance and strength, providing relief from mental anguish and relating an attitude of understanding and reassurance as well as praise and encouragement. Minimum support was operationalized as being with the mother at least once while she was breastfeeding in the hospital, a visit or call each day in the hospital, and calls home at one and two days and one week postpartum. The results were that 80% of the Group III mothers were breastfeeding at six weeks postpartum compared with 50% of Groups I and II mothers. The

weaknesses of this study were that the study sample was small and social support from other non-professional people was not assessed or controlled.

Others have examined social support from only family sources. Beske and Garvis (1982) identify factors that influence a mother's decision to breastfeed, to wean, as well as, when such decisions are made. Questions they formulated for their study were "who or what are the sources of encouragement and discouragement for breastfeeding?". The 94 participants were selected by convenience sampling from a Minneapolis hospital. Data were collected using a structured questionnaire developed from the study and completed by the participants at three different times. Results indicated the infant's father and the infant were the predominant sources of encouragement for breastfeeding. The infant influenced weaning the greatest in the long term breastfeeders; the father in the short term breastfeeders. Participants identified the greatest sources of verbal discouragement to be the paternal grandmother, the maternal grandmother and other family members and friends. Physical discouragement was caused by reasons such as sleepy baby, nipple tenderness, and difficulties in positioning for comfort and modesty. Important to this study is the identified value of consistent encouragement of both the infant and the infant's father as influencing breastfeeding duration. The key component of premature weaning was also linked to the maternal and paternal grandmothers'

discouragement of breastfeeding. A failure to have assessment of professional encouragement (social support) for breastfeeding was the weakness of this study.

Coreil and Murphy (1988) studied the influence of social support from family and friends on the introduction of formula supplements. They conducted a longitudinal study of 44 breastfeeding mothers. The sample of 44 mothers drawn from childbirth education classes were Caucasian, middle to upper class and married, with a median of 14 years of education. Intended duration correlated strongly with maternal confidence. Formula supplements were inversely related to social support from family and friends. The results of the study suggest that the lack of a supportive environment for breastfeeding may influence mothers' use of formula supplements. The emotional support of reinforcing positive attitudes toward breastfeeding by the family members and friends may be the most effective way to help mothers breastfeed for a longer period of time. Again professional support sources were not assessed in this study.

Sloper, McKean and Baum (1975) studied patients on a single maternity ward over nine 20 week periods to determine the influence of professionals (e.g. nurses and MDs) on mothers' decisions to breastfeed and their breastfeeding duration. The data for the study were collected using questionnaires that were given to breastfeeding mothers at hospital discharge, at three months, and again at eight and

one half months. The results indicated that the emotional social support of the nursing staff and health professionals (MD or midwife) caring for the mother did increase the number of mothers initially breastfeeding their infants; however, it did nothing to prevent the rapid decline in lactation after hospital discharge. The researchers found factors other than social support, e.g. how a mother had been fed herself and her socioeconomic status, influenced duration of breastfeeding most significantly. Social support from family and friends was unmeasured in the study. This is a limiting aspect of the research.

Kendall-Tackett and Sugarman (1995) studied 179 women who breastfed one or more babies past the age of six months. They used a closed-ended self administered 96 item questionnaire and asked the women to rate the impact of partners, friends, relatives, employers, strangers, lactation consultants, and members of La Leche League (LLL) on the women's feelings and behavior related to breastfeeding. Nurses, physicians and other health care providers were not included in the list of people to be rated. Mother-to-mother support in breastfeeding had the highest impact on breastfeeding with the LLL leaders and members being very positive toward their breastfeeding experience. A lower, but still large, percentage of women indicated that their spouse or partner was "very positive" toward their breastfeeding experience. Negative responses were from relatives and strangers. In this study there was

a strong positive association between perceived amount of social support and positive breastfeeding outcome measured by the positive responses and comments about the breastfeeding experience from the women in the sample. The study also combined personal and professional support sources.

Bryant (1982) studied the impact of kin, friend and neighbor networks to further assess social support on infant feeding practices. Bryant interviewed a sample of 76 families in Florida, divided almost evenly among Puerto Ricans (n=28), Cubans (n=28) and Anglo-Americans (n=20). Anglo-Americans participants viewed their husbands and friends as having the most significant impact on their feeding decisions as well as the duration of breastfeeding and rarely looked to their mothers for advice. For Puerto Ricans and Cubans, however, mothers were the key members of the extended family consulted on infant feeding and duration of breastfeeding, although husbands were responsible for most other family decisions. Professionals were not included as offering social support for breastfeeding in this study. The results did indicate culture does affect the influence of social support on infant feeding.

Neifert, Gray, Gary and Camp (1988) studied a subset of 60 primiparous breastfeeding adolescents regarding the influences of several factors on their duration of breastfeeding. The variables examined related to the duration of breastfeeding were maternal age, ethnic group,

education level, involvement of the infant's father, timing of the breastfeeding decision, intended duration of breastfeeding, age at which formula supplements were initiated, and availability of maternal support. None of these variables were found to be predictive of breastfeeding duration. Adolescent breastfeeding may have additional factors which affect it and deserves further study.

The influence of social support on lactation duration was studied in postpartum women by McNatt and Freston (1992). The researcher mailed questionnaires to a convenience sample of 45 primiparous lactating women from a southeastern Connecticut community hospital at six weeks postpartum to measure their perceived informational social support and its influence on lactation duration. Also evaluated by researchers were the size and structure of the participants' personal support networks. Subjects were asked to share their thoughts and feelings regarding breastfeeding. The results of the study indicate that increasing a woman's informational support network to include qualified professionals may increase the duration of the mother's breastfeeding experience.

Saunders and Carrol (1988) also studied the impact of postpartum breastfeeding support on breastfeeding duration. The results of the study were that the experimental group offered informational support breastfed consistently longer than the control group, with 80% of the experimental participants breastfeeding at four weeks and 50% at 16

weeks. Of the subset of the experimental group members who received all three activities offered (n=36), 95% of these women were breastfeeding at four weeks and 67% at 16 weeks. The results of the study suggest the importance of professional informational support as a contribution to breastfeeding duration but did not assess family or friend support.

West (1980) studied factors influencing the duration of breastfeeding. Participants in her study were mothers (n=239) who were breastfeeding upon hospital discharge who had delivered mature, healthy babies. The mothers were followed up by means of a mailed questionnaire when their infants were six months old. Questions were asked about the duration of breastfeeding, the timing and reasons for any supplementary feedings in the first three months, and the factors responsible for discontinuation of breastfeeding. Women were also asked whether they enjoyed breastfeeding, whether they had received enough support and whom they had consulted about their problems. The results indicated breastfeeding duration was significantly influenced by assistance and emotional support to the breastfeeding woman by relatives, professionals and breastfeeding support groups which contributed to overcoming her problems. This is one of the few studies which included social support from all three groups (professionals, family and friends) in the results.

Summary

The research literature does not categorize the concepts of social support to breastfeeding mothers as discrete entities of emotional, informational, instrumental and appraisal support; it often describes social support as a constellation of support activities. Social Support is generally thought of as a good thing. Social Support from relatives, friends and health care professionals often is not clearly differentiated in the literature or when it is, includes support from just one of these sources. Conclusions drawn from these studies are often not generalizable to a larger population because samples are small for most studies done with white middle class women. A woman's concerns about lack of social support have been identified as barriers in duration of breastfeeding. Studies also suggest many other things defined as informational social support such as previous experience, infant factors, and a strong commitment/confidence in ability to breastfed interact to contribute to lengthening breastfeeding duration.

METHODS

The purpose of this study is to describe the differences in perceived social support measured after delivery and at eight weeks postpartum between mothers who breastfeed and mothers who begin and then terminate breastfeeding.

Setting and Sample

This study is based on a secondary data set. A convenience method of nonprobability sampling of 60 women was used in the original study. The study was conducted in 1995 at a 650 bed tertiary care hospital in the Midwest on the low risk postpartum unit. The hospital delivers 3,500 births a year.

Women who met criteria for inclusion in the study were those who: 1) had given birth to a healthy term infant, 2) spoke English, 3) planned to breastfeed for at least eight weeks, 4) were primigravidas, and 5) were between the ages of 18-40 years. Of the 340 women giving birth during the one month study period, 100 met the criteria for inclusion in the study, 60 consented to participate with a 60% overall response rate. Eight weeks follow up data were obtained from 41 women yielding a 32% lost to follow up rate.

Protection of Human Rights

The research investigation was determined to pose no risks to the physical, social, or emotional well-being of its participants. The research proposal was approved by the Wayne State University Committee for Protection of the Rights of Human Subjects (#H 02-19-95(B03)-ER) and Michigan State University committee for Protection of the Rights of Human Subjects (96-396). Approval to conduct the study was also granted through the internal Human Subjects Review Board and Nursing Research Committee of the large, nonprofit community medical center where the study was conducted (SJ

0295-01). To protect the rights of the participants, the consent form (Appendix A) explaining the study as well as the legal rights of the subjects was read, signed and a copy presented to each of the study participants. The confidentiality of the information and the voluntary nature of the participation of all subjects were emphasized.

Operational Definitions of Variables

Operational definitions of breastfeeding duration and social support are:

Breastfeeding was defined as: 1) any mother who breastfed after delivery and planned to continue to breastfeed; and 2) any mother who was still breastfeeding at eight weeks postpartum. This was assessed by The Breastfeeding Attrition Prediction Tool (BAPT) in question #95 "What is the primary method of infant feeding you are using with your new baby?"

Social Support was defined as the 13 subjective norm items on the BAPT (questions 72-84) that focus on the mother's perception of the desire by individuals or groups (the baby's father, your mother, your doctor, etc.) for her to breastfeed multiplied by how much she values the opinion of those individuals or groups related to her feeding choice ("care very much" to "do not care at all"). The BAPT was completed at delivery and at eight weeks postpartum. Valued opinion was considered a proxy for social support in this study.

Instrument

The instrument used for the research study was the Breastfeeding Attrition Prediction Tool (BAPT) developed by Janke, (1994) (Appendix B). The tool was developed based on the constructs of attitude, subjective norm and control of the Theory of Planned Behavior (TPB) (Ajzen, 1985; Ajzen & Madden, 1986).

The BAPT consists of a two-part questionnaire. The first part measured the TPB constructs of attitude, subjective norm and control using six-point summated rating scales, and the second part consisted of a demographic questionnaire (See Appendix C).

The Social and Professional Support Subjective Norm Scale score was produced by multiplying each of the 13 belief statements (#72 to #84) by its corresponding motivation to comply statement "do not care at all" (1) to "care very much" (6). The six-point summated rating scale format for the belief scores had anchors of "definitely breastfeed" (1) to "definitely not breastfeed" (6) and "not applicable" (0) in response to the statement, "For each of the following individuals indicate how much they want you to breastfeed." The anchors for the corresponding question "How much do you care about the following people's opinions on how you should feed your baby?" Were "do not care at all" (1) to "care very much" (6) and "not applicable" (0). Each belief statement was multiplied by the corresponding motivation to comply statement as follows: 30, 72; 31, 73;

32, 74; 33, 75; 34, 76; 35, 77; 36, 78; 37, 79; 38, 80; 39, 81; 40, 82; 41, 83; and 42, 84. The sum of the multiplied scores on the paired items produced the Social and Professional Support Subjective Norm Scale score. The higher the score, the greater the support of breastfeeding. See Appendix C for the Scoring Guidelines for the BAPT.

The instrument's content validity was determined by a panel of ten nurse lactation experts. The instrument's overall reliability was .80 (Cronbach's alpha) when the instrument was developed (Janke, 1994).

Data Collection Procedures

To implement the study, the following steps were taken:

1. Participants were breastfeeding primiparous women who met the study criteria, who were hospitalized on a postpartum unit of a large community medical center, and who were at least eight hours post-delivery.
2. Prospective participants were informed of the format of the study. The voluntary nature of the participation was stressed as was the fact that the woman's decision to participate or decline participation would in no way affect her care while in the hospital or her breastfeeding follow-up care.
3. Participants were informed that all data collected would remain confidential and that they would be identified on their questionnaires only by code numbers. No adverse consequences were anticipated. Informed consent was obtained. Participants returned a

copy of their signed consent describing the study and were given their own copy of their signed consent describing the study.

4. The Breastfeeding Attrition Predication Tool (Janke, 1994) was completed in privacy by each participant after the investigator fully explained the directions and answered any questions. The completed tool was then sealed in a blank envelope by the participant and was collected by the investigator the same day.
5. At the time the initial BAPT was completed in the hospital, the participant was asked to place a copy of the BAPT with her code number inscribed on it along with a stamped envelope addressed to the investigator into a second stamped envelope on which the participant was asked to write a valid address where the envelope would be mailed to her in eight weeks. Lastly, the participant was asked to complete a third envelop with a valid addressed to be used to mail a second BAPT at ten weeks postpartum only in the event that the first mailed BAPT was not received by the investigator. The second and third envelopes discussed were collected by the investigator when she picked up the initial completed BAPT.
6. Seven weeks after the delivery of the participant's infant, the investigator mailed the self-addressed envelope containing the BAPT, and the stamped envelope

addressed to the investigator to return the completed BAPT.

7. The participant was asked to respond to the BAPT with the private code number inscribed on it; place it into the stamped envelope addressed to the investigator, and mail it to the investigator. The investigator's private work telephone number was included in the BAPT so that questions could be answered. The participants were asked to refer to themselves only by code number in the event that they called with questions.

Forty-one of the returned questionnaires were complete enough to be utilized in this study. The final sample of 41 mothers contained 31 still breastfeeding at eight weeks postpartum and 10 who were bottle feeding.

Statistical Analysis of Data

This was a descriptive study. Basic descriptive statistics, frequency counts were computed for the study variables. Descriptive statistics were utilized to analyze characteristics of the sample. Sociodemographic data were used and included age, ethnicity, income, and education.

Social Support scores were computed at birth and eight weeks postpartum for women who continued to breastfeed at eight weeks and those who began but terminated breastfeeding. The mean scores of the two groups were analyzed for statistical significance using the t-test. The t-tests were used because, despite differences in the group size, the variances were approximately equal. The t-test

analysis is a statistical test used for analyzing the difference between two means (Hungler & Polit, 1991). Data were analyzed using the SPSS-PC statistical program.

RESULTS

Forty-one completed and returned the questionnaires and were the subjects of this report. Of the 41 mothers participating 31 (75.6%) continued to breastfeed and 10 who began breastfeeding were bottle feeding at eight weeks postpartum.

See Table 1 for the sample background characteristics. Table 1 states the maternal variables of age in years, education in years and income for the breastfeeding mothers and the bottle feeding mothers at eight weeks postpartum. It also states the baby variables of birth weight in pounds and how soon after birth in hours the babies were breastfed for the breastfeeding mothers and the bottle feeding mothers. The demographics of the sample revealed no statistically significant differences on these variables between the group of breastfeeding and bottle feeding mothers.

The question asked in this study centers on the differences in perceived social support measured after delivery and at eight weeks postpartum between mothers who breastfeed and mothers who began but terminated breastfeeding. The BAPT score of the two respondent groups is reported in Table 2. There were no significant differences in the two groups at birth ($t=.20$, $df=38$, $p=.84$)

Table 1
Background Characteristics

Maternal Variables	Breastfed n=31 at 8 weeks			Bottle Fed n=10 at 8 weeks				
	Mean or %	SD	RANGE	Mean or %	SD	RANGE	t(df)[c] or X^2	P
Age (years)	29.4	4.5	18-38	28.4	5.9	20-37	.54	.59
Education (years)[a]	14.9	2.7	9-20	13.8	2.2	11-18	1.17	.25
Income[b]	4.5	1.7	2-8	3.9	2.0	1-7	.88	.39
Ethnicity								
Caucasian	80.6			100			2.27	.13
Non Caucasian	19.4							
Baby Variables								
Birth Weight (lbs)	7.79	1.08	5.62-9.88	7.50	.82	6.5-8.6	.78	.44
How soon breastfed (hrs)	2.8	3.6	.2-16	5.1	7.1	1.0-24	1.31	.20

a. See BAPT data collection tool for details
b. 8 point scale--see data collection tool, BAPT, for details
c. df=39 for all t-tests; df=1 for X^2

Table 2
Social Support

Social Support	Breastfeeding at 8 weeks			Bottle Feeding at 8 weeks			t(df) 39	p
	Mean	SD	Range	Mean	SD	Range		
Initial Social Support	63.1	30.1	3-147	65.5	37.5	28-132	.20(38)	.84
8 Weeks Social Support	65.8	23.1	20-115	68.9	35.1	12-124	.31 (38)	.76

and at eight weeks (t=.31, df=38, p=.76) in social support levels.

DISCUSSION

This study revealed no difference in perceived social support measured after delivery and at eight weeks postpartum between the women who breastfed and the women who began but terminated breastfeeding. This may be in part due to the test instrument. The BAPT may not be a valid measure of social support provided to the breastfeeding mother. Certain activities which might relate to emotional, instrumental, informational, and appraisal support from the social support network were not addressed on the BAPT tool. Perhaps separate perceived support scales for each group of support providers listing specific activities would be more appropriate to measure specifically the type of social support affecting breastfeeding duration. The BAPT measured valued opinion rather than social support.

Both groups started out breastfeeding so initial differences in social support might be hard to show since both groups were initially similarly breastfeeding and similar in social support. Since social support changes slowly, differences at eight weeks would be impossible to capture. Social support may influence initiation of breastfeeding. Using groups would begin to breastfeed and stop makes it difficult to sort out how support influences how long a mother breastfeeds.

Study Limitations

Results of this small sample of mothers are not generalizable to represent breastfeeding mothers as a whole. The population at a 650 bed tertiary care hospital on a low risk postpartum unit are different from the population as a whole. Data were limited mainly to Caucasian, middle class, primigravida females. The reasons mothers gave for not continuing to breastfeed were not available. Therefore, conclusions regarding these reasons are beyond the scope of this study. Breastfeeding support was measured more as a valued opinion, so a real measure of all aspects of social support is needed.

Study Assumptions

The following assumptions were identified for the purpose of this investigation:

1. Breastfeeding attrition occurs most often in the first eight weeks postpartum.
2. Social support is not a single phenomenon but is a cluster of factors that act together.
3. The perceived self reported data were accurate.

Practice Implications for the Advanced Practice Nurse

The results of this study have many implications for nursing. Although the study showed no statistically significant differences between social support and duration of breastfeeding, the Advanced Practice Nurse can still benefit from the study in better understanding the complexity of social support and the continuance of

breastfeeding. The Advanced Practice Nurse can assist by educating women about normal adjustments necessary to becoming a successful breastfeeding dyad. Advanced Practice Nurses can further assist the breastfeeding dyad by promoting breastfeeding and have an understanding of the importance and intricacies of social support. Advanced Practice Nurses study of social support (informational, emotional, instrumental and appraisal) has a high probability of improving health care to the breastfeeding mothers and families. Advanced Practice Nurses can also study other factors that influence breastfeeding continuance.

Additionally, tools used for assessing social support can improve upon the BAPT. The BAPT clearly measures how much opinions are valued. A better measure of true social support related to breastfeeding is needed for research and clinical practice. A tool designed as a checklist using the theoretical definitions of social support as described by House (1984) could serve as the framework for asking the women to identify her interpersonal support system. This would include: 1) the nature, strength, kind and the availability of this support; 2) a definition of her role obligations; 3) an indication of the amount of support available to meet these role obligations during breastfeeding; 4) the woman's patterns of social affiliation; and 5) a woman's need for social affiliation during her breastfeeding experience.

Future Research

This investigation opens several possibilities for future research. These include the following: 1) accessing a larger, more heterogeneous, randomly selected sample to reveal differences between perceived support and breastfeeding duration at eight weeks; 2) use of another tool to measure social support; the BAPT is not a valid measure of all kinds of social support (emotional, instrumental, informational, and appraisal); 3) development of a tool for nurses and lactation consultants to assess a breastfeeding social support after delivery.

This sample was homogeneous with regard to breastfeeding intention, healthy baby and first birth. Using a larger, random sample of breastfeeding mothers in a primary care setting would improve the variability, and the generalizability of this study. This, along with a more valid measure of social support may help to determine if there are differences between perceived support and lactation outcome.

Using another more valid scale to determine what kinds of support are needed and helpful to the breastfeeding is recommended. The Hughes Breastfeeding Support Scale (Hughes, 1984) could be used to better measure a lactating woman's social support (emotional, instrumental, and information support). Personal and professional aspects of support should always be included in a comprehensive social

support assessment. The use of a more valid tool may help in explaining differences in breastfeeding duration.

Breastfeeding is a complex process affected by many variables. A more multivariate model might help to identify and clarify the relationship between breastfeeding outcome and all variables. Social Support in and of itself although important must be considered as a part of a constellation of variables affecting breastfeeding duration. Other factors such as awareness of the physical and psychological benefits for the infant (Lawrence, 1985; Hall, 1978), milk supply, and infant factors (hyperbilirubinemia) need to be considered. Studying heterogeneous samples of women of different cultures and ethnic backgrounds (Wright, Holberg, & Taussig, 1988) would also be helpful.

CONCLUSION

The results of this study have implications for the Advanced Practice Nurse whose practice includes breastfeeding mothers. By utilizing these findings and developing more valid tools to explore a breastfeeding woman's support network, lactation specialists and other health care providers may potentially find what is most helpful in increasing breastfeeding duration.

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LIST OF REFERENCES

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APPENDICES

APPENDIX A

UCRIHS Approval

MICHIGAN STATE
UNIVERSITY

November 6, 1996

TO: Jeanette Jacobs
60353 Shawnee Ln.
Washington, MI 48094

RE:

IRB#:	96-396
TITLE:	SOCIAL SUPPORT AND BREASTFEEDING DURATION
REVISION REQUESTED:	10/21/96
CATEGORY:	1-E
APPROVAL DATE:	08/02/96

The University Committee on Research Involving Human Subjects'(UCRIHS) review of this project is complete. I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the UCRIHS approved this project and any revisions listed above.

RENEWAL: UCRIHS approval is valid for one calendar year, beginning with the approval date shown above. Investigators planning to continue a project beyond one year must use the green renewal form (enclosed with the original approval letter or when a project is renewed) to seek updated certification. There is a maximum of four such expedited renewals possible. Investigators wishing to continue a project beyond that time need to submit it again for complete review.

REVISIONS: UCRIHS must review any changes in procedures involving human subjects, prior to initiation of the change. If this is done at the time of renewal, please use the green renewal form. To revise an approved protocol at any other time during the year, send your written request to the UCRIHS Chair, requesting revised approval and referencing the project's IRB # and title. Include in your request a description of the change and any revised instruments, consent forms or advertisements that are applicable.

PROBLEMS/ CHANGES: Should either of the following arise during the course of the work, investigators must notify UCRIHS promptly: (1) problems (unexpected side effects, complaints, etc.) involving human subjects or (2) changes in the research environment or new information indicating greater risk to the human subjects than existed when the protocol was previously reviewed and approved.

If we can be of any future help, please do not hesitate to contact us at (517)355-2180 or FAX (517)432-1171.

Sincerely,

David E. Wright, Ph.D.
UCRIHS Chair

DEW:bed

cc: Linda Beth Tiedje

OFFICE OF
RESEARCH
AND
GRADUATE
STUDIES

University Committee on Research Involving Human Subjects (UCRIHS)
Michigan State University
232 Administration Building
East Lansing, Michigan
48824-1046

517/355-2180
FAX: 517/432-1171

APPENDIX B

Human Subjects Consent Form

Wayne State University

Human and Animal Investigation Committees
Room 2238 Gordon H. Scott Hall
540 E. Canfield Avenue
Detroit, Michigan 48201
(313) 577-1628

Multiple Assurance# M1261
IRB# 01

MEMORANDUM

TO: **Therese Mitchell Reddan, Nursing**
20437 Kenosha
Harper Wodds, MI 48225

FROM: **Peter A. Lichtenberg, Ph.D.** Peter A. Lichtenberg, PhD
Chairman, Behavioral Investigation Committee

SUBJECT: **Expedited Approval of Protocol #H 02-19-95(B03)-ER; Breastfeeding Atttrition: Factors Influencing Outcome in the Early Postpartum Period**

DATE: **March 9, 1995**

As required under provisions of the Department of Health and Human Service Regulation 45 CFR 46 (as amended) and or other pertinent federal regulations to assure that the rights of human subjects have been protected, the above protocol and informed consent submitted to/supported by No funding requested was approved following expedited review by the Wayne State University Behavioral Investigation Committee (B03) at its meeting of March 9, 1995.

Since the BIC has not evaluated this proposal for scientific merit except to weigh the risk to the human subjects in relation to potential benefits, this approval does not replace or serve in place of any departmental or other approvals which may be required.

This protocol will be subject to annual review by the BIC.

St. John Hospital and Medical Center

22101 Moross Road
Detroit, Michigan 48236-2172
(313) 343-4000

FROM: St. John Hospital & Medical Center
Nursing Research Committee

RE: Research Advisor
Institution of Higher Learning

Dear Advisor:

St. John Hospital Nursing Research Committee will review research proposals for potential implementation at St. John Hospital and Medical Center.

The proposal should be in final form with all revisions completed, approved by the academic advisor, and approved by the Human Subjects Committee if required by your institution. The advisor's recommendation is based on the proposal's merit and adherence to approved research methodology.

The Nursing Research Committee will not accept proposals in draft form or not signed off as completed by their advisor.

PLEASE COMPLETE:

I recommend this research project for implementation at St. John Hospital and Medical Center.

Breastfeeding Attrition: Factors Influencing Outcome in the Early Postpartum Period
Title

Therese Mitchell Reddan, RN, BSN
Investigator/Student

This proposal has been reviewed and approved in final form.

Chandie Covington
Advisor

Asst. Professor of Nursing
Title Wayne State University

Wayne State University
Institution

St. John Hospital and Medical Center

22101 Moross Road
Detroit, Michigan 48236-2172
(313) 343-4000

BREASTFEEDING STUDY

Human Subjects Informed Consent Form

I am being asked to participate in a research study. I understand the purpose of the research is for nurses and others who care for newborns and new mothers to understand and identify what factors and characteristics place women at risk for stopping breastfeeding during the first eight weeks postpartum. I understand that if I agree to to participate, I will be asked to complete a questionnaire while in the hospital and again when it is mailed to me at eight weeks postpartum. The questionnaire is designed to identify how I feel about breastfeeding and formula feeding, how much my family and my health care team want me to breastfeed, how much I value the opinions of these individuals related to breastfeeding, and how confident I feel about my abilities to breastfeed. The next part of the questionnaire asks for personal information about my choice of infant feeding, my delivery, my level of education as well as other social and financial information. Each time I fill out the questionnaire (once in the hospital and again eight weeks later) it will take approximately 20 minutes. I realize that approximately 60 women are being asked to participate in this study and that my participation will not directly benefit me or influence my care while in the hospital or my follow-up care at home, but my participation may help nurses and other health care professionals in the support and care of breastfeeding women. I understand that there is a minimal risk of being in the study, and that risk is related to possibly experiencing psychological stress related to being asked to fill out the questionnaire at eight weeks in the event that I have decided to stop breastfeeding. I do realize that my input is valued and needed regardless of my feeding method at eight weeks (breastfeeding, formula feeding/ or a combination of both.). I understand that if I do experience any stress related to this study, I am free to withdraw my consent and to discontinue my participation in the study at any time. Also, I am free to have my questions answered or my concerns addressed by the researcher at any time during the study.

St. John Hospital and Medical Center

22101 Moross Road
Detroit, Michigan 48236-2172
(313) 343-4000

I further understand that:

1. All information is confidential and will not be disclosed outside the hospital except as information reported collectively in a research paper for the purposes of advancing health care knowledge related to breastfeeding; with my written permission; or as required by law.
2. My participation is voluntary.
3. My decision to participate will not affect the care or service I receive from St. John Hospital and Medical Center.
4. I may choose not to answer any questions I do not wish to answer.
5. I will receive a signed copy of this consent form.
6. If I have any questions about this research study now or in the future, I can ask the research nurse, Therese Reddan, RN, MSNc at (313) 343-6323.

I understand that in the unlikely event of any injury resulting from this research, no reimbursement, compensation, ar free medical treatment is offered by Wayne State University or St. John Hospital and Medical Center.

I have read or had read to me all the information about this research study included in this informed consent. I have discussed this study with _____, and he/she has offered to answer any questions I have concerning the procedures, potential risks, and likelihood of any benefit to me related to this research. The content and meaning of this information has been explained and is understood. I am aware to contact Dr. Paul Bush at (313) 343-3763, if I have any questions regarding research subject's rights, or my participation in the study. I hereby consent and voluntarily offer to follow the study requirements and take part in this research study.

Participant's Signature:_____ Date:_____

Printed Name of Participant: _____ Date: _____

Witness's Signature: _____ Date: _____

IRB Approval Date: _____

APPENDIX C

Breastfeeding Attrition Prediction Tool (BAPT)

BREASTFEEDING ATTRITION

PREDICTION TOOL

(BAPT)

University of Alaska Anchorage
School of Nursing and Health Sciences
3211 Providence Drive
Anchorage, Alaska 99508

PLEASE CIRCLE THE NUMBER THAT MOST CLOSELY DESCRIBES HOW YOU FEEL ABOUT EACH STATEMENT.

	Strongly agree					Strongly disagree
1. Breastfeeding is more convenient than formula feeding.	1	2	3	4	5	6
2. Breastfeeding is painful.	1	2	3	4	5	6
3. Formula feeding allows the mother more freedom.	1	2	3	4	5	6
4. Infant formula can cause allergies.	1	2	3	4	5	6
5. Breastmilk is healthy for the baby.	1	2	3	4	5	6
6. No one else can help feed the baby when you breastfeed.	1	2	3	4	5	6
7. It is difficult to breastfeed in public.	1	2	3	4	5	6
8. Formula fed babies tend to get sick.	1	2	3	4	5	6
9. Breastmilk is more nutritious than infant formula.	1	2	3	4	5	6
10. Breastfeeding makes your breasts sag.	1	2	3	4	5	6
11. Formula feeding is easier than breastfeeding.	1	2	3	4	5	6
12. Formula fed babies are more fussy than breastfed babies.	1	2	3	4	5	6
13. Breastfeeding makes you closer to your baby.	1	2	3	4	5	6
14. Breastfeeding makes returning to work difficult.	1	2	3	4	5	6
15. Formula fed babies are easier to satisfy than breastfed babies.	1	2	3	4	5	6
16. Formula fed babies tend to be overweight.	1	2	3	4	5	6
17. Breastfeeding is more economical than formula feeding.	1	2	3	4	5	6
18. When you breastfeed you never know if the baby is getting enough milk.	1	2	3	4	5	6
19. Mothers who formula feed get more rest than breastfeeding mothers.	1	2	3	4	5	6
20. Breastfeeding is natural.	1	2	3	4	5	6
21. Breastfeeding is more time consuming than formula feeding.	1	2	3	4	5	6
22. Formula feeding lets the father become close to the baby.	1	2	3	4	5	6
23. Infant formula can cause constipation.	1	2	3	4	5	6
24. Breastfeeding is best for the baby.	1	2	3	4	5	6
25. Breastfeeding is personally satisfying.	1	2	3	4	5	6
26. Breastfeeding is messy.	1	2	3	4	5	6
27. Breastfeeding ties you down.	1	2	3	4	5	6
28. Breastfeeding helps you bond with your baby.	1	2	3	4	5	6
29. Mothers who formula feed get back into shape sooner.						

FOR EACH OF THE FOLLOWING INDIVIDUALS INDICATE HOW MUCH THEY WANT YOU TO BREASTFEED.

	Definitely breastfeed					Definitely NOT breastfeed	Not Applicable
30. The baby's father thinks I should:	1	2	3	4	5	6	0
31. My mother thinks I should:	1	2	3	4	5	6	0
32. My mother-in-law thinks I should:	1	2	3	4	5	6	0
33. My sister thinks I should:	1	2	3	4	5	6	0
34. My closest female friend thinks I should:	1	2	3	4	5	6	0
35. My doctor thinks I should:	1	2	3	4	5	6	0
36. My midwife thinks I should:	1	2	3	4	5	6	0
37. La Leche League thinks I should:	1	2	3	4	5	6	0
38. The hospital nurses think I should:	1	2	3	4	5	6	0
39. My baby's doctor thinks I should:	1	2	3	4	5	6	0
40. My childbirth educator thinks I should:	1	2	3	4	5	6	0
41. Other relatives think I should:	1	2	3	4	5	6	0
42. People who are important to me think I should:	1	2	3	4	5	6	0

PLEASE INDICATE BELOW HOW IMPORTANT EACH OF THE FOLLOWING STATEMENTS ARE TO YOU.

	Important to me					Not important to me
43. Using a feeding method that is convenient is:	1	2	3	4	5	6
44. Using a feeding method that doesn't cause me pain is:	1	2	3	4	5	6
45. Using a feeding method that lets me have some freedom is:	1	2	3	4	5	6
46. Using a feeding method that won't cause allergies is:	1	2	3	4	5	6
47. Using a feeding method that is healthy for my baby is:	1	2	3	4	5	6
48. Using a feeding method that lets someone else feed my baby is:	1	2	3	4	5	6
49. Using a feeding method that is easy to do in public is:	1	2	3	4	5	6
50. Using a feeding method that protects my baby from getting sick is:	1	2	3	4	5	6
51. Using a feeding method that is nutritious is:	1	2	3	4	5	6
52. Using a feeding method that won't make my breasts sag is:	1	2	3	4	5	6
53. Using a feeding method that is easy is:	1	2	3	4	5	6
54. Using a feeding method that keeps my baby from being fussy is:	1	2	3	4	5	6
55. Using a feeding method that lets me be close to my baby is:	1	2	3	4	5	6
56. Using a feeding method that makes it easy to return to work is:	1	2	3	4	5	6
57. Using a feeding method that satisfies my baby is:	1	2	3	4	5	6
58. Using a feeding method that keeps my baby from being overweight is:	1	2	3	4	5	6
59. Using a feeding method that is economical is:	1	2	3	4	5	6
60. Using a feeding method that lets me know the baby is getting enough is:	1	2	3	4	5	6
61. Using a feeding method that lets me get lots of rest:	1	2	3	4	5	6
62. Using a feeding method that is natural is:	1	2	3	4	5	6
63. Using a feeding method that saves time is:	1	2	3	4	5	6
64. Using a feeding method that lets the father be close to the baby is:	1	2	3	4	5	6
65. Using a feeding method that doesn't cause constipation is:	1	2	3	4	5	6
66. Using a feeding method that is best for my baby is:	1	2	3	4	5	6
67. Using a feeding method that is personally satisfying is:	1	2	3	4	5	6
68. Using a feeding method that is not messy is:	1	2	3	4	5	6
69. Using a feeding method that doesn't tie me down is:	1	2	3	4	5	6
70. Using a feeding method that helps me bond with my baby is:	1	2	3	4	5	6
71. Using a feeding method that lets me get back into shape is:	1	2	3	4	5	6

HOW MUCH DO YOU CARE ABOUT THE FOLLOWING PEOPLES OPINION ON HOW YOU SHOULD FEED YOUR BABY?

	Do not care at all					Care very much	Not Applicable
72. The baby's father	1	2	3	4	5	6	0
73. Your mother	1	2	3	4	5	6	0
74. Your mother-in-law	1	2	3	4	5	6	0
75. Your sister	1	2	3	4	5	6	0
76. Your closest female friend	1	2	3	4	5	6	0
77. Your doctor	1	2	3	4	5	6	0
78. Your midwife	1	2	3	4	5	6	0
79. La Leche League	1	2	3	4	5	6	0
80. Your hospital nurse	1	2	3	4	5	6	0
81. Your baby's doctor	1	2	3	4	5	6	0
82. Your childbirth educator	1	2	3	4	5	6	0
83. Other relatives	1	2	3	4	5	6	0
84. People who are important to you	1	2	3	4	5	6	0

PLEASE INDICATE THE DEGREE TO WHICH YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS.

	Agree					Disagree
85. I have the necessary skills to breastfeed	1	2	3	4	5	6
86. I am physically able to breastfeed	1	2	3	4	5	6
87. I know how to breastfeed	1	2	3	4	5	6
88. I am emotionally ready to breastfeed	1	2	3	4	5	6
89. I am determined to breastfeed	1	2	3	4	5	6
90. I won't need help to breastfeed	1	2	3	4	5	6
91. I have total control over my breastfeeding	1	2	3	4	5	6
92. Breastfeeding is easy	1	2	3	4	5	6
93. I am confident I can breastfeed	1	2	3	4	5	6
94. I know I will have enough milk for the baby	1	2	3	4	5	6

PLEASE CIRCLE THE CORRECT ANSWER OR FILL IN THE BLANKS FOR THE FOLLOWING QUESTIONS:

95. What is the PRIMARY method of infant feeding are you using with your new baby?
    a. Breastfeeding (*if circled, proceed to question #96*)
    b. Formula feeding (*if circled, skip to question #100*)

96. How long do you intend to breastfeed? _____

97. When did you decide you were going to breastfeed?
    a. Before you became pregnant
    b. During the first three months of your pregnancy (1st trimester)
    c. During the middle three months of your pregnancy (2nd trimester)
    d. During the last three months of your pregnancy (3rd trimester)
    e. After the baby was born

98. How soon after the birth did you first breastfeed your infant? _____ (hours)

99. What was the main reason(s) you chose to breastfeed? (list as many reasons that apply)

    _____

    _____

    _____

    _____

100. What is the birthdate of your newborn:_____

101. What type of birth did you have?
    a. Vaginal birth
    b. Cesarean birth

102. How much did your baby weigh at birth? ____pounds____ounces

103. What was your infant's sex? ___male ___female

104. Have you ever breastfed before?
    a. Yes (*if yes, proceed to question #105*)
    b. No (*if no, skip to question #107*)

105. How long did you breastfeed your last child? _____

106. Was the experience
   a. Extremely successful
   b. Very successful
   c. Moderately successful
   d. Slightly successful
   e. Not at all successful

107. How many children have you given birth to?_____

108. Your age:_____

109. Your ethnic origin:
   a. Black
   b. Asian
   c. White
   d. Hispanic
   e. Native american
   f. Other (please specify):_____

110. Circle the highest grade completed:

Grade school:	5 6 7 8
High school:	9 10 11 12
College:	13 14 15 16
Graduate School:	17 18 19 20

111. Annual family income:
   a. $10,000 or less
   b. $10,001 to $25,000
   c. $25,001 to $40,000
   d. $40,001 to $55,000
   e. $55,001 to $70,000
   f. $70,001 to $85,000
   g. $85,001 to $100,000
   h. over $100,000

112. Marital status:_____

113. Who is YOUR primary health care provider?
   a. Nurse midwife
   b. Obstetrician
   c. Family practice physician
   d. Other (please specify)_____

114. Who is the BABY'S primary health care provider?
   a. Nurse practicioner
   b. Pediatrician
   c. Family practice physician
   d. Other (please specify)_____

This is the end of the questionnaire. If you have further comments, please write them on the back of the questionnaire.
Thank you for your time.

APPENDIX D

Scoring Guidelines for the BAPT

SCORING GUIDELINES

for the

BREASTFEEDING ATTRITION

PREDICTION TOOL

(BAPT)

University of Alaska Anchorage
School of Nursing and Health Sciences
3211 Providence Drive
Anchorage, Alaska 99508

1. ATTITUDINAL FACTORS

   a. Negative Breastfeeding Sentiment (NBS) Attitudinal Scale.

      i. Multiply each belief score by its corresponding outcome evaluation. The items to be multiplied are as follows: 2,44; 3,45; 6,48; 7,49; 10,52; 11,53; 14,56; 15,57; 18,60; 19,61; 21,63; 22,64; 26,68; 27,69; 29,71.

         (1) Example: a person scores a 6 for item 2 "breastfeeding is painful" and a 4 for item 44 "using a feeding method that doesn't cause me pain is ...". These scores are multiplied for an item attitudinal score of 24.

      ii. Sum all multiplied scores for the "Negative Breastfeeding Sentiment" attitudinal score.

      iii. The higher the score, the greater the negative breastfeeding sentiment.

   b. Positive Breastfeeding Sentiment (PBS) Attitudinal Scale.

      i. Multiply each belief score by its corresponding outcome evaluation. The items to be multiplied are as follows: 1,43; 4,46; 5,47; 8,50; 9,51; 12,54; 13,55; 16,58; 17,59; 20,62; 23,65; 24,66; 25,67; 28,70.

         (1) Example: a person scores a 2 for item 5 "Breastmilk is healthy for the baby" and a 6 for item 47 "Using a feeding method that is healthy for my baby is...". These scores are multiplied for an item attitudinal score of 12.

      ii. Sum all multiplied scores for the "Positive Breastfeeding Sentiment" attitudinal score.

      iii. The lower the score, the greater the positive breastfeeding sentiment.

2. SOCIAL AND PROFESSIONAL SUPPORT SCALE (SPS)

   a. Multiply each belief statement by its corresponding motivation to comply statement. The items to be multiplied are as follows: 30,72; 31,73; 32,74; 33,75; 34,76; 35,77; 36,78; 37,79; 38,80; 39,81; 40,82; 41,83; 42,84.

   b. Sum all multiplied scores for the "Social Support" scale.

   c. The higher the score, the greater the support for breastfeeding.

3. BREASTFEEDING CONTROL SCALE (BFC)

   a. Sum scores for items 85-94.
   b. The lower the score, the greater sense of control the woman has over her ability to breastfeed.