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## Breastfeeding Beliefs, Attitudes, and Experiences of Rural Native American Women

JoAnne Blue

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BREASTFEEDING BELIEFS, ATTITUDES, AND EXPERIENCES OF RURAL  
NATIVE AMERICAN WOMEN

by

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Bachelor of Science, University of North Dakota, 1995

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Submitted to the Graduate Faculty

of the

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for the degree of

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## ABSTRACT

Breastfeeding has long been recognized as the preferred method of feeding. There is an increasing awareness of the need to return to traditions and values such as breastfeeding, which has been part of the Indian culture in the past. The purpose of this descriptive, correlational study was to determine the attitudes, beliefs, and experiences of breastfeeding among rural Native American women. Ajzen and Fishbein's (1980) Theory of Planned Behavior (TPB) and Leininger's theory of Culture Care Diversity and Universality (1991) guided this study.

This study addressed the following questions: 1) What are the attitudes, beliefs and experiences of native American women regarding breastfeeding? 2) Are there differences in breastfeeding attitudes and beliefs between women with and without personal breastfeeding experience? 3) Are there relationships among breastfeeding attitudes and beliefs?

Data were collected from a convenience sample of 60 women enrolled in or working at a rural northcentral community college using the Minnesota Infant Feeding Questionnaire (MIFQ). Women who participated in this study, breastfed at a slightly lower rate than the current North Dakota rate. Native women who breastfed, tended toward a pattern of exclusive breastfeeding. They also nursed their subsequent children longer, and to greater degrees of satisfaction.

Most respondents had witnessed a family friend breastfeeding and agreed that it was most natural to breastfeed in the child's home. Most felt that breastfeeding was

healthy, natural and pleasant to do. In addition, breastfeeding saves money and breastmilk is best for the babies teeth.

## CHAPTER 1

### INTRODUCTION

Women's roles have undergone a rapid transformation in recent decades and the changes appear to have affected decisions on breastfeeding. Breastfeeding is the ideal way of providing for infant health, growth, and development while simultaneously benefiting the lactating mother (Garcia & Frazier, 1995). Therefore, exclusive breastfeeding should be the norm from birth until infants are five to six months old (Newman, 1: 93). This was once commonly accepted. However, research has shown that breastfeeding rates have dropped markedly (Bagwell, Kendrick, Stitt, & Leeper, 1993). This change may be due to basic attitudes of the mother, negative experiences, or a lack of social support to women who consider breastfeeding (Kearney, 1988).

Despite the fact that breastfeeding rates among Indian populations are low and the rate of infant morbidity and mortality high, and despite public health campaigns to encourage breastfeeding, bottlefeeding continues to be the most common method of feeding Native infants (Neander & Morse, 1989). Native women who do choose to breastfeed their babies usually discontinue by the time the infant is six months old. At the same time, there is an increasing awareness of the need to return to traditions and values, such as breastfeeding, which have been part of the Indian culture in the past (Stewart & Steckle, 1987).

In the United States, breastfeeding rates continue to be highest among women who are older, well-educated, and relatively affluent (Institute of Medicine, 1991). Those



least likely to breastfeed are women who are low-income, black, less than age 20, and who live in the southeastern United States (Jacobson, Jacobson, & Frye, 1991). In the Native American population, women who have breastfed were older. They also tended to be those who had more children, less formal education, and lived in crowded housing. The focus of this research project is on Native American mothers coming from rural, low income populations who reside on reservations.

As stated previously, breastfeeding is most common in the under-privileged of these communities. As with the general population, breastfeeding has lost favor with Native women. This trend could be reversed by re-identification of Native Americans' with their culture (Macaulay, Hanusaik, & Beauvais, 1989). Breastfeeding is a tradition; therefore, this would be a fundamental step toward good health among Native American children.

#### Purpose of the Study

The purpose of this study was to determine the attitudes, beliefs, and experiences of breastfeeding among the Turtle Mountain Chippewa Indian women. It will also look at relationships among attitudes, beliefs and experiences of breastfeeding in that population. It is hoped that the results of this study can be used to create an awareness of the positive benefits of breastfeeding and to effectively promote the tradition in the Native community. Findings can be used to develop health education programs to enhance support to mothers who decide to breastfeed.

## CHAPTER II

### LITERATURE REVIEW

Breastfeeding has long been recognized as the preferred method of infant feeding because of its physical, emotional, and economic benefits. The American health objectives specify that, by the year 2000, 75% of new mothers should be initiating breastfeeding and at least 50% should continue to breastfeed their babies through age six months (DHHS, 1990). This objective will not be achieved until all women are educated about the values of breastfeeding.

#### Benefits of Breastfeeding

Benefits may be defined as those things that promote well being (New Webster's Dictionary, 1992). The health, nutritional, psychological, and psychosocial benefits of breastfeeding are widely acknowledged (Janke, 1993). Therefore, breastfeeding is the infant-feeding method recommended by the American Academy of Pediatrics, the American Public Health Association, and the American Dietetic Association for the first four to six months of life (Janke, 1993).

The immediate benefits of breastfeeding are well known (Wingard et al., 1994). Breastfeeding increases survival in poor countries and reduces the risk of infant infections and other childhood diseases in all settings. This benefit is most evident in the first 6 months of life, but it persists into the child's second year (Wingard, et al., 1994).



Because of its composition, the nutritional elements are ideal for human infants throughout the various stages of their growth and development.

Hewat and Ellis (1984) also reported that human milk has been shown to provide the best nourishment for human babies. In fact, biomedical studies have demonstrated that taurine, the amino acid present in human milk, is necessary for brain growth during early infancy (Janke, 1993). This component is not found in formula. For that matter, human milk is unique in its physical structure and in the types and concentrations of nutrients. Some important elements in breast milk are: enzymes, hormones, growth factors, host resistance factors, inducers/modulators of the immune system, and anti-inflammatory agents (Institute of Medicine, 1991). Therefore, breast milk is a biologically active substance that adapts to match the needs of the growing infant (DHHS, 1990).

The health benefits of breastfeeding can be seen in many ways, throughout a lifetime. Breast milk reduces the frequency and severity of gastrointestinal and respiratory infections including otitis media, pneumonia, bacteremia, and meningitis in infants (Pabst, Godel, Grace, Cho, & Spady, 1989). It had also been associated with a reduced frequency of certain chronic diseases later in life including non-insulin-dependant diabetes mellitus, lymphoma, and Crohn's disease (Newman, 1993). Cunningham, Jelliffe, and Jelliffe (1991) reported that food allergies appear to be less frequent in infants who are exclusively breastfed, and even despite a strong family history toward them.

Many psychological benefits of breastfeeding for both mothers and infants have also been recognized. For instance, for many women successful breastfeeding defines

effective mothering. It is an intimate activity and the physical representation of the closeness of the mother infant-dyad that is socially epitomized as feminine (Diagnam, 1994). This intimate biological interplay in the nursing dyad promotes the formation of an intense attachment, which is the basis of an enduring bond between the infant and the caretaker (Hewat & Ellis, 1984).

The psychosocial benefits of breastfeeding relate primarily to the enhanced opportunity for maternal-infant attachment (Alexy & Martin, 1994). Mothers who have prolonged physical contact with their newborn infants exhibit more effective soothing behaviors, engage in more eye contact with the infants, and report greater maternal attachment than mothers with less physical contact (Alexy & Martin, 1994). Therefore, since breastfeeding increases the quantity and quality of early contact between mother and infant, the strength of attachment may also be increased (Janke, 1993).

#### Beliefs and Attitudes

While health considerations continue to influence a woman's decision to breast-feed, there is evidence that the social context in which infant feeding occurs is also salient. In particular, beliefs and attitudes can have major impacts on breastfeeding success. An attitude can be defined as an individual's disposition to respond favorably or unfavorably to a particular person, object, institution, event, or act (Duckett, Henly & Garvis, 1993). A belief may be defined as a full acceptance of an assertion as true (New Webster's Dictionary, 1992). Many attitudes and information provided by various individuals in a woman's social or kinship network influence her decision regarding infant feeding (Losch, Dungy, Russell, & Duszdieker, 1995). These opinions arise from

the family of origin, friendship groups, the spouse and his family, mass media, and health-care providers (Richardson & Champion, 1992).

Because of this community influence, culture can be the most important source of support to new mothers. As stated before, the Native American tradition promoted breastfeeding and good breastfeeding practices (Maccaulay, et al., 1989). Teachings cautioned against high levels of activity when breastfeeding and advocated nursing the baby regularly to prevent the cessation of lactation (Neander & Morse, 1989). The Fort Alexander Health Centre, which serves members of the Sakeeng First Nation in Pine Falls, MB, used traditional ideas to promote breastfeeding (Personal Communication to S. Henly from P. Martens, MS, IBCLC, Oct., 1996). A video titled "So You Want a Healthy Baby" featured tribal elders who exhorted pregnant women to consider breastfeeding (Fort Alexandre Health Centre, 1996). However, misinformation and myths may also impede the acceptance of breastfeeding. As a result, young minority women often perceive that the practice is old fashioned and embarrassing. They also may be afraid it would tie them down (Neander & Morse, 1989).

Maternal perception of an insufficient milk supply is often given as a reason for weaning and subsequent feeding of a human milk substitute early in the postpartum period (Henly, Anderson, Avery, Hills-Bonczyk, Potter, & Duckett, 1995). Also women may be led to introduce solids to their newborns within the first few days or weeks of life, believing that neither breast milk nor formula are sufficient food for their babies (Locklin & Naber, 1993). This belief can encourage early weaning, denying the child the health and emotional benefits of mother's milk.



Beliefs about the convenience, attractiveness, pleasure, and desirability of breastfeeding are held, to different degrees, by those women who practiced it. Garcia and Frazier (1995) found that, despite the benefits of breastfeeding, prevalence and duration is low in the United States. This often is due to cultural notions of the female breast as being a sex object. This attitude places the act of breastfeeding in a controversial light and can be one of the most influential factors in a woman's decision not to breastfeed (Dettwyler, 1995).

The need to meet employment demands after the baby affect a mother's decision on breastfeeding (Kelly, Kviz, Richman, Kim, & Short, 1993). Although breastfeeding is possible upon return to work, women may encounter barriers. They also find difficulty in attempting to balance work and family roles. There is also evidence that support from the spouse or male partner is positively associated with a woman's decision to breastfeed (Kelly, et al., 1993).

Other barriers identified came from the lack of consistent and accurate information about breastfeeding. For instance, hospitals and health programs are often oriented toward bottle feeding and have infant formula samples readily available. Added to the sexual connotations associated with the breast are many misconceptions (e.g., breastfeeding is painful, it makes infants overly dependent on their mothers) and sometimes mothers feel there are too many rules to follow about diet, smoking and drinking. There is also a serious lack of flexibility in the workplace, and in the family support (Newman, 1993).

Dix (1991) found that mothers thought breastfeeding was better for the baby, but many chose to bottle feed because of these negative attitudes. Others make choices for

more personal reasons. For instance, the mother may have conflicting schedules or responsibilities. She may feel breastfeeding is not convenient or she may have had a previous negative experience.

### Social Support and Experiences

Many studies have focused on the sources of support available to breastfeeding mothers. It was found that there have been differences in support networks for different ethnic groups. It has been suggested that multiple sources of support, as those in Native American families, are more influential than single sources (Buckner & Matsubara, 1993). Within the Native context, family and other sources of social support influence health practices as a result of the social environment (Higgins & Dicharry, 1991).

Kearney (1988) explained that learning about, and being exposed to, breastfeeding in one's family appeared to create a positive feeling toward breastfeeding and a woman's belief that she could do it successfully. Perceived positive support of family members has also been associated with increased breastfeeding duration (Kessler, Gielen, West, & Paige, 1995). It has been found that the influence of social networks among low-income women may be a variable affecting the duration of breastfeeding (Barron, Lane, Hannan, Struempfer, & Williams, 1988).

Barron et al., (1988) found that early termination of breastfeeding occurred more frequently among those women who did not have supportive others available to them during the breastfeeding experience. Conversely, when a woman perceived that family members and peers supported her breastfeeding endeavor, she breastfed for a longer time.

A woman's perception of her male partner's supportive attitude and initiation of breastfeeding has been associated with increased breastfeeding duration (Kessler, et al.,

1995). Those women who did breastfeed for longer periods indicated that their husbands provided emotional and psychological assistance. Therefore, partner support has been established as an important influencing factor for sustaining breastfeeding (Hewat & Ellis, 1984).

Health-care providers were found to have strong influences on breastfeeding mothers (Bagwell et al., 1993). While this relationship might be expected, it is still important for health care providers to understand the need to remain current in their knowledge regarding breastfeeding. A woman's perception of being supported is known to be related to the number of people in her informational and health care provider networks. Thus, it is important for nurses and other health care providers to encourage clients to seek information and supportive relationships (McNatt & Freston, 1992).

When women talk of their breastfeeding experience, they have frequently recognized the importance of being persistent. For some, being persistent is so much a part of their breastfeeding experience that they come to view it as a way of life (Bottorff, 1990). This is a challenge. As indicated, breastfeeding duration is influenced by a complex interplay of factors related to the mother, the support network, and the baby (Lothian, 1995). The personal priorities of the mother regarding her beliefs and values about breastfeeding, her life goals at the time her infant is born, her objectives for intended duration of breastfeeding and her need to maintain control of daily living activities influence the continuance of breastfeeding (Hewat & Ellis, 1984).

### Summary

Breastfeeding style is influenced by many attitudes, experiences and beliefs. In other words, the culture of health care influences the way a mother feeds her child



(Mulford, 1995). The decision to breastfeed is based on several personal and environmental factors. Positive experiences and social support play an integral part in successful breastfeeding. When considering breastfeeding, a woman should know that human milk is nutritionally superior to any type of infant formula. Breastfeeding is natural and fosters the bonding between mother and infant. Therefore, it has benefits for both of them (Sayed, Coodin, Dilling, & Haworth, 1979). Successful breast-feeding is dependent upon multiple factors related to the mother, the infant, and the environment (Hills-Boncyk, Avery, Savik, Potter, & Duckett, 1993). For these reasons, it is incumbent upon health professionals to give high priority to the education and promotion of breast-feeding for virtually all infants in their communities.

### The Gap

Although it is well documented that mothers' milk is the best source of nutrition for babies, the majority of American Indian women choose not to breast feed. This may be linked to personal and community attitudes and experiences involving the various factors previously discussed. Therefore, this study proposes to investigate the attitudes, beliefs and experiences that may affect breastfeeding behaviors of Native American women.

### Significance of the Study

Little or no research exists on the attitudes of Native American women concerning breastfeeding. However, it is easily assumed that health care professionals must educate Native women of childbearing years about breastfeeding in order to increase numbers of those who do practice it. Re-identification with traditional culture should be an integral part of this education, because basic Native American values offer very positive attitudes

toward breastfeeding. Continuous education on the matter promotes a lifelong, inter-generational commitment to breastfeed within families and improve the overall health of the community.

The finding from this study can be effectively incorporated into nursing practice, education, and research. For instance, nurses working with Native American women may use the results of this work to understand the characteristics and culture of their clients. In nursing education, results of this study will emphasize the importance of considering all social and cultural factors when caring for Native women. Research should focus on how attitudes and community beliefs influence the incidence of breastfeeding, with the goal of making positive choices.

#### Research Questions

1. What are the attitudes, beliefs and experiences of Native American women regarding breastfeeding?
2. Are there differences in breastfeeding attitudes and beliefs between women with and without personal breastfeeding experience?
3. Are there relationships among breastfeeding attitudes and beliefs?

#### Theoretical Framework

This study will utilize both Ajzen & Fishbein's (1980) Theory of Planned Behavior (TPB) and Leininger's theory of Culture Care Diversity and Universality (1991). The Theory of Planned Behavior (TPB) offers an approach for explaining, predicting, and influencing human behaviors based on the modifiable measures of subjective norm, control, and attitude (Ajzen & Fishbein, 1980). The TPB is based on the assumption that individuals will engage in health behaviors when they believe their



action will achieve desired consequences (attitude); when the behavior is considered worthwhile by persons or groups they want to please (subjective norm); and when they believe the behavior will be easy to perform (control) (Ajzen & Fishbein, 1980).

According to the TPB, attitude is defined as beliefs concerning the consequence of a given behavior, multiplied by the positive or negative evaluation of the consequences (Ajzen, 1988). Subjective norm was defined by the TPB as an individual's belief that a certain referent wants them to perform or not to perform a given behavior multiplied by the individual's self-reported motivation to comply with the given referent (Ajzen, 1988). The TPB theoretically defines the control construct as perceptions of having control over the internal constraints believed to interfere with performing a behavior under limited volitional control (Jenke, 1994). The control construct is assumed to reflect past experiences as well as anticipated obstacles and impediments (Ajzen, 1988).

Attitudes have been studied as factors in mothers' decision making because of the assumed link with behavior. Behavioral beliefs measure the woman's beliefs about the consequences of breastfeeding (O'Campo, Faden, Gielen, & Wang, 1992). Current data indicate that, when attitudes and behaviors are measured at the same level of specificity, the ability of those attitudes to predict behavior is strong (Losch et al., 1995). The TPB had been useful for predicting a number of health behaviors in the clinical areas and it is particularly relevant to breastfeeding behaviors (Duckett, et al., 1996).

Leininger's theory of Culture Care Diversity and Universality (1991) is also relevant. Leininger holds that there are differences and similarities in both the patterns and practices of care that are based on cultural differences. These social dimensions influence care patterns and practices of the phenomenon under study (Leininger, 1991).

Because culture is the patterned lifeway of people that influences decisions and actions, the theory is directed toward nurses to help them grasp the world of the client and use their viewpoints, knowledge, and practices as a basis for making culturally congruent professional actions and decisions. The following three modes of professional nurses' practice decisions were also studied within Leininger's theory:

1. Culture care preservation/maintenance;
2. Accommodation/negotiation, and/or
3. Repatterning/restructuring (1991).

Care and caring are generally manifested in different cultural constructs and Leininger's research has discovered much diversity across cultures with only a universal care construct (Leininger, 1991). In order to understand the impact of culturally diverse care constructs on the outcomes of this study, the researcher specifically focused on individuals of Native American culture.

There is a need to blend generic and professional care practices that provide nursing care that is satisfying, and cultural congruent. This would ultimately lead to the improved health and well being of Native American clients. Such nursing care would emphasize presence, support, and comforts as the primary generic care practices and would be incorporated into the professional cares in meaningful ways. Information about the breastfeeding experiences, attitudes and beliefs of Native women is needed to develop and implement assessment protocols and interventions that are both effective and culturally congruent.

### CHAPTER III

#### METHODOLOGY

The purpose of this study was to determine the beliefs, attitudes and experiences of breastfeeding among a sample of Native women who are enrolled or work at a rural Northcentral Community College. It also looked at how attitudes, beliefs, and experiences were related in that population. It is hoped that the results will serve as a foundation in building an awareness of the positive benefits of breastfeeding and will promote the tradition in the Native community. In this chapter, the methodology that was utilized to address these areas of investigation is described. The sample, study design, data collection methods, data analysis, and protection of human subjects will also be discussed.

#### Population

The target population for this study included all female Native women over the age of 18, with or without children, who resided on a rural, geographically located reservation community of 2,500 persons located in northcentral North Dakota. The setting for conducting this study was at a community college located on that reservation.

#### Sample

A convenience sample, made up of Indian women (n=60), with or without children, was chosen to participate in this study. Women attending or working at this

college were asked by the principal investigator if they would like to fill out the questionnaire relating to infant feeding experiences, beliefs, and attitudes.

### Study Design

The design that was utilized was a descriptive, correlational study. This work also described what exists in terms of frequency of occurrence of breastfeeding. Relationships among variables were described, but no cause-and-effect relationships were determined.

### Limitations

It should be noted that random sampling from the population would be better from the perspective of statistical inference. However, the response rate from the population at large, sampled at random, would probably be low. In addition, it was not clear that less educated and geographically isolated women would be able to respond to the survey. Therefore, the convenience sample that was chosen was expected to have been motivated for research participation and, by virtue of their education could easily answer the questions on standard instruments. These people were good informants and could provide initial information of high quality.

### Procedures

Data were collected using of a self-report questionnaire. Polit and Hungler (1995) referred to self-report instruments as the ability to gather retrospective data about activities and events occurring in the past or projections about behaviors in which subjects plan to engage in the future. In this study, data were collected in a designated area of the college, such as the student lounge. The interviewer made sure the respondents were comfortable and at ease before the questionnaire was filled out. The interviewer followed the wording of the questions precisely and explained that any



participants who did not wish to continue with the study, could leave at that time. This survey was conducted during the spring of 1997.

#### Instrumentation Reliability and/Validity

Polit and Hungler (1995) stated that the reliability of an instrument that yields quantitative data is a major criterion for assessing its quality and adequacy. The reliability of an instrument is the degree of consistency with which it measures the attribute it is supposed to be measuring. A second important component when assessing an instrument refers to validity. The reliability and validity of an instrument are not totally independent qualities of an instrument (Polit & Hungler, 1995).

Walker (1992) emphasized that reliability and validity should be given equal emphasis in tool selection. Low reliability leads to attenuated correlations among measures. Furthermore, demonstrated construct validity is essential to make inferences from social support data to hypotheses about support.

In the case of breastfeeding, specific measures of the TPB constructs were developed based on guidelines and sample instruments (Ajzen & Fishbein, 1980; Ajzen & Madden, 1986) and combined as a set in the Minnesota Infant Feeding Questionnaire (MIFQ; Susan Henly, Personal Communication, October 23, 1996). Detailed information regarding the entire set of instruments is available in Duckett (1992). Sections of the MIFQ that are related to measurement of breastfeeding attitudes and beliefs about outcomes were utilized in this study (Appendix A).

#### Attitudes

The MIFQ-Attitudes section includes scales that measure attitudes toward breastfeeding and attitudes toward bottlefeeding a baby for six months or more. For each

feeding method, respondents indicate the degree to which the idea and the act are pleasant, embarrassing, healthy, attractive, convenient and natural on a seven point semantic differential scale.

Used by Duckett et al., (1996) internal consistency reliabilities were over .88 for all samples of breastfeeding women in the study. Both attitude toward bottlefeeding and attitude toward breastfeeding were important predictors of breastfeeding intent and breastfeeding duration. Anderson (1996) used the scales to measure attitudes of 80 maternity nurses. Reliability estimates were over .90. It was found that attitude toward breastfeeding was significantly correlated with nurses intentions to support breastfeeding during maternity hospitalization. It also was influenced by background. O'Keefe (1996) measured attitudes of university staff, faculty, students and administrators using the MIFQ scales and found significant differences in attitude toward the act of breastfeeding greater than 6 months for respondents who had or had not been breastfed themselves.

In all of these studies, correlations between breastfeeding and bottlefeeding attitudes were relatively low, suggesting that they are relatively distinct ideas. Taken together, findings suggest adequate reliability for use within a wide range of populations as well as evidence in support of proposed relationships with variables in the TPB.

### Beliefs

The MIFQ-Beliefs section includes scales that measure respondents evaluation of the likelihood that breastfeeding and bottlefeeding are associated with wellness, allergy, growth development, identification with and bonding to mother, maternal role development, and convenience to the family. Reliabilities were over .80 in the Duckett et al, (1996) samples. In O'Keefe's (1996) study of the university community, beliefs about

breastfeeding were positively related with breastfeeding attitudes and beliefs about bottlefeeding were positively correlated with bottlefeeding attitudes. In addition, beliefs about breastfeeding outcomes that correspond with known scientific findings were associated with positive regard for the appropriateness of breastfeeding across a wide variety of settings.

### Personal Experiences

Personal breastfeeding experiences are those lived events that provide knowledge, activity, and insight in skill about nursing a baby. For the purposes of this study, respondents were asked to report whether they, or their partners, or siblings were breastfed as infants. In addition, participants were asked to report whether they recalled observing their mother, sisters, aunts, grandmothers, strangers, or family friends breastfeeding. Settings where breastfeeding was observed, including infants home, relatives home, school, church, mall, restaurant, park, car, hospital and worksite, were also noted and rated as to the appropriateness of the setting for breastfeeding. Finally, women were asked to report the feeding patterns of their own children. For each child, participants reported whether they were fed with a bottle, and/or breast, and the duration of breastfeeding.

### Data Analysis

Descriptive statistics enable the researcher to reduce, summarize, and describe quantitative data obtained from empirical observations and measurements (Polit & Hungler, 1995). Polit & Hungler (1995) referred to a frequency distribution as a systematic arrangement of numerical values from the lowest to the highest, together with a count of the number of times each value was obtained. Frequency distribution tables

were used to summarize the data describing beliefs, attitudes and breastfeeding experiences as well as background information. Correlation coefficients were used to index the linear relationships among breastfeeding beliefs, attitudes and experiences. In addition, t-tests were used to determine if there were mean differences in attitudes and beliefs of women who had personal breastfeeding experience and those who did not.

#### Protection of Human Rights

Prior to implementation of this research, the design for this study was reviewed and approved by the University of North Dakota Institutional Review Board. In addition, permission to conduct this study was requested from the facility where it was to take place. Polit and Hungler (1995) reported that prospective subjects who are fully informed about the nature of the research and potential costs and benefits to be incurred are in a position to make thoughtful decisions regarding participation in the study.

Attneave (1989) suggested that, when conducting research in a cultural community with respect to informed consent there are somewhat different responsibilities required. The community must define itself and its members and must find ways to ensure that all subgroups of which it is composed are adequately represented (Attneave, 1989). The participants in this study were identified by a code number to ensure confidentiality and anonymity. Also, findings were reported in an aggregated format.



## CHAPTER IV

### RESULTS

The purpose of this descriptive study was to determine the attitudes, beliefs, and experiences of breastfeeding among the Native women in a rural northcentral college located on a reservation. In the sample, univariate data and bivariate data were described graphically and numerically. This information was analyzed using the Statistical Package for the Social Sciences (SPSS 6.1 Windows: SPSS, 1994). The results of this study will be addressed the same order as the research questions were presented.

#### Data Management

Data on questionnaires was coded to facilitate data entry. A unique number was assigned to each participant and was entered into a computerized file using the data entry facility in SPSS. Data were entered once and examined for out of range values.

Occasional errors were corrected.

#### Description of Participants

The population for this study was female residents, with or without children, from this Indian reservation. A convenience sample of 60 eligible females, who were enrolled or were employed at the community college, comprised the sample.

The respondents were recruited by the nurse researcher who explained the purpose and intent of the study. A total of 60 women, whose ages ranged from 18 to 57 years, were interviewed ( $n=59$ , mean = 31.34,  $SD=8.27$ ). A total of 57 women were recognized

as Native Americans, 52 of whom were enrolled in this reservation. Five women were enrolled with other tribes and one respondent was a Caucasian. Data from all subjects were analyzed and reported because the racial/ethnic mix was felt to represent the local community. Native Americans must be recognized by the United States Government and Bureau of Indian Affairs as being Native American by a certified degree of Indian blood (Form BIA-4431).

In answering the questionnaire, there were about a half dozen respondents who made note that the survey was long, difficult to answer, and that they were uncomfortable answering some of the questions. They felt the researchers were asking very personal questions that were not necessary to gathering information of breastfeeding attitudes and beliefs. One participant responded that she would not like to fill out the questionnaire because it brought back memories of her negative breastfeeding experience. In spite of the difficulties of answering the questionnaire, the researcher did note that the vast majority appeared to respond with ease.

Table 1 lists age, blood quantum levels (BQL), and number of children reported by the subjects. All subjects except one reported at least 1/4 Indian blood. Thirty seven percent of the sample was married and almost 46% had never been married. Educational levels varied from high school graduate to graduate school. There were 44 participants (73%) who were enrolled in college and 11 (18%) who were in graduate school. The majority of the women (64%) were employed.

### Personal Breastfeeding Experience

Table 2 lists breastfeeding experiences among the participants. About half the participants reported that they had been breastfed as infants, 40% said no, and almost 12% did not know whether they had been breastfed as infants. Twenty two percent said their partners were breastfed, 50% said no, and almost 28% didn't know. It was found that 47% had siblings who had been breastfed and 37% did not. Fifteen percent did not have any information in this area. Altogether, 26 of the 60 participants reported having breastfed at least one infant. Table 2 also lists the percentage of children by birth order who had been breastfed by the participants.

When asked if they had ever observed a woman breastfeeding when they were a child, 65% reported they had. Twenty seven percent said no, and 8% reported they didn't know. Of those who have breastfed their own infants, 35 of the respondents reported the degree of satisfaction with their experiences. Scores ranged from 0-10, with 30% reporting maximum satisfaction. The average was 8.26 (SD=2.74).

Table 1

Description of Participants

Characteristics	N	Mean	SD
Age	59	31.34	8.27
Blood Quantum Level	44	0.46	0.16
Number of Children	60	2.18	1.6

Table 2

Breastfeeding experience for self, partner and siblings

Infants	N	Yes		No		Don't know	
		n	%	n	%	n	%
Self	60	29	48.3	24	40.0	7	11.7
Partner	58	13	22.4	29	50.0	16	27.6
Siblings	59	28	46.7	22	36.7	9	15.0
Firstborn Child	51	26	51.0	25	49.0		
Second Child	38	20	52.6	18	47.4		
Third Child	20	11	55.0	9	45.0		
Fourth Child	12	8	41.7	7	58.3		
Fifth Child	5	5	60.0	3	40.0		
Sixth Child	2	1	50.0	1	50.0		
Seventh Child	1	1	100.0				

Table 3 lists the duration of breastfeeding by birthorder. The eldest child was breastfed on the average length of almost 11 months. As for the subsequent children, mothers tended to breastfeed them longer. The fifth child was being breastfed for an average of 16 months.

Table 4 lists feeding patterns of the respondent's children by whether they were breastfed exclusively or a combination of breastfeeding and bottlefeeding. It is interesting to see that almost 62% of those who breastfed their first child had done so exclusively. The women who breastfed their third child, 100% were exclusively being breastfed. Growing up on this reservation, I have witnessed that the women who do breastfeed, do so exclusively without bottle supplements.

Table 3

## Duration of Breastfeeding in Months by Birthorder

Birthorder	N	Mean	SD
1	26	10.54	8.28
2	20	8.55	7.90
3	11	11.73	8.32
4	5	11.40	4.34
5	3	16.00	7.21
6	1	10.00	-----
7	1	10.00	-----

---

Table 4

## Feeding Patterns of Children by Birth Order

	Exclusive		Combined	
	N	%	N	%
Eldest	16	(61.5%)	10	(38.5%)
Second	15	(75.0%)	5	(25.0%)
Third	11	(100.0%)	0	(.0%)
Fourth	4	(80.0%)	1	(20.0%)
Fifth	3	(100.0%)	0	(.0%)
Sixth	2	(100.0%)	0	(.0%)
Seventh	1	(100.0%)	0	(.0%)



Table 5 lists the maximum duration of the respondents breastfeeding experience. Of the 26 women who had breastfed, the average length of the maximum duration was 12 months. It is interesting to see that at least one third of the women breastfed for at least 6 months. This is positive because breastfeeding is the infant-feeding method recommended by the American Academy of Pediatrics the American Public Health Association and the American Dietetic Association for the first four to six months of life (Janke, 1993). The remaining two thirds of the children, seven children were breastfed for at least 18 months.

Table 5

## Maximum Duration of Breastfeeding in Months

Duration	Frequency	Percent
1.00	1	3.8
2.00	3	11.5
3.00	1	3.8
4.00	2	7.7
6.00	2	7.7
8.00	1	3.8
9.00	1	3.8
10.00	1	3.8
11.00	3	11.5
12.00	3	11.5
14.00	1	3.8
18.00	1	3.8
19.00	1	3.8
24.00	3	11.5
36.00	2	7.7

Note. Entries are the longest duration of breastfeeding among all children who were breastfed by an individual respondent.

Table 6 reports the breastfeeding observations made by the respondents. Almost half reported that they had observed a woman breastfeeding as a child, 48% responded that they had seen a family member or friend breastfeed, and 38% had seen an aunt breastfeed. It is interesting to note that one participant had witnessed their grandmother breastfeeding as a child.

Participants were asked to list places where they had observed women breastfeeding their infants and how they felt about the appropriateness or pleasantness of the situation. Reactions were measured by their feelings of the setting being inappropriate, (1) to being natural (3). Findings are listed in table 7. The infants home was found to be the most natural setting. The homes of relatives and the car were close to being natural, also. The respondents felt that the most inappropriate places to breastfeed were the workplace and church.

Table 6

Breastfeeding Observations by Respondents when they were a Child

Family Friends	48%
Aunt	38%
Stranger	37%
Sister	32%
Mother	25%
Other	15%
Grandmother	2%

Table 7

## Rated Appropriateness of Breastfeeding Across Settings

Setting	N	Mean	SD
Infant Home	45	3.00	0.00
Relative Home	45	2.84	.37
School	25	2.24	.78
Church	25	2.20	.71
Mall	36	2.25	.69
Restaurant	35	2.37	.81
Park	26	2.65	.63
Car	33	2.91	.38
Hospital	44	2.80	.46
Worksetting	25	2.16	.85

---

Note. Settings were rated as 1 = inappropriate, 2 = neutral, 3 = natural



## Attitudes and Beliefs

## Item Responses

Tables 8, 9, and 10 indicate the mean responses to each item in the attitudes and beliefs about breastfeeding and bottlefeeding scales. In Table 8, the respondents were to mark on the scale of 1-7 how they felt on both the idea and act of breastfeeding and the idea and act of bottlefeeding for 6 months or more. Most felt that breastfeeding was healthy, pleasant and natural. When asked about the idea and act of a woman bottlefeeding for 6 months or more, the of the respondents felt that it was not embarrassing to bottlefeed a child.

Table 9 lists mean responses about personal beliefs about the possible results of breastfeeding an infant 6 months or more. The respondents believed strongly that, when a woman breastfeeds, she saves money (mean = 6.37). Most respondents also felt that breastmilk was best for the babies teeth (mean = 6.16). If a mother breastfed, most felt she would feel satisfaction with her mothering role (mean = 6.15). Women felt that there was little association between a child's obesity in later life and breastfeeding.

Table 10 lists respondent's personal beliefs about the possible results that might occur of bottlefeeding an infant for 6 months or more. The respondents believed strongly (mean = 4.67) that when a woman bottlefeeds, she will feel closeness to her child and satisfaction with her mothering role. Most felt bottlefeeding a child cost more money than breastfeeding.

Table 8

## Infant Feeding Attitudes

Item	N	Mean	SD
Breastfeeding Idea			
Unpleasant-Pleasant	55	6.07	1.41
Embarrassing-Not Embarrassing	55	5.71	1.91
Unhealthy-Healthy	58	6.40	1.58
Repulsive-Attractive	55	5.15	1.64
Inconvenient-Convenient	55	4.98	2.04
Unnatural-Natural	56	6.37	1.52
Breastfeeding Act			
Unpleasant-Pleasant	55	5.89	1.63
Embarrassing-Not Embarrassing	55	5.67	1.86
Unhealthy-Healthy	56	6.21	1.69
Repulsive-Attractive	54	4.94	1.66
Inconvenient-Convenient	54	5.19	1.89
Unnatural-Natural	55	6.56	.96
Bottlefeeding Idea			
Unpleasant-Pleasant	56	4.61	1.95
Embarrassing-Not Embarrassing	55	6.11	1.51
Unhealthy-Healthy	56	3.82	1.80
Repulsive-Attractive	54	4.61	1.78
Inconvenient-Convenient	56	4.93	2.26
Unnatural-Natural	56	3.89	2.06
Bottlefeeding Act			
Unpleasant-Pleasant	54	4.69	2.00
Embarrassing-Not Embarrassing	53	5.94	1.56
Unhealthy-Healthy	54	3.94	1.77
Repulsive-Attractive	52	4.58	1.74
Inconvenient-Convenient	56	4.88	2.15
Unnatural-Natural	54	4.00	1.92

Table 9

## Beliefs about Breastfeeding

Item	N	Mean	SD
Few Illnesses	59	4.95	2.42
Mild Illness	59	5.17	2.13
Allergies	60	5.05	2.10
Good jaw and facial development	60	5.18	1.99
Not overweight	60	4.95	2.09
Not underweight	60	5.25	2.03
Not obese later in life	59	4.34	1.99
Associate milk with mother's skin	60	5.83	1.74
Experience skin-to-skin contact	60	6.05	1.80
Feedings are rewarding	60	5.88	1.94
Mother close to baby after 12 months	60	6.03	1.78
Satisfaction with mothering role	60	6.15	1.54
Best milk for teeth	59	6.15	1.56
Return to pre-pregnancy weight	60	5.47	1.98
Save time	60	5.43	2.09
Save money	60	6.37	1.46
Convenient	60	5.30	2.10
Interest in Sex will return	59	4.68	2.14

Table 10

## Beliefs about Bottlefeeding

Item	N	Mean	SD
Few Illnesses	60	3.30	1.86
Mild Illness	60	3.47	1.80
Allergies	60	3.31	1.91
Good jaw and facial development	60	3.73	1.83
Not overweight	60	3.43	1.75
Not underweight	59	3.31	1.73
Not obese later in life	59	3.34	1.48
Associate milk with mother's skin	60	3.30	2.16
Experience skin-to-skin contact	60	2.97	1.99
Feedings are rewarding	60	3.95	2.11
Mother close to baby after 12 months	60	4.67	1.95
Satisfaction with mothering role	60	4.52	2.02
Best milk for teeth	60	3.58	1.96
Return to pre-pregnancy weight	59	3.34	1.75
Save time	60	3.53	2.14
Save money	60	2.10	1.59
Convenient	60	4.30	2.12
Interest in Sex will return	58	3.78	1.52

## Scale Scores

Table 11 gives reliabilities, mean responses, and standard deviations for scales measuring attitudes and beliefs about breastfeeding and bottlefeeding. Overall, the attitudes and beliefs toward breastfeeding were more positive than the attitudes and beliefs of bottlefeeding.

Table 12 lists correlations among the attitude of breastfeeding, attitude of formula feeding, beliefs about breastfeeding and beliefs about formula feeding. There was a negative correlation (-.35) between the attitude of formula and the attitude of breastfeeding. The beliefs of breastfeeding & beliefs about bottlefeeding correlation was (-.14). Figure 1 shows a matrix scatterplot of the beliefs and attitude variables.

### Personal Experiences and Breastfeeding Attitudes/Beliefs

Table 13, 14, and 15 lists experiences, beliefs and attitudes by whether the respondent, their partner, and or their siblings was breastfed. The t-test was used to determine if there were significant differences. Respondents who were breastfed as an infant had significantly more positive attitudes towards breastfeeding, reported a significantly longer maximum period of breastfeeding, and a longer duration of breastfeeding her first child. There were no other significant findings in Table 14 and Table 15; knowing whether their partner or siblings were breastfed was unrelated to breastfeeding and bottlefeeding attitudes and beliefs.



Table 11

Means & Standard Deviations for Attitudes & Beliefs about Breastfeeding & Bottlefeeding

Scale	N	Alpha	Mean	SD
Attitude of Breastfeeding	52	.86	68.89	12.55
Attitude of Bottlefeeding	52	.91	55.31	15.46
Beliefs of Breastfeeding	57	.93	77.51	18.64
Beliefs of Bottlefeeding	56	.91	64.21	20.78

Table 12

Correlations among Measures of Breastfeeding and Formula Feeding Beliefs and Attitudes

	1.	2.	3.	4.
1. Attitude of Breastfeeding	1.00 (52)			
2. Attitude of Formula	-.3527 (51)	1.00 (52)		
3. Beliefs of Breastfeeding	.1357 (50)	-.1422 (50)	1.00 (57)	
4. Beliefs of Bottlefeeding	-.2467 (50)	.4125 (49)	-.1239 (54)	1.00 (56)

Note. Sample sizes are in parentheses.

Figure 1

Matrix Scatterplot of the Beliefs and Attitude Variables

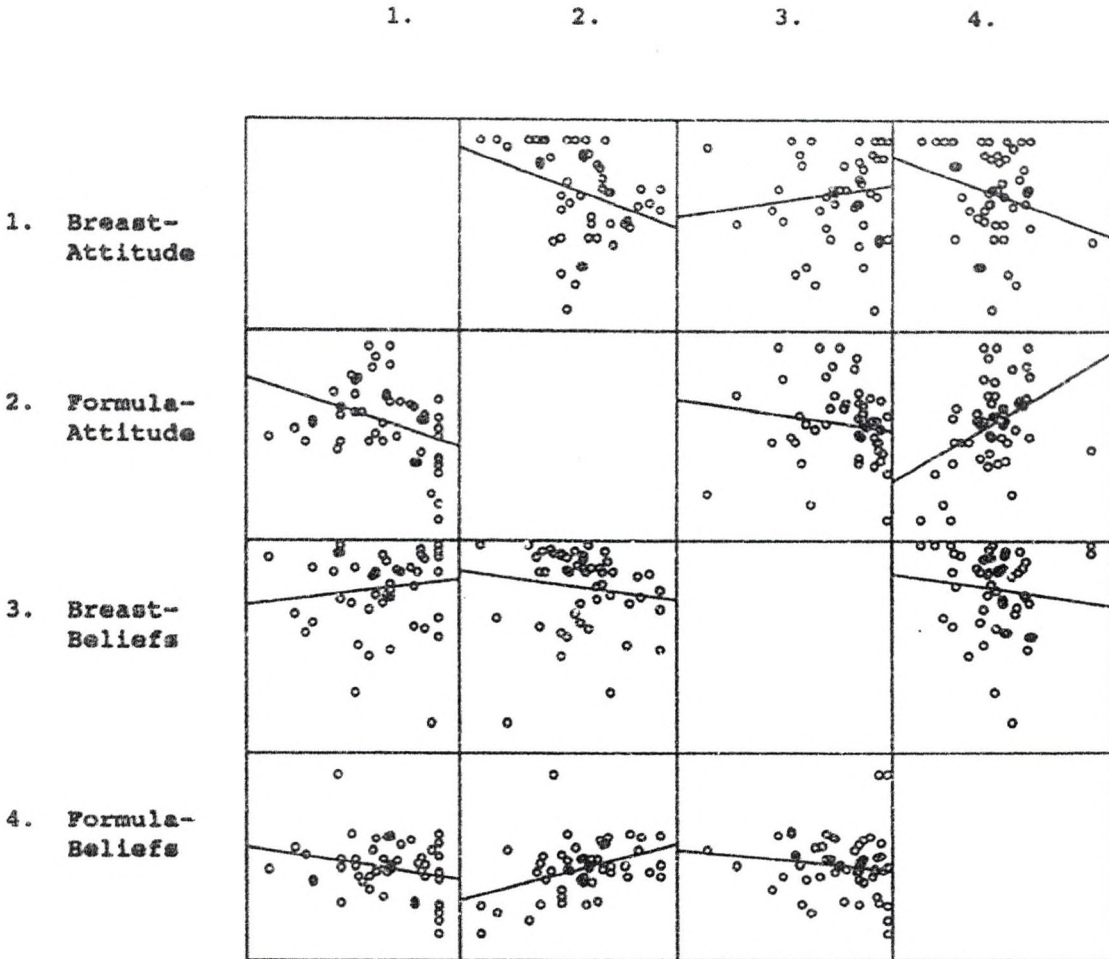


Figure 1. Matrix scatterplot of the attitudes and beliefs scales, with the least squares lines superimposed. Corresponding correlation coefficients are listed in Table 12.

Table 13

Breastfeeding experiences, beliefs and attitudes- by were you breastfed?

Independent	Dependent	N	Mean	SD	t	p
yes no/don't know	br-belief	28	81.29	14.05	-1.52	.13
		29	73.86	21.82		
yes no/don't know	for-belief	27	63.89	15.76	.11	.91
		29	64.52	24.86		
yes no don't know	br-attitude	24	73.88	10.83	-2.83	.007
		28	64.61	12.50		
yes no/don't know	for-attitude	25	51.68	14.19	1.66	.10
		27	58.67	16.9		
yes no/don't know	satisfaction	16	9.00	2.28	-1.52	.14
		16	7.56	3.01		
yes no/don't know	max-time	14	18.29	9.43	-3.97	.000
		10	5.50	4.43		
yes no/don't know	time-1	14	15.29	8.13	-3.63	.00i
		10	5.00	4.35		
yes no/don't know	setting	29	16.59	9.40	-1.39	.17
		24	12.96	9.46		

Table 14

Breastfeeding experiences, beliefs and attitudes- by was your partner breastfed?

Independent	Dependent	N	Mean	SD	t	p
yes no/don't know	br-belief	12	82.08	14.04	-.82	.414
		43	77.09	19.58		
yes no/don't know	for-belief	13	57.77	22.85	1.18	.242
		41	65.63	20.26		
yes no don't know	br-attitude	12	72.83	11.58	-1.23	.223
		38	67.63	13.05		
yes no/don't know	for-attitude	12	55.92	14.00	-.30	.762
		38	54.37	15.74		

Table 15

Breastfeeding experiences, beliefs and attitudes- by were your siblings breastfed?

Independent	Dependent	N	Mean	SD	t	p
yes no/don't know	br-belief	27	79.48	14.47	-.87	.390
		29	75.14	21.95		
yes no/don't know	for-belief	25	63.08	16.45	.49	.625
		30	65.87	24.00		
yes no don't know	br-attitude	23	73.35	11.44	-2.37	.022
		28	65.25	12.65		
yes no/don't know	for-attitude	24	52.29	15.30	1.38	.175
		27	58.26	15.56		



### Respondents Observations/Concerns About Breastfeeding

When asked about their observations or concerns about breastfeeding at the Turtle Mountain area, respondents had many mixed feelings. Two of the respondents felt a women choosing to breastfeed, results in a very rewarding experience that they share with the child. The mother-infant attachment is far greater than when a women chooses to bottlefeed. There were at least a half a dozen of the respondents who felt that breastfeeding was important to women everywhere, but it is not practiced enough on the reservation. There were four respondents who felt that there is a lack of knowledge about Indian traditions in this area. These traditions hold that children should be breastfed until they reach the age of two.

Five respondents felt that many women chose not to breastfeed because they could not drink alcohol or smoke tobacco. Two of these same women said that they had witnessed nursing women who were not educated on the harmful effects of drinking and smoking. Two respondents noted that there are too many very young mothers. These young women have been having too many children, close together. Due to this closeness in age they could not nurse and care for their children properly.

The majority of the responses note that, overall, there is a lack of education and health promotion in regards to the benefits of breastfeeding on this reservation. Three respondents noted that this may be due to the lack of effort in this area by the Women, Infants, and Children Program (WIC) In addition, a few women explained that, when they had children, the physician or the nurses did not mention or promote the idea of breastfeeding. They also mentioned that nurses are too eager to give a newborn a bottle, thinking that the mother is too fatigued to nurse.

There were at least a half a dozen respondents who thought breastfeeding was the best nourishment for the child. They also felt that breastfeeding many advantages over bottlefeeding; it is cheaper, easier, and healthier. There were a few participants who said that breastfeeding was too time consuming, and interfered with work, school, and family. Those women felt, if there was a way to cope with these problems effectively, they probably would nurse their babies.

## CHAPTER V

### DISCUSSION

In this chapter, a synopsis of the study will be presented, followed by discussion and conclusion. Recommendations for nursing education, practice, and research will be proposed.

#### Synopsis

The purpose of this study was to determine the attitudes and experiences of breastfeeding among the Native women who were at a northcentral community college. It also looked at how attitudes, beliefs, and experiences are related in that population. The Minnesota Infant Feeding Questionnaire (MIFQ) was administered to a sample of 60 women who were attending or working at this site. Women who responded to the survey ranged from 18 to 57 years of age. The survey was given to these women at this college during the month of March, 1997. The findings of this study can serve to help create an awareness of the positive benefits of breastfeeding and promote the tradition in the native community.

This study utilized both Ajzen & Fishbein's Theory of Planned Behavior and Leininger's theory of Culture Care Diversity and Universality. The Theory of Planned Behavior (TPB) offers an approach for explaining, predicting, and influencing human behaviors based on the modifiable measures of subjective norm, control, and attitude.

This TPB had been useful in predicting a number of health behaviors in the

clinical areas and it is particularly relevant to breastfeeding behaviors. In combination with the TBP, Leininger's theory of Culture Care Diversity and Universality was also utilized. Because culture is the patterned lifeway of people that influences decisions and actions, the theory is directed toward nurses to help them grasp the world of the client. Caregivers can use these viewpoints, knowledge, and practices as a basis for making culturally congruent professional actions and decisions.

## Discussion

### Personal Breastfeeding Experiences

Women who participated in the research breastfed at a slightly lower rate (about 43%) than the current North Dakota rate (about 52%). However, it was found that Native women who breastfed tended toward a pattern of exclusive breastfeeding, rather than the pattern of combining breastfeeding and formula feeding that is more common in the majority population (Mulford, 1995). The study found that most women who breastfed their first child, breastfed their subsequent children for longer durations, most did so by breastfeeding exclusively, and had a great degree of satisfaction doing so.

### Attitudes and Beliefs

Most respondents had witnessed a family friend breastfeeding their child when they were younger. They also agreed that it was most natural to breastfeed in the child's home. Most felt that breastfeeding was healthy, natural and pleasant to do. They also felt that when one breastfeeds she saves money, and that breastmilk was best for the babies teeth. The attitudes and beliefs of breastfeeding were stronger than that for bottlefeeding. Some differences in attitudes and beliefs reflected personal breastfeeding experiences. Women who knew that they had been breastfed as infants scored higher on

attitudes and beliefs about breastfeeding, and they nursed their own infants for significantly longer periods of time than did mothers who were not or did not know whether they had been breastfed as infants. These findings are similar to those reported elsewhere for other populations (Mulford, 1995).

#### Relationships between Attitudes and Beliefs

The theory of planned behavior (Ajzen & Fishbein, 1980) posits that beliefs about outcomes of a specific behavior predicts attitude toward the behavior. Attitudes and beliefs about breastfeeding and bottlefeeding were all measured in this study. The pattern of relationships was similar to that found in other studies of breastfeeding women (Duckett et al, 1997), a university community (O'Keefe, 1996), and professional nurses working in hospital maternity and neonatal units (Anerson, 1996). Beliefs that breastfeeding or bottlefeeding led to beneficial outcomes was associated with a positive attitude toward the specific feeding method. The noticeable but not large negative correlation between attitude toward breastfeeding and attitude toward bottlefeeding suggested that the concepts are relatively distinct, but not independent.

Native women responded to standard instrumentation included in the MIFQ when they participated in the study. From a technical psychometric perspective, their responses corresponded with published properties of the instruments. It may be necessary to adapt the instruments for future use with less educated members of the Native community. An alternative response format, such as a face to face interview in a private setting, might be more comfortable.



## Recommendations

### Implications for Practice

The implications of these findings for practice are that, in order to achieve the Healthy People 2000 goals (USDHHS, 1991) the level of awareness and knowledge about breastfeeding should be increased to facilitate progress in achieving these goals. Supportive education and guidance should begin before childbirth and be reinforced during the early months of lactation. Educational programs that are culturally sensitive should include information on maintenance practices, lactation complications (such as mastitis and engorgement) and sensitivity to a woman's support system. For example, the breastfeeding video "So You Want a Healthy Baby" that highlights recommendations for infant feeding from elders, in light of traditional beliefs and has proven effective in the local Native community (Fort Alexandre Health Centre, 1996). Finally, women who lack positive experiences with breastfeeding could be advised about community resources available to nursing mothers. This can be addressed by person-to-person programs of support, such as moms helping moms. A program of this sort has been instituted with some success at Sakeeng First Nation, in Manitoba (Martens, 1997; Romphf & Fontaine, 1996).

### Recommendations for Education

Many health professional education programs lack curricular content about breastfeeding education (Lawrence, 1994). In addition to rectifying that omission, specific concerns about providing breastfeeding support, promotion and protection to Native women should be studied in regions with significant Native American populations. Women in this study indicated a preference for modesty and privacy for

breastfeeding. Data suggested a strong intergenerational influence; i.e., breastfeeding seemed to “run in families.” Thus, breastfeeding support may be important to some women, with efforts directed toward encouragement and enhancement of assistance from knowledgeable family members. For others who lack a family breastfeeding history, breastfeeding promotion and education in the practical art of nursing may be more important. All of these concerns should be addressed in educational programs for nursing, including preprofessional and continuing education.

Community health nurses and lactation specialists should provide education and support and encourage expectant mothers in rural settings, especially on Native American reservations. This can be done through a variety of ways. For instance, there could be a development of a breastfeeding coalition group, support groups, seminars, and pamphlets which are all culturally appropriate.

#### Recommendations of Further Research

Future research is needed to explore the effectiveness of nursing strategies aimed at reduction of perceived barriers such as negative attitudes and skeptical beliefs and to increase the benefits. In addition, there is a need for clarification in regards to urban and rural populations. Also, there is a minimal amount of breastfeeding research based literature specifically related to Native American women of the upper midwest. There is a need to identify what specific education programs and support that would provide a positive impact to such a group. Further studies using the MIFQ should be replicated, perhaps at the Indian Health Service hospital, to determine if women who work within the hospital or visit the hospital have differences in their attitudes and beliefs regarding breastfeeding.

## APPENDICES

**Appendix A**

**Information About You**

Circle only one choice in each category

Age

Marital Status 1. Never Married 2. Married 3. Separated/Divorced 4. Widow

Education 1. Grade School 2. Some High School 3. High-school Graduatee  
4. Vocational School 5. College 6. Graduate School

Tribal Membership 1. No 2. Yes → Please circle: Turtle Mt. Chippewa / Other Tribe / White  
Degree of Indian Blood

Employment 1. No 2. Yes → How many hours per week? .....

Number of Children .....

Current Age of Child

**Feeding Information**  
**(Check all that apply)**

- |          |        |        |                           |
|----------|--------|--------|---------------------------|
| 1. _____ | Bottle | Breast | If Breast how long? ..... |
| 2. _____ | Bottle | Breast | If Breast how long? ..... |
| 3. _____ | Bottle | Breast | If Breast how long? ..... |
| 4. _____ | Bottle | Breast | If Breast how long? ..... |
| 5. _____ | Bottle | Breast | If Breast how long? ..... |

Please give the same information for additional children.

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Please use this space for your observations or concerns about breastfeeding at the Turtle Mountain area.

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**Minnesota Infant Feeding Questionnaire**  
by L. J. Duckett

Mark the spot on each scale that most closely represents how you feel. Mark between two lines rather than on a line.

To me the **idea** of a woman **breastfeeding** for 6 months or more is:

1. Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
2. Embarrassing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not Embarrassing
3. Healthy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unhealthy
4. Repulsive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attractive
5. Convenient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Inconvenient
6. Unnatural	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Natural

To me the **act** of a woman **breastfeeding** for 6 months or more is:

1. Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
2. Embarrassing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not Embarrassing
3. Healthy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unhealthy
4. Repulsive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attractive
5. Convenient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Inconvenient
6. Unnatural	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Natural

To me the **idea** of a woman **bottle-feeding** for 6 months or more is:

1. Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
2. Embarrassing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not Embarrassing
3. Healthy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unhealthy
4. Repulsive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attractive
5. Convenient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Inconvenient
6. Unnatural	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Natural

To me the **act** of a woman **bottle-feeding** for 6 months or more is:

1. Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
2. Embarrassing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not Embarrassing
3. Healthy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unhealthy
4. Repulsive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attractive
5. Convenient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Inconvenient
6. Unnatural	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Natural





If a woman **FORMULA** feeds for the first six months or more:

19. The baby will experience **few** illnesses, during the first year.  
unlikely           likely
20. Any illness the baby experiences, during the first year, will be **mild**.  
unlikely           likely
21. The baby will have **no** allergies, or **mild** allergies.  
unlikely           likely
22. The baby will have good jaw and facial development.  
unlikely           likely
23. The baby will **not** be overweight in relation to height.  
unlikely           likely
24. The baby will **not** be underweight in relation to height  
unlikely           likely
25. The baby will not become obese later in life.  
unlikely           likely
26. The baby will associate the smell of milk and feel of mother's skin with feelings of safety, warmth, and satisfaction of hunger.  
unlikely           likely
27. The mother and baby will experience a lot of skin-to-skin contact.  
unlikely           likely
28. Feedings will be a rewarding time.  
unlikely           likely
29. The mother will feel close to her baby 12 months after delivery.  
unlikely           likely
30. The mother will feel satisfaction with the mothering role.  
unlikely           likely
31. The mother will feel satisfied that the baby is getting the best type of milk for his/her teeth.  
unlikely           likely
32. The mother will return to her pre-pregnant or ideal weight, within the year following delivery.  
unlikely           likely
33. The mother will save time by bottlefeeding.  
unlikely           likely
34. The mother will save money by bottlefeeding.  
unlikely           likely
35. Bottlefeeding will be convenient.  
unlikely           likely
36. The mother's interest in sex will return rapidly.  
unlikely           likely



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