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Johnie N. Mozingo

Johnie N. Mozingo, Major Professor

We have read this thesis
and recommend its acceptance:

Mitzi Davis

Dara H. Shaffer

Accepted for the Council:

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Date April 25, 1991

THE INFLUENCE
OF SOCIAL STRUCTURE ON INTENT TO BREASTFEED:
A STUDY OF LOW INCOME WOMEN IN EASTERN TENNESSEE

A Thesis

Presented for the

Master of Science in Nursing

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ABSTRACT

Breastfeeding rates in the United States have been declining over the past six years following over a decade of increasing rates. Low income women in particular are less likely to elect to breastfeed. This descriptive study surveyed eighty-five low income pregnant women residing in Eastern Tennessee with the purpose of identifying how the social structure in which these women live influence their choice of feeding method. Participants answered thirty-six questions on a Likert scale to measure the influence of various aspects of the social structure as being positively or negatively related to breastfeeding. A total score was obtained for each participant. The tool also assessed demographic and background data and allowed an opportunity for the subjects to comment about breastfeeding.

The scores of women who expressed intent to breastfeed (n=27 or 32% of total) were compared to the scores of those with intent to bottlefeed (n=52 or 61% of total). Six of the participants were undecided as to feeding intent (7% of total). The scores for the group with intent to breastfeed were found to be, on the average, higher than the scores of the group with intent to bottlefeed.

Subscores representing various components of the social structure were analyzed for similarities and differences between the two groups. Results verify that the majority of low income women in Eastern Tennessee intend to bottlefeed. The areas of greatest variation between the two groups may represent important clues as to the etiology of the difference in the choice of feeding method intended. The fact that many low income women appear unfamiliar with breastfeeding behavior and see bottlefeeding as the social norm is hypothesized as perhaps the primary barrier to the selection of breastfeeding. Suggestions are offered concerning techniques that may increase the exposure of low income women to breastfeeding behavior and areas for future research are cited.

TABLE OF CONTENTS

CHAPTER PAGE

I. STATEMENT OF PROBLEM.....1

Significance and Background.....3

Purpose of Study.....5

Conceptual Framework.....6

Nominal Definitions.....12

Research Questions.....15

Assumptions.....16

Summary 16

II. REVIEW OF THE LITERATURE.....18

Application of Leininger's Model to Clinical Research.....18

Historical Review.....21

Worldwide Cultural Diversity in Breastfeeding.....24

Diversity in American Culture and Subcultures.....30

The Culture of Eastern Tennessee.....37

Summary of Literature Review.....39

III. METHODOLOGY.....42

Subject Description.....42

Data Collection Procedure.....44

Instrument: Operational Definitions, Reliability, and Validity.....46

Analysis of Data.....52
Limitations.....53
Summary.....54
IV. DATA PRESENTATION AND ANALYSIS.....55
Intent to Breastfeed.....55
Total Scores of Culture Questions.....56
Analysis of Kinship and Social Factors.....60
Analysis of Cultural Values and Beliefs.....65
Analysis of Economic Data.....69
Analysis of Educational Factors.....72
Analysis of Demographic Data
and Written Comments.....75
Summary 79
V. CONCLUSIONS AND IMPLICATIONS FOR FUTURE
RESEARCH AND ACTIVITIES.....80
Conclusions.....80
Application of Leininger's Theory to
Results of Study.....89
Implications for Future Research
and Activities.....92
REFERENCES.....96
APPENDIXES.....106
A. Leininger Sunrise Conceptual Model.....107
B. Cover Sheet for Questionnaire.....109
VITA.....111

LIST OF TABLES

TABLE PAGE

I. Mean Scores of Culture Questions Comparing the Total Study Group with Women Expressing Intent to Breastfeed and with Women Expressing Intent to Bottlefeed.....57

II. Analysis of Variance Procedure comparing Responses of the Bottlefeeding Group and Breastfeeding Group for all Culture Questions and the Four Subscales.....59

III. Kinship and Social Factors: Differences and Similarities in Responses Among Breastfeeding and Bottlefeeding groups.....62

IV. Cultural Values and Beliefs: Differences and Similarities in Responses Among Breastfeeding and Bottlefeeding groups.....66

V. Economic Factors: Differences and Similarities in Responses Among Breastfeeding and Bottlefeeding groups.....70

VI. Educational Factors: Differences and Similarities in Responses Among Breastfeeding and Bottlefeeding Groups.....74

VII. Main Reasons Subjects Choose to Breastfeed or Bottlefeed.....77

CHAPTER I

STATEMENT OF PROBLEM

In 1980, the United States Department of Health and Human Services published the document, Promoting Health, Preventing Disease: Objectives for the Nation. Stated within this document was the explicit goal that "by 1990, the proportion of women who breastfeed their babies at hospital discharge should be increased to 75% and to 35% at six months of age" (p. 149). In the last ten years, a variety of programs and projects have been implemented nationwide in an attempt to promote breastfeeding in America. However, as of 1989, the percentage of women who breastfeed at hospital discharge was 52.2% nationwide and only 37.9% for the East South Central area of the nation, which includes Tennessee (Martinez, 1989). Results just in for 1990 from the National Mothers Survey conducted yearly by Ross Laboratories once again shows a decline in the percentage of women breastfeeding at hospital discharge, with a 51.2% rate for the nation and a 36.3% rate for the East South Central United States (personal communication, Marketing Research, Ross Laboratories, Columbus Ohio).

For low income women residing in Eastern Tennessee

and participating in the Woman, Infant, and Child Supplementary Program (WIC) in 1988, 13% were found to be breastfeeding at six weeks postpartum decreasing to 7% by six months postpartum (Speer, 1990). Despite much effort to promote breastfeeding, American woman are not breastfeeding at the proposed rate. Clearly the majority of low income woman in Eastern Tennessee are choosing not to breastfeed.

In 1984, the Tennessee Department of Health and Environment initiated a statewide multidisciplinary breastfeeding promotion task force to develop effective strategies to increase the incidence and duration of breastfeeding in Tennessee. The task force speculated that a variety of factors contribute to the low rate of breastfeeding in the state, including "common misconceptions and concerns regarding breastfeeding; lack of support from family, friends, and employers; and lack of available knowledgeable, and supportive health care providers" (Lazarov, 1989, p. 1).

This study explores cultural and social factors thought to influence the decision of low income women in Eastern Tennessee to breast or bottle feed their infants. Since most health practices are based upon American middle class norms, with limited consideration of other social classes, health care providers must be sensitive to the culture of other social classes whose

norms may differ (Leininger, 1970, p. 20).

Significance and Background

In November of 1990 a major breastfeeding promotion campaign began in Tennessee. This campaign is part of the Best Start Program, a joint effort by public health agencies in eight southeastern states to implement a federally funded program to promote breastfeeding, especially among low income woman. Previous attempts to promote breastfeeding among pregnant woman participating in WIC, which have focused on educational techniques alone, have been unsuccessful. The new campaign is based on techniques of commercial marketing and support methods as well as education. Tennessee is to be one of the first states to pilot this project (Bryant, Lazarov, Light, Bailey, Coreil, & D'Angelo, 1989; Lazarov, 1989).

A host of projects and activities are planned to be implemented by health care personal as part of the Best Start Program. In Hamblen, Carter, and Blount counties, a media campaign was initiated in which local care providers were contacted and provided with information regarding the importance of breastfeeding. A handbook suggesting techniques in promoting breastfeeding was provided to these health care

providers, and nutritionists provided classes on breastfeeding in local physicians' offices. Radio and TV spots were purchased for promotional information regarding breastfeeding. In Carter and Blount counties, a special grant was obtained to support an even more intensive effort to promote breastfeeding. Public health department personnel are being offered workshops which promote breast feeding. Classes are being offered for pregnant women, peer support groups for breastfeeding women are to be formed, and hospital personnel as well as health care practitioners in private offices are being contacted and asked to support the project (Lazarov, 1986).

As this innovative project begins in Tennessee (with potential for nationwide implementation), nurses will be extensively involved through many health systems. Nurses concerned with maternal child health should have a through and accurate understanding of breastfeeding techniques, advantages, and problems. Nurses should be expert in teaching and assisting pregnant and lactating women. In order to provide this caring behavior to clients, nurses must incorporate the cultural health norms, values, and beliefs of clients in planning their care. Assistance in making the infant feeding decision should reflect the viewpoint of the client (Leininger, 1970).

In a recent internationally published review article, a worldwide need for research with a focus on social class differences in the attitudes of women toward breastfeeding was identified (Kocturk & Zetterstrom, 1989). The authors summarized that most breastfeeding promotional programs function under the assumption that if women are taught "breast is best," this information would be adequate motivation for all women to breastfeed, regardless of socioeconomic and cultural differences. Such an assumption "fails to address itself to women facing different realities and attitudinal barriers concerning breastfeeding" (p. 817). The knowledge gained from this research project will contribute to the growing body of worldwide knowledge regarding the culturally derived attitudes of low income woman toward breastfeeding.

Purpose of Study

The purpose of this study was to identify ways in which the social structure of low income women in Eastern Tennessee influences the stated intent of these women to breast or bottle feed their newborn infants.

Conceptual Framework

The conceptual framework for this study was derived from the science of nursing and, more specifically, from the nursing theory of transcultural care, diversity, and universality formulated by nurse anthropologist Madeleine Leininger. Transcultural nursing is "a formal area of study and practice focused on a comparative analysis of different cultures and subcultures in the world with respect to cultural beliefs, values, and practices with the goal of using knowledge to provide culture specific and cultural universal nursing care to people" (Leininger, 1984b, p. 72).

Major concepts of this theory are: social structure, cultural values, and health system. Social structure refers to the major interdependent structural and functional elements of many systems; the religious, kinship and social, political, economic, educational, technological, and cultural value systems of a particular culture (Leininger, 1984b). Definitions of other concepts quoted from Leininger's work (1985) are as follows:

> Culture refers to the learned, shared, and transmitted values, beliefs, norms, and lifeway practices of a particular groups that

guides thinking, decisions, and actions in patterned ways.

Cultural value refers to the preferred way of acting or knowing something that is often sustained by a culture over a period of time and governs one's actions or decisions.

Health system(s) refers to the values, norms, and structural features of an organization designed for serving peoples' health needs, concerns, or conditions.

a. Folk system refers to the non-professional local or indigenous system that offers traditional home or folk care or cure services to people.

b. Professional system refers to organized and interdependent care or cure services that have been identified with or altered by various health professionals.

c. Nursing system refers to organized and interdependent care giving and health promotion (or maintenance) nursing service modes to assist clients (p. 209).

Care or caring is defined as "those assistive, supportive or facilitative acts toward another

individual or group with evident or anticipated needs to ameliorate or improve a human condition or lifeway" (Leininger, 1981a, p. 9).

Care is the central concept of Leininger's theory in that care is seen as the central and unifying domain for the body of knowledge and practices of nursing. Caring behaviors and practices uniquely distinguish nursing from the contributions of other disciplines (Leininger, 1981a). Caring acts are essential for human development, growth, and survival and are provided in all cultures by various caregivers who are usually women. Nurses provide professional nursing care, defined as:

> Those cognitive learned humanistic and scientific modes of helping or enabling an individual, family, or community to receive personalized services through specific culturally defined or ascribed modes of processes, technique, and patterns to improve or maintain a favorably healthy condition for life and death. (Leininger, 1981a, p.9)

Nursing with a caring attitude means having concern for, being devoted to, attending to, being helpful to, and having compassion for another (Leininger, 1981b). Nursing care cannot be successfully accomplished unless the concept of culture

is addressed. Several premises that have been stated by Leininger relating nursing to culture include: (a) care and culture are closely linked, (b) human caring is culturally derived and therefore nurses will need knowledge of the cultural values, beliefs, and practices of clients, families, and community groups to know and use caring therapeutically (Leininger, 1981b); (c) nursing care decisions or actions that reflect the use of the client's cultural care values, beliefs, and practices will be positively related to the client's satisfactions with nursing care (Leininger, 1985).

Culture may be viewed "as a blueprint for living which guides a particular group's thoughts, actions, and sentiments" (Leininger, 1970, p. 49). Culture includes material items such as dress and food and nonmaterial things such as problem solving techniques, and religious and political thoughts. Various cultures have commonalities and unique traits, are stable yet dynamic and changing, and determine how lives are lived yet are rarely thought about consciously (Leininger, 1970). Culture can be viewed as a broad concept to characterize common traits of a large group of people such as Western culture or American culture. Culture can also be viewed with a narrow focus to study common values, beliefs, and practices of small groups of individuals such as Afro-Americans, Southern Afro-

Americans, or Southern Afro-Americans living in a village in central Alabama (Leininger, 1984a). The concept of culture has even been used to study the subculture of children who experience alopecia (hair loss) after receiving chemotherapy treatments in order to explain and predict how such treatment may effect this group of individuals (Aamodt, Grassl-Herwehe, Farrell, & Hutter, 1984).

Nurses also compose a subculture because nursing has its own norms and practices that differ from other members of the health care system. Like most American subcultures, nursing contains many norms which are part of the general American culture. These norms usually reflect the norms of the American middle class. (Leininger, 1970). Nurses from different cultures define and practice care in different ways. Cultural differences in the concept of care can have direct implications in nursing practices. When cultural differences exist between nurses and clients, stress and resistance can result instead of care. Leininger (1970) suggests that "to impose one's own values and lifestyle on a client is a serious problem for health care providers" (p. 212).

By use of Leininger's theory and her sunrise model (reproduced in appendix A), culture specific care can be identified, planned, and provided. The following

explanation of the sunrise model has been condensed from the most recent publication of the model (Leininger, 1985). The social structure of human beings is depicted in the model as a semi-circle composed of seven identifiable social structure features (educational factors, economic factors and others). All seven features of the social system influence the care and health patterns and health expressions of human beings as they interact with health systems. Health systems are organizations designed for serving people's health needs, concerns, or conditions. They can be viewed as being composed of folk systems and professional systems. Folk systems are nonprofessional indigenous systems that provide traditional (or folk) care or cure. Professional systems reflect organized care or cure services offered by various health professionals.

Nursing interrelates with both the folk system and the professional system and uses knowledge from both systems to provide one of three types of nursing care: (a) cultural care preservation or actions that help individuals preserve or maintain favorable health and caring lifeways; (b) cultural care accommodation or actions that help clients adjust lifeways; and (c) cultural care repatterning or actions that help clients change health or life patterns meaningful to them.

When the folk system of an individual is understood, nurses can use that knowledge along with their professional knowledge of breastfeeding benefits and techniques to provide care in assisting women to nourish their infants.

The research questions and assumptions developed for this study were derived from the sunrise conceptual model for culturologic interviews, assessments and therapy goals (Leininger, 1984a; Leininger, 1985) and modified to relate specifically to this study. The information obtained from the current study provides insight into the beliefs of one group of woman concerning infant feeding or one aspect of their folk system.

Nominal Definitions

A questionnaire was employed in this study that explores how four of the seven components of social structure (as defined by Leininger) influence the decision of women to breast or bottle feed their babies. The seven components of social structure have not been found to be explicitly defined by Leininger. This is perhaps due to the fact that she believed these components are so interdependent that to separate them explicitly is impossible. However, in order to measure

and discuss these components and their relationship to infant feeding, the author has, for the purposes of this study, defined the four components utilized in this study. The definitions were formulated by extrapolation from Leininger's work and then structured to relate specifically to the cultural influences on infant feeding methods. The definitions of these four components as well as other nominal definitions are as follows.

Kinship and social factors refers to the subject's perception of the attitudes and actions of her mother, spouse, other relatives, friends, and the general public concerning infant feeding methods. Includes how the subject was fed as an infant, her perceived feelings of embarrassment/comfort when breastfeeding among others, and her perceptions of how breastfeeding may affect her sexual relationship(s).

Educational factors refers to the subject's perception and report of formal and informal educational opportunities she has experienced concerning breastfeeding. It includes opportunities she has had to speak with health professionals, books or pamphlets she has read, and if she feels she would like or needs to learn more about breastfeeding.

Cultural values and beliefs refers to the values and beliefs of the subject concerning infant feeding

methods. Cultural values are highly desireable ways of acting or knowing and are sustained by a culture over time (Leininger, 1985). Cultural values and beliefs include the knowledge an individual has gained from both formal and folk means and the beliefs regarding that knowledge such as the subject's beliefs about the ability of woman (including herself) to produce milk, her beliefs regarding ease and convenience of various methods, her beliefs about the affects of breastfeeding on the body, her belief regarding which method of feeding is best for the baby, and her beliefs regarding the social status of the typical woman who chooses to breastfeed.

Economic factors refer to how the employment status of a new mother, the possibility of saving money (by breastfeeding), and the perceptions of help available from the WIC program are associated with the subject's beliefs concerning breastfeeding. It includes the subject's thoughts on the ease at which a new mother can return to work and breastfeed and if the possibility of saving money might be a motivating force for the subject to breastfeed.

Intent to breastfeed is the stated intent of the pregnant woman to nourish her newborn infant primarily with milk from her breasts. Breastfeeding can be the sole source of nourishment or combined with formula.

Intent to bottlefeed is the stated intention of the pregnant woman to use human milk substitutes as the primary source of nutrition for her newborn.

Low income is defined as a total household income of $20,000 or less OR any women whose medical care is paid for by medicaid OR both. (Based on eligibility for assistance for a household with four people plus $5000 per year, personal communication, Hamblen County Department of Human Services, July 20, 1990).

Research Questions

1. In what ways does the social structure of low income woman in Eastern Tennessee influence their stated intent to breast or bottle feed their newborn infants?

Subsidiary Questions

1. What is the relationship between the kinship and social factors of pregnant low income woman and their stated intent to breast or bottle feed?

2. What is the relationship between the cultural values and beliefs of low income pregnant woman and their stated intent to breast or bottle feed?

3. What is the relationship between economic factors of pregnant low income woman and their stated intent to breast or bottle feed?

4. What is the relationship between educational factors of pregnant low income women and their stated intent to breast or bottle feed?

Assumptions

1. Responses of the participants are accurate and honest within the limits of their perceptions.

2. The social structure of an individual (which includes religious, kinship, political, economic, educational, technological, and cultural values) determines the behavior of that individual.

3. Human care patterns, conditions, and actions are largely based upon cultural care values, beliefs, and practices of particular cultures, and the universal nature of humans as caring beings.

4. All human beings have folk and professional care practices.

Summary

Breastfeeding rates have been declining in America over the past several years. Low income women have been identified as a group less likely to breastfeed than the general population. This study utilizes the theory of transcultural nursing developed by Madeleine

Leininger to identify ways in which the social structure of low income women in Eastern Tennessee influences the stated intent of these women to breast or bottlefeed their newborn infants.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter reviews previous studies in which Leininger's model has been utilized in the study of health care and it's relation to culture. A historical review of infant feeding methods is also provided as well as a discussion concerning the worldwide diversity in infant feeding methods and diversity within the United States. Finally, the culture of Eastern Tennessee is then described.

Application of Leininger's Model to Clinical Research

The majority of research that has utilized Leininger's model to date has been in areas where nurses wished to gain a clearer understand of a culture in order to provide better health care to that culture. Leininger, when developing her theory, spent thirteen months living with the Gadsup people of New Guinea (Leininger, 1978). She identified such aspects of the culture as the early infant and child rearing practices of the people including the importance of the kin midwife in helping a new mother. She described the health care rituals important to the people and the

value they placed on the use of food and natural resources for health. She then discussed how a nurse wishing to care for these people would need to be aware of their culture, for example the nurse would have to become familiar with the foods of the people and to "appreciate their value in health" (p.396).

Steffen and Francis (1978) utilized Leininger's model to study the health care beliefs of migrant farm workers who entered the state of Utah each year and subsequently were able to develop a health program that incorporated the beliefs of the people. For example, the decisions of the mothers and grandmothers regarding health care of their children are highly valued in the culture. Therefore, the mothers and grandmothers were included as active participants in the examinations of their children and were shown how to examine the abdomen, ears, and throat. Since poor nutrition was found to be a problem with the children and breastfed babies were found to be healthier, the clinic sought support from the influential older women in teaching the younger women about breastfeeding in an attempt to halt the trend of younger women choosing to bottlefeed.

Osborne (1978) utilized Leininger's model to study black aging Americans with the goal of providing better nursing care for these individuals. The extreme significance of the family and community to these

individuals was found to be of utmost importance in provision of nursing care. Nursing homes or retirement villages were viewed as inappropriate for the aging black American because of close ties to their community and kin:

> whenever possible, these people must be kept in their home community or close to family and friends.... Nurses must be aware that for the African-American aged their can be positive rewards in longevity not available to youth. Rather than be depreciated for lack of vigor and productivity, the black aged can anticipate receiving greater respect and being more influential among their relatives and the community (p.331).

Leininger has suggested the use of her model to study not only cultures different than our own but also to look within the culture and study patterns of caring for the infant, child, adolescent, adult, and elderly. She described, for example, how a nurse anthropologist was able to assist nurses observe, document, and respond to variations in cultural expressions of pain among patients on a ward (Leininger, 1977).

Historical Review

Artificial feeding of infants has been attempted since Roman times, as evidenced by widespread presence of earthenware feeding bottles in excavations dating to this period (Jelliffe, 1968; Helsing, 1982). Attempts by women, particularly those of high social status, to find alternatives to personally breastfeeding can be found throughout history. Wet nurses were employed in Biblical times, as evidenced in Exodus 2:9, when the pharaoh's daughter summoned a wet nurse to feed Moses. Wet nurses were common in Europe throughout the seventeenth and eighteenth centuries (Jelliffe, 1968).

While most cultures have developed special soft foods for infants, such as cereal gruels and sugar water, these foods were traditionally used as supplements to, not substitutes for, breast milk. Indeed, the majority of women throughout millennia have successfully and through necessity relied on nature's ideal food, breast milk, as the primary nourishment for their infants. In societies where breastfeeding is the rule, evidence indicates that 90 to 95% of women can initiate breastfeeding successfully (Kent, 1981; Khan, 1980). Because breastfeeding (and bottlefeeding as well) is believed to be a learned behavior (La Leche League, 1981), new mothers depend on the experiences

and teachings of others in their culture to successfully initiate infant feeding behaviors.

Not until relatively recent times, beginning around 1930, did American society experience a significant decline in breastfeeding and support artificial feeding as the preferred infant feeding method (Helsing, 1982; Jelliffe, 1968). Reasons for the decline in breastfeeding are multiple, complex, and to this day unclear. Commonly cited reasons throughout the literature include: (a) the increase in working mothers, (b) highly advertised, affordable, safe infant formulas, (c) social attitudes toward exposure of breasts (embarrassment), and (d) belief that the formula is superior to breast milk.

In America, breastfeeding declined steadily from 1930 to the early 1970's and then began an upward trend. In 1982, the percentage of women reported breastfeeding at hospital discharge was 61.9%, decreasing to 61.4% in 1983 (Arango, 1984). In 1987, the percentage decreased again to 55.5% and reports for 1989 indicate the current percentage of women breastfeeding at hospital discharge is 52.2% nationwide and 37.9% for the southeast-central region of the United States, which includes Tennessee (Martinez, 1989). It appears that once again, the United States is experiencing a downward trend in breastfeeding.

The decline of breastfeeding which began in the United States in the 1930's was a forerunner to a worldwide decline in breastfeeding. As the review of literature will show, in some countries the decline is just now beginning. The increase in bottlefeeding is thought to be due to various sociocultural factors and the vigorous promotion of manufactured breast milk substitutes (World Health Organization, 1981). The many serious health problems occurring worldwide in developing countries due to the increase in bottlefeeding was reported to the World Health Organization by Jelliffe in 1968. In 1981, the World Health Organization joined forces with the United Nations Children Fund (UNICEF) in an effort to halt the worldwide decline in breastfeeding by establishing an international code of marketing of breast milk substitutes. The aim of this code was to "contribute to the provision of safe and adequate nutrition for infants, by the protection and promotion of breastfeeding, and by ensuring the proper use of breast milk substitutes, when these are necessary, on the basis of adequate information and through appropriate marketing " (World Health Organization, 1981).

Kent (1981) theorized that many complex reasons account for the popularity of bottlefeeding in the traditional cultures of developing nations. The

packaged infant formulas share the aura of other "modern" ideas and bestow status to the user. Bottlefeeding also grants women a degree of freedom which may be seen as valuable to those mothers reentering the labor force.

The model of cultural diffusion has been used frequently to explain breastfeeding trends in developing nations (Brown, 1986). In this model, the bottlefeeding trend is adopted first by the elite, followed by the urban poor, and then by the poor in rural areas. The return of breastfeeding in most advanced nations also followed in this pattern, as was seen in the United States. In Nigeria, breastfeeding decline was occurring only among the urban elite when, at the same time in Sweden (a very advanced country), a return to breastfeeding by all groups occurred (Brown, 1986).

While certain commonalities are seen in breastfeeding trends throughout the world, each culture has also remained unique. A diversity of infant feeding beliefs and behaviors continues to exist between cultures and subcultures.

Worldwide Cultural Diversity in Breastfeeding

In the last ten years, a considerable amount of

research has been conducted to describe infant feeding patterns and trends in cultures worldwide. It is of value to health care professionals to use a cross-cultural approach in the study of people and in the formulation of hypotheses and theoretical ideas about man in general. A cross cultural approach helps to prevent the researcher from becoming unduly ethnocentric and encourages objectivity in thinking (Leininger, 1970).

In Puerto Rico, trends in breastfeeding have been shown to closely follow those of the U.S., but to lag behind in time (Becerra & Smith, 1990). Prior to 1960, the women in Puerto Rico most likely to breastfeed were less educated while the most educated women bottlefed. After 1975, the trend reversed and currently, as in the United States, educated women are more likely to breastfeed than uneducated woman. However, unlike the United States, the length of time (or duration) of breastfeeding was found to decrease with increasing maternal education. So while the proportion of infants who are breastfed has increased, the duration of breastfeeding time has decreased. The decrease in duration of breastfeeding along with the use of early supplements, has produced an overall decrease in the breastfeeding rate.

A recent study from the Philippines

("Urbanization", 1989) reveals that as urbanization occurred, breastfeeding rates fell in both urban and rural areas with the urban areas showing a significant decline. Currently, breastfeeding still appears to be declining except among women with ten or more years of education. In these women, incidence and duration were increased over a previous report from 1973.

In Singapore, one of the most rapidly developing countries in the world, breastfeeding declined from 90% in 1951 to 49% in 1978 ("Breastfeeding trends", 1987). As of 1987, an increase in breastfeeding among the "well to do" woman was reported, with 60% of well to do mothers breastfeeding, compared to 36% of poor mothers. The difference between the socioeconomic groups seemed to be due primarily to education, but the husband's attitude toward breastfeeding was also highly significant in influencing the mother's choice.

Cunningham (1990) explored Jamacia's problem of overall declining rates in breastfeeding by comparing rural Jamaican women with urban women. Women at the urban hospital received much more education and encouragement about breastfeeding through posters, pamphlets, and lectures than did women at the rural hospital. However, the women in the rural area were found to be much more likely to initiate and succeed at breastfeeding than the urban women. The authors

concluded that attempts to increase the education of women in the urban setting may not translate into higher breastfeeding rates. Providing a supportive environment for breastfeeding played a far greater role in the promotion of breastfeeding than all the costly educational efforts of the urban hospital. In this case, a much more supportive environment for breastfeeding was found in the traditions of the rural Jamaican people than in the modern urban setting.

Kocturk (1988) conducted a most interesting cross sectional study of Turkish women. He compared a group of 30 Turkish mothers who had relocated to the industrially advanced city of Stockholm, Sweden, with a group of Turkish mothers remaining in their traditional environment of Istanbul, Turkey. Each group was asked about their choice of infant feeding method and to list the advantages of breastfeeding. Both groups lived in urban areas and contained representatives from upper and lower social classes in each city.

Women in Istanbul reported breastfeeding with significantly higher frequency than women is Stockholm. When asked to list the advantages of breastfeeding, two major themes differentiating the two groups of women were identified: (a) infant centered responses, and (b) adult centered responses. Mothers living in Istanbul tended to respond with more adult centered

messages when asked about the advantages of breastfeeding; such as breastfeeding is inexpensive and provides a degree of contraceptive value. In Stockholm, mothers tended to see the advantages of breastfeeding with an infant centered focus in that it provided better nutrition, immunological, and psychological benefits to the child. The desire for contraceptive assistance was identified as an important motive for breastfeeding in Turkey. Women living in Sweden had easy access to contraceptive methods and did not value breastfeeding for contraceptive assistance.

Koturk pointed out that cultural differences exist between Turkish and Western industrialized societies. The latter tend to be more child oriented, while many developing countries have a more adult centered orientation. In adult oriented cultures, children are valued for their potential economic benefits and future input into the family. It was hypothesized that infant centered reasons to breastfeed were probably good motivators for women living in economically advantaged environments, but women who live in less advantaged countries may be more motivated to breastfeed if adult centered messages were also provided.

Winikoff and Laukaren (1989) investigated infant feeding practices in four urban areas of the third

world; Bangkok, Thailand; Bogota, Columbia; Nairobi, Kenya; and Semarang, Indonesia. Evidence from this study refutes the notion that breastfeeding is being abandoned in the third world, as even in the most modern of these urban areas, 90% or more of woman initiate breastfeeding. However, widespread supplementation with infant formula was the rule in all four cities. The most common reason given for supplements in all cities was the perception by the women that their milk supply was inadequate. Bottlefeeding, once started, appeared to interfere with breast feeding and interfered more in some cultures than in others, especially in the most industrialized cultures. Most of the women reported they did not wish to wean when supplements were begun. Most of the bottlefed babies did not have working mothers.

Winikoff and Laukaren (1989) thus concluded that medical professionals have acted as a broker between the manufacturers of infant feeding products and mothers in these countries, encouraging the shift away from traditional feeding patterns. Mothers in these countries reported they want to breastfeed, but inability of medical professionals to provide assistance coupled with subtle pervasive incentives in health care institutions are tending to push mothers toward bottlefeeding, according to the authors.

Diversity in American Culture and Subcultures

It has been repeatedly shown that in the United States, the woman most likely to breastfeed is socioeconomically advantaged, is educated beyond the high school level, has family who support breastfeeding, has friends who breastfed, and does not belong to a racial or ethnic minority (American Academy of Pediatrics, 1982; Grossman, Fritzsimmons, Larson-Alexander, Sachs, & Harter, 1990; Kaufman & Hall, 1989). It is interesting to compare ethnic and minority subcultures of United States to the United States middle class norm and observe the influence of culture on the breastfeeding behaviors of these groups.

Social support and social influence affecting the breastfeeding decision have been found to vary among ethnic groups in the United States. A 1981 survey conducted at a large Texas medical center (Baranowski, Bee, Rassin, Richardson, Brown, Guther, & Nather, 1983) found that for Anglo American mothers, the male partner is significantly the single most important source of support in promoting breastfeeding. The mothers of the new Anglo American mothers were identified as having a negative influence on breastfeeding, perhaps reflecting the fact that most middle class grandmothers of today bottlefed their infants. Among black Americans, the

support of a best friend was the only support variable found to significantly influence breastfeeding. Mexican American women identified their mother as the primary source of social support for breastfeeding, but weaker multiple sources such as mother-in-law were also noted.

It is suggested by the authors of the above study that programs designed to reach Anglo American women should include the male partner and avoid the mother of the index mother. For Mexican Americans, all female adults in a family should be the target of influence for breastfeeding promotion programs, and such programs should encourage peer support groups for black Americans.

Black women in the United States tend to bottlefeed their infants. In 1984, 65% of white women and 33% of black women in the U.S. breastfed their infants (Martinez & Krieger, 1985). Baranowski et al. (1983) found that in Texas, only 9.2% of black American mothers expressed an intention to breastfeed as compared to 43.5% Mexican American and 22.6% Anglo American mothers.

A study of black women in the Washington D.C. area found that black mothers in the sample were younger, less educated, less likely to married, had lower family incomes than the general population, and breastfed less

(Kurinji, Shiono, & Rhoads, 1988). When compared to the percentage of white mothers who breastfed (84%), a smaller percentage of black mothers were shown to breastfeed (49%). The Cox proportional regression model was used to determine which sociodemographic and other variables influenced the prevalence of breastfeeding. Maternal education was strongly associated with breastfeeding for all women, and for black women the effect of ethnicity was moderate. The incidence of breastfeeding increased among black women who attended childbirth classes, were married, or were older.

Bryant (1982) studied the subcultures of Cubans and Puerto Ricans living in Florida to compare the impact of relatives and friends on their infant feeding behaviors of Hispanic women to Anglo women. The extended network of family and friends was found to be an important source of advice and assistance to the Hispanic women but was relatively insignificant to the Anglo women. None of the Anglo women interviewed considered their mother a primary source of advice on infant care. If they consulted anyone, they consulted trusted friends about infant care.

In stark contrast, Hispanic women depended significantly on advice from their mothers and maternal grandmothers. The majority reported they learned how

to care for and feed their infants from their mothers. Ethnic beliefs toward breastfeeding were recognized in the Hispanic women, such as the common belief that breast milk from an undernourished mother could poison the infant. The majority of both Hispanic and Anglo women in this study believed that in most cases breastfeeding was better for the infant. However, only 27 of the 76 women interviewed attempted to breastfeed. Reasons most frequently given for bottlefeeding by these low income women in Florida were: (a) public exposure of breasts is embarrassing and often unavoidable, (b) a mother's anxiety will spoil the milk and make the baby nervous, (c) the mother has to eat a special diet, (d) breast milk will harm the baby if the mother is unhealthy, (e) breasts leak between feedings, and (f) breastfeeding will ruin the mother's figure.

Young and Kaufman (1986) developed a relatively successful program to promote breastfeeding among Mexican American migrant farm workers at a North Carolina clinic. Culture specific methods were studied and used to implement the program. Female friends and relatives were reported to frequently accompany the pregnant women to prenatal clinics, but the women were noted to be uncomfortable discussing personal care issues (such as breastfeeding) in front of men. Observations such as this were used when designing the

breastfeeding promotion class that invited only women and encouraged the pregnant women to bring female relatives and friends.

Concerns expressed by these Mexican women about breastfeeding centered around feelings of embarrassment if the infant was breastfed in front of others and the desire to use oral contraceptives after the birth (which can interfere with breastfeeding). The program developers at the North Carolina clinic found that the success of their program was due to the fact that health personnel explored with the mothers their reasons for choosing not to breastfeed and incorporated these concerns to design a culturally sensitive program.

While programs such as the one just described have been successful promoting breastfeeding in some ethnic groups, it appears that the culture of the United States in general has a negative influence on ethnic groups who migrate to the United States from cultures where women have traditionally breastfed. Romero-Gwynn & Carias (1989) queried Hispanic women of Mexican origin living in Southern California before and after delivery of their infants in a California hospital. Prenatally, 67.7% of the women stated they intended to breastfeed, but only 19.7% of these women actually did breastfeed postpartum. Hispanic mothers

born in Mexico were found to value breastfeeding more than those born in the United States, reflecting a tendency to preserve the traditional infant feeding practices of many areas in Mexico. However, hospital practices and protocols were found to significantly disrupt the mothers' intention to breastfeed and produce a large number of unintended bottlefeeders.

Desantis (1986) also found the culture of the United States to negatively influence breastfeeding in a descriptive study of 30 Haitian immigrant women in Florida. All mothers interviewed were born in Haiti, had migrated to the United States since 1980, and had at least one child whose age fell between infancy and adolescence. The majority of the Haitian mothers believed that breastfeeding was best for infants and related that it was the traditional feeding method in Haiti. Most of the mothers reported having breastfed one or more children while in Haiti. However, of the 22 babies born to these women in United States, only one had been breastfed. Reasons cited for not breastfeeding in the United States included: need for employment, lack of support, influence of other people, and a wish to acculturate to the perceived norm of infant feeding in the United States.

The Haitian mothers were found to have been given confusing messages while in the hospital. Infants were

kept in the nursery for long periods of time and routinely bottlefed, even those infants whose mothers had intended to breastfeed. Free formula was provided for the mothers to use at home. Most of the mothers concluded that bottlefeeding was preferred by the health care professionals and by the culture of the United States.

The authors of the Haitian study concluded that while the decrease in breastfeeding of immigrants to the United States is alarming, health care professionals must be careful not to try and force women to breastfeed as "well intended efforts may run the risk of increasing acculturation stress and engendering resentment toward their children" (p. 83). Haitian mothers were found to endure a high level of stress, to lack traditional strong family support, and to have an immense need to maintain employment. Health care professionals must consider each individual situation in assisting in the infant feeding decision and "look beyond the biomedical reasons for advocating certain health care practices ...it may be that the social and psychological costs of implementing the desired biomedical health action are too great for immigrants to adopt" (Desantis, 1986, p. 86).

The Culture of Eastern Tennessee

Hamblen County, the area of Eastern Tennessee in which this study was conducted, is located in the foothills of the Appalachian mountain range and in the area known as the Tennessee Valley. Historically, the people of this area were predominately white farmers who had less education, less annual income, smaller homes, and were more isolated than the general population of the United States (Tennessee Valley Authority, 1940). The culture has emerged from a rural people, and the traditions and farming patterns of the people can be traced back to the English speaking mixture of Celts arising in England, Ireland, and Scotland. Two major social organizations have traditionally been and are currently of prime importance: the family or kinship system and the church. The traditional culture of the people has been described as valuing individualism, fundamentalist religious beliefs, and distrust of outsiders (Marshall, 1978).

Much change has occurred since 1940 with the coming of the Tennessee Valley Reservoir System. The available power and the proximity of the area to major interstate systems has brought in much industry and shifted the major source of income from farming to

factory labor. The industrialization has also produced an influx of people to the area to fill available jobs.

Many households in Hamblen County have a relatively low income, with 35% of households earning $14,999 or less. The largest group is composed of households with income between $15,000 and $24,000 personifying household, per year. Only about one fifth of the population of the county earns a total household income of over $35,000. The average family income is reported to be $26,000 (Morristown Chamber of Commerce, 1987).

The largest cultural group of people in the area are white families with children, living in a rural location and employed by industry (31.6%). Many live in homes built since 1960 or mobile homes. Earnings for this group are at the low middle income level. The next largest group is the small farmer (29.3%) made up of young and old white families. Income, education, and skill level is low in this group. Young families characterized by white families earning a lower middle income and both partners working comprise 20.% of the population (Morristown Chamber of Commerce, 1987).

The estimated county available labor shows more available female workers than male workers in the area. Indeed woman comprise a substantial segment of the labor force in the major 36 industries in the county.

Of the 608 high school graduates in the county in 1989, 61% were college bound. There are 117 Protestant churches in the County, 1 Catholic church, and no Jewish Temple (Tennessee Department of Economic and Community Development, 1990).

Summary of Literature Review

Differences in infant feeding patterns and attitudes have been shown to vary among cultures and subcultures. Women are significantly more influenced by the social environment in which they reside than by health care providers or educational programs (Hill, 1987). Cronenwett and Reinhardt (1987) reported that when women were asked what influenced their breastfeeding decision, consistently they replied that health care professionals were neither the major source of influence or information, nor the major source of support. Most women, by the time they become pregnant, already have a strong orientation as to how they will feed their infant based on personal experiences and relationships within their culture (Hally, Bond, Crawley, Gregson, Phillips, & Russell, 1984; Entwisle, Doering, & Reilly, 1982).

Breastfeeding is supported as the ideal infant feeding method (under normal circumstances) by all

major professional health organizations in the United States. It is, however, questionable if the culture of the United States really supports breastfeeding at this time (Morse, 1989). Hospital practices, health professionals, employers of women, and social attitudes toward breastfeeding have been shown in many cases to be detrimental to breastfeeding.

In all cultures analyzed, a difference existed in infant feeding behaviors between women of high and low socioeconomic status. Knowledge level alone does not account for this difference, as the literature review has shown that many women of low socioeconomic status have knowledge that breastfeeding is best for infants, yet still choose to bottlefeed. The need to secure employment does not appear to be a primary reason poor women do not breastfeed. It has been shown (Ryan & Martinez, 1989) that women who chose to breastfeed are more likely to return to work outside the home than full time homemakers.

Motivation to breastfeed may differ between women of low and high social class. Women of low socioeconomic status may experience more or different stress, be more influenced by cultural barriers against breastfeeding, or be more adult centered than infant centered in making the decision. Adult centered behavior of poorer women would be consistent with

Maslow's hierarchy of needs in that an individual must fulfill basic self needs before fulfilling needs of others (Maslow, 1962).

It appears that the culture of low income women in Eastern Tennessee must currently discourage breastfeeding. The low income of many of the families leading to the high employment rate of women may contribute to the low breastfeeding rate. The significance of family and church to the women of the area could lead to the prediction that these social factors influence child rearing practices more than educational influences or health care professionals. As health professionals begin a breastfeeding promotion campaign in Eastern Tennessee, it should be remembered that people are generally not likely to forfeit their own cultural values for temporary professional values unless they have motivation and desire to change (Leininger, 1970). If a health care provider wishes to initiate change in the health care practices of individuals, a through understanding of what needs to be changed is essential.

CHAPTER III

METHODOLOGY

This chapter describes the subjects who participated in this study and the procedure used for data collection. Operational definitions are provided and the instrument utilized is discussed in terms of it's reliability, validity, and how the data obtained were analyzed. Limitations of the study are included.

Subject Description

A convenience sample composed of pregnant low income women was recruited from waiting areas of the public health department and a private physician's office, both located in Hamblen County, Tennessee. In order for the questionnaire data to be valid for this study, the women must have responded on the questionnaire that they were using the medicaid payment plan or have a total household income of $20,000 or less, or both.

A total of eighty-five pregnant women accurately completed the questionnaire and met the low income criteria for this study. Seventy-five percent (N=58) of the subjects responded that their total income was

$20,000 or less, with 22.1% earning $10,000-$15,000, 28.6% earning $5000-$10,000, and 24.7% indicating an income of $5000 or less. Eighteen percent (N=14) stated their income was from $15,000 to $20,000. Only five of the subjects reported an income greater than $20,000 (they also reported accepting medicaid). Eight subjects did not choose to reveal their income but did check they were accepting medicaid.

The subjects ranged in age from sixteen to thirty-five. There were eleven adolescents who were sixteen and seventeen years old. The remainder of the subjects were eighteen years old or over with the mean for all subjects being twenty three.

About half the subjects (N=40) or 47.1% reported having other children, and the majority of these had only one other child. In fact, only three subjects reported having three or four other children with four children the greatest number reported. Of the forty subjects with other children, seventeen reported they had either attempted to breastfeed or had successfully breastfed a child previously.

The educational level of the subjects ranged from seven years of school to post high school education. Forty-two percent of the subjects had not completed high school, 38.8% were high school graduates, and 19% indicated they had some education beyond high school.

Five of the subjects indicated they were currently students.

Over half the woman (61.1%) reported that they had no occupation or stated they were homemakers. For the employed women, the most frequently held jobs were: factory workers, secretary/clerical workers, waitresses, and nursing assistants. Interestingly, the majority (78%) of the woman did not plan to return to work or seek employment before the expected baby was three months of age. Eighty-one percent of the women were in their second or third trimester of pregnancy.

Data Collection Procedure

All pregnant women entering the health care facilities during the time the study was being conducted were invited to participate in this infant feeding study, however, the questionnaires completed by women not meeting the low income criteria were discarded. The researcher went to each facility on the days when prenatal clinics were conducted and remained at the facility during the entire clinic period, recruiting volunteers. Each volunteer was invited personally by the researcher to participate in the study. Response to the study was excellent, and the researcher found this population of women to be very

receptive.

In the case of one illiterate woman, the researcher escorted the woman to a private place and read the cover sheet and then the questions to the participant. The researcher used a separate questionnaire from which to read the questions and indicated to the participant the meaning of the answers. This allowed the woman to mark her responses on her questionnaire with confidentiality.

Participants recruited were given a questionnaire to complete while waiting for their appointment. A cover sheet (see appendix B) explained the purpose of the study and stated that completion of the questionnaire constituted consent to use the data for the study. The researcher reinforced the information on the cover sheet verbally, especially to emphasize to the subjects that their health care at the facility would in no way be affected whether they chose to participate or preferred not to do so. All questionnaires were completed anonymously. The cover sheet and the researcher inviting participation asked that the subjects complete no more than one questionnaire, even if asked to participate again on a subsequent visit. Subjects were asked to drop the completed questionnaires in a conveniently located, locked, wooden box marked "Infant Feeding Survey."

Most subjects were able to complete the questionnaire within ten to fifteen minutes and while they were waiting to see the health care provider.

Instrument: Operational Definitions, Reliability, and Validity

The questionnaire used for this study was formulated by the author in order to measure the influence of four of the seven elements composing the social structure of low income women in Eastern Tennessee on their decision to breast or bottle feed (the kinship and social factors, the cultural values and beliefs, the economic factors, and the educational factors). The questionnaire required the participants to respond to fifty items (including demographic data) that were divided into two sections. The first section consisted of thirty-six questions that were answered by circling the best response on a Likert scale below the question. These questions dealt with how the social structure of the women was associated with their intent to breastfeed or bottlefeed and are referred to throughout this paper as <u>culture questions</u>.

The second section contained fourteen questions about demographic and background data including two questions that requested the subjects to write in an

opinion about breastfeeding.

Operational Definitions

Intent to Breastfeed: If a subject responded that her intent was to "breastfeed only" or "breastfeed with some formula," she was defined as having the intent to breastfeed.

Intent to Bottlefeed: If a subject responded that she intended to "bottlefeed only" or "bottlefeed with some breastmilk," she was defined as having intent to bottlefeed.

Similar Responses indicates responses to a culture question in which the percentages of agreement (or disagreement) between the two groups under study was similar within 20%.

Responses that Differ indicates responses to a culture question in which the percentage of agreement (or disagreement) was greater than 20%.

Extreme Variation defines a difference of 40% or greater between two reported percentages, each representative of one the two groups under study. The percentages indicate percent of agreement or disagreement to a certain response to a culture question.

Extreme Similarity defines a difference of 5% or less between two reported percentages, each representative of one of the two groups under study.

The percentages indicate percent of agreement (or disagreement) to a certain response to a culture question.

Reliability and Validity

The tool used in this study was derived from the concepts found in two other questionnaires: The Infant Feeding Questionnaire (Dusdieker, Booth, Seals, and Ekwo, 1985) and The Prenatal Infant Feeding Survey (Lazarov, 1986). The Infant Feeding Questionnaire was designed for a study conducted by Dusdieker, Booth, Seals, and Ekwo (1985). Their study was based on at least 15 previous studies all dealing with maternal attitudes and beliefs concerning breastfeeding. The Infant Feeding Questionnaire was designed by these researchers only after they had first conducted a descriptive study that verified what they believed were important issues affecting the decision of a women to breast or bottlefeed (Ekwo, Dusdieker, & Booth, 1983). In their 1985 study, the Infant Feeding Questionnaire was completed by 158 primigravida women and results were obtained by use of multiple regression analysis with subsequent development of a theoretical causal model describing the primary influences affecting the decision of a women to breast or bottlefeed her infant. The Infant Feeding Questionnaire and permission for use

was obtained from Dr. Dusdieker.

Also partially used in the formulation of the tool for this study was the Prenatal Infant Feeding Survey, published in the handbook distributed by the Tennessee Department of Health and Environment (Lazarov, 1986) for use by health professionals in the promotion of breastfeeding. The Prenatal Infant Feeding Survey is based on the work of Bryant, Bailey, Coreil, D'Angelo, and Lazarov (1989) and is the report of a study in which thirty-five groups of low income women living in the southeastern region of the United States were recruited from public health programs to participate in group interviews about infant feeding. From these 35 groups, themes were identified that described major attractions and barriers to breastfeeding among low income women in the south. The work of these authors has been the primary focus used in planning the Best Start Program, described in the introduction of this paper.

In developing the tool for the current study, the author, utilizing major concepts from the two tools previously described, compiled a group of relevant questions that can be evaluated within the context of Leininger's theoretical model (1985). After an in depth review of literature, the author concluded that the major social influences affecting the decision of

most women to breast or bottlefeed are related primarily to four of Leininger's seven components of social structure. These four components were therefore utilized in organizing and arranging data for this study. The components and number of questions from the tool that pertain to each are as follows: (a) kinship and social factors; ten questions, (b) economic factors; seven questions, (c) educational factors; five questions, and (c) cultural values and beliefs; thirteen questions.

For example, one of the seven components of social structure in Leininger's sunrise model is Kinship and Social Factors. The culture question below would measure this feature in part:

My husband / boyfriend would like for me to breastfeed my baby.

Disagree very much	Disagree somewhat	not sure	agree somewhat	agree very much

To test the validity of the questionnaire, a panel of experts were asked to review the instrument and provide feedback on content and construct validity. In addition, a pilot test was conducted in which the researcher remained in the area while ten subjects completed the questionnaire. Subjects were observed as to the ease in which they completed the questionnaire, the time it took them, and they were asked for feedback

upon completion as to it's clarity and how they felt about the questions in general. All ten responded that the tool was easy to understand and that they had no problems with or objections to answering any of the questions.

Reliability of the tool was tested by use of the Cronbach's Alpha to test internal consistency. The Cronbach coefficient alpha was .849 indicating good internal consistency. When each subscale was tested for internal consistency, the results of each were as follows: (a) kinship and social factors, Cronbach alpha = .682975, (b) cultural values and beliefs, Cronbach alpha = .597590, (c) educational factors, Cronbach alpha =.476522, (d) economic factors, Cronbach alpha = .692031. The instrument as a whole shows excellent internal consistency, however when divided into subscales, internal constancy is not as reliable. This may be due to the fact that a smaller number of questions is being tested in each subscale and the fewer questions, the more difficult to establish internal consistency. The subscale, educational factors, which has the smallest number of questions (five questions), also has the least reliable Cronbach alpha.

Analysis of Data

The first 36 questions (culture questions) are scored on a Likert scale as being positively or negatively related to breastfeeding. The most negative response is worth one point and a point is gained for each response as they increase positively toward breastfeeding. The most positive response is worth five points, so a total of 180 points is possible. Data were analyzed by first compiling a total score, and then four subscores for each set of questions pertaining to the four components of social structure being analyzed.

In part one of the questionnaire, subjects were asked the primary question of whether they intended to breast or bottle feed. Those with intent to bottlefeed were then compared to those with intent to breastfeed in relation to the total score and subscores derived from the culture questions. Descriptive statistics were used to analyze the data obtained from each component of the social structure.

Part two of the questionnaire, containing open ended responses and demographic data, was reported using descriptive statistics. Each response was also observed in relation to the scores obtained in section one. Responses to the question, "What is the main

reason you would choose to breast/ bottle feed ?," were analyzed by categorizing the responses into themes and reporting the themes as well as the number of individuals who responded with each theme. In addition, any other comments made (question 50) were categorized and reported.

Limitations

Findings of this study must be interpreted with cognizance of its nonexperimental design. Also, clients inside a health care facility may answer questions with some bias toward their perception of what health personnel believe is correct. There was a possibility that an individual could fill out more than one questionnaire, but this was partially controlled for by asking the subjects to fill out only one questionnaire, by the researcher being careful not to give out more than one questionnaire to each person in the facility on a given day, and by limiting the time of total data collection to no more than one month at each facility used. The sample was a convenience sample, not random. Finally, the instrument in the form utilized is new and reliability of the instrument would be strengthened by it's repeated use in order to verify the results obtained in this study.

Summary

Eighty-five pregnant low income women participated in this study that measured the influence of the women's social structure on their intent to breast or bottle feed. The income level chosen to define low income appeared to be appropriate for the population studied as the majority of the women who were found to have a total household income of $20,000 or less were also accepting funds from medicaid. Only five women with an income greater than $20,000 responded that they accepted medicaid. The instrument was shown in the pilot study and then in further data collection to be readily understandable to the women. Results of this study show the instrument to be reliable in that it was shown to exhibit good internal consistency when tested with the Cronbach coefficient alpha.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

The results obtained in this study are presented and discussed in this chapter. The intent of the women to either breast or bottle feed is first discussed and then these two groups of women (breastfeeding group and bottlefeeding group) are compared in relation to their responses to all culture questions and to the demographic and background data.

Intent to Breastfeed

Of the eighty-five pregnant women studied, fifty-two or 61.2% responded that their planned intent was to totally or primarily feed their newborns with formula. This group is referred to throughout this study as the bottlefeeding group (or bottlefeeders). Thirty-two percent (27 women) stated that they planned to primarily or totally breastfeed their newborns and are referred to as the breastfeeding group (or breastfeeders). Only six (7%) of the women responded that they were undecided. Of these six undecided women, two were in their first trimester, one was in her second trimester, and three were in their third

trimester.

Total Scores of Culture Questions

Because the culture questions were formulated so that the higher the score, the more positive the response toward breastfeeding, it seems logical to expect higher scores in the breastfeeding group if the culture questions do indeed assess relevant aspects of the culture related to the decision to breastfeed. The highest possible score is 180, and the scores for the entire study group ranged from 80 to 162 (range=82) with a standard deviation of 17.5 (see table I indicating the mean scores of the culture questions). In observing the frequency distribution for all the scores, kurtosis and skewness were negligible (- 0.3 and 0.339 respectively). The mean, median, and mode were 116, 114, and 108 respectively indicating a slight positive skew of the distribution.

The breastfeeding group did tend to score higher than the bottlefeeding group on the culture questions with a mean score for breastfeeders of 133 and the range from 105 to 162 (range=57). The standard deviation for the scores of the breastfeeders was 13 (variance 169). The standard deviation for the scores of the bottlefeeders was 11.4 (variance 130). The

Table I. Mean Scores of Culture Questions Comparing the Total Study Group with Women Expressing Intent to Breastfeed and with those Expressing Intent to Bottlefeed

	Total Score Of All Culture Questions	Kinship and Social Factors	Cultural Values and Beliefs	Economic Factors	Educational Factors
Number of Questions in group	36	10	13	7	5
Total score possible	180	50	65	35	25
Entire study Group N=85	Mean= 116 Range=82 (80-162) SD=17.5	Mean= 28 Range=31 (14-45) SD=6.4	Mean= 47 Range=30 (33-63) SD=6	Mean= 23 Range=21 (13-34) SD=4.9	Mean= 15 Range=18 (6-24) SD=4
Bottle Group N=52	Mean= 106 Range=48 (80-128) SD=11.4	Mean= 26 Range=26 (14-40) SD=5	Mean= 45 Range=22 (33-55) SD=5	Mean= 20 Range=13 (13-26) SD=3	Mean= 14 Range=18 (6-24) SD=3.75
Breast Group N=27	Mean= 133 Range=57 (105-162) SD=13	Mean= 32 Range=29 (16-45) SD=7	Mean= 52 Range=18 (45-63) SD=5	Mean= 27 Range=15 (17-32) SD=4	Mean= 17 Range=13 (11-24) SD=3

SD=Standard Deviation

bottlefeeding group had a mean total score of 106 with scores ranging from 80 to 128 (range=48). An analysis of variance was performed to test the significance of difference between the scores of the breastfeeders compared to the bottlefeeders (see table II for analysis of variance results). The test utilized compensated for the difference in the sizes of the two groups. The scores for the two groups were found to be significantly different with a p value of .0001. At first glance, the means between the bottlefeeders and breastfeeders do not appear that different. The high significance levels achieved for the analysis of variance can be explained by the fact that there is very little overlap between scores of the bottlefeeders and breastfeeders. When ranges appear close it is because of a few outliers who were atypical of their group as a whole. Because the sample contained 52 bottlefeeders as compared to 27 breastfeeders, and the bottlefeeders tended to have lower scores than the breastfeeders, the slight skew noted for the distribution is due to greater frequency of scores at the lower end of the distribution.

Subscores were then calculated for each of the four components of social structure being measured. When the questions were divided into the four components of social structure being examined (kinship

Table II. Analysis of Variance Procedure comparing Responses of the Bottlefeeding group and Breastfeeding group for all Culture Questions and the four subscales of Culture Questions.

	Df	Type III Sum of Squares	Mean Square	F Value	P Value
All Culture Questions	1	12296.68	12296.68	85.72	.0001
Kinship and Social factors	1	715.7497	715.7497	21.20	.0001
Cultural Values and Beliefs	1	817.6235	817.6235	29.82	.0001
Educational Factors	1	153.8566	153.8566	12.18	.0008
Economic Factors	1	864.9971	864.9971	73.46	.0001

and social factors, cultural values and beliefs, educational factors, and economic factors), the breastfeeding group still maintained consistently higher mean scores for each division, although some group means differed more than others between the two groups (see table I for group means of each subscale). The analysis of variance procedure also showed significant difference between the two groups for each subscale when each subscale was analyzed independently of the others (see table II for analysis of variance for each subscale).

In comparing the two groups' (breastfeeding and bottlefeeding) responses to individual questions, it was found that the responses were very similar to some questions while responses to other questions showed an extreme variation. The differences found between the two groups provides insight into the subtle differences that exist between those who intend to bottlefeed or to breastfeed. Each component of social structure was then analyzed to discover similarities and differences between the two groups.

Analysis of Kinship and Social Factors

Ten questions comprise this category so that the highest score possible for this section is fifty. The

bottlefeeding group scores ranged from 14-40 (range=26) with the mean score being 26 (see table I).

The breastfeeding group showed a slightly higher mean of 32 with a range from 16-45 (range=29). The two groups had very similar responses to four of these ten questions (see table III; SIMILAR RESPONSES, for percentages). Both groups tended to agree that it would bother most people to see a women breastfeed in public, with bottlefeeders showing stronger agreement with the statement than the breastfeeders. However, both groups also tended to believe that most people think breastfeeding is better for babies than bottlefeeding. The majority of both groups believe their friends would choose to feed their infants with formula. Neither group seemed very worried that breastfeeding would interfere with their sex life as the great majority of both groups responded that they felt it would not interfere or they were not sure.

The primary responses that demonstrated a great deal of variation between the two groups concerned issues of perceived embarrassment if breastfeeding around strangers and whether or not the husband/boyfriend would like for the subject to breastfeed. The breastfeeders were much more likely (74% verses 31%) to believe that they would be minimally embarrassed or not embarrassed if they

Table III. Kinship and Social factors: Differences and Similarities in Responses Among Breastfeeding and Bottlefeeding Groups.

Culture Question #	Bottle Group N=52	Breast Group N=27
SIMILAR RESPONSES		
It bothers most people to see a woman breastfeed in a public place.	73% agree	56% agree
Breastfeeding would Interfere with my sex life.	56% disagree 31% unsure	69% disagree 19% unsure
* Most people think it is better to breastfeed.	71% agree	70% agree
Most of my friends would probably feed with:	81% formula	70% formula
RESPONSES THAT DIFFER		
* My husband/boyfriend would like me to breastfed.	27% agree 23% unsure	74% agree 22% unsure
My mother would suggest I feed my infant with:	46% formula 15% unsure	18% formula 22% unsure
As an infant I was fed:	83% formula	56% formula
* I would be embarrassed to breastfed around strangers.	31% disagree 19% unsure	74% disagree 0% unsure
A few or none of my friends/relatives breastfed.	77% agree 17% unsure	48% agree 26% unsure
* Most men would like for their wives to breastfeed.	23% agree 57% unsure	63% agree 22% unsure

* Indicates extreme difference or similarity; 40% or greater difference or within 5% similarity.

breastfed in front of strangers whereas 50% of the bottlefeeders perceived they would be moderately to very embarrassed. Embarrassment has been cited throughout the literature as a barrier to breastfeeding for some women (Bryant et al., 1989; Simopoulos, A. & Grave, G., 1984) and does appear to play a role in the attitudes toward breastfeeding of the women in Eastern Tennessee. The reasons that some women perceive severe embarrassment from the thought of breastfeeding while others from the same culture do not can only be speculated upon at this point. Perhaps the breastfeeders have viewed more women breastfeeding, have knowledge that the behavior can be performed discreetly, have fewer inhibitions about breastfeeding, less concern about the opinions of others, or more confidence that the behavior is or should be a social norm.

The breastfeeders tended to believe that their husband or boyfriend would like for them to breastfeed (74%) or they were unsure (22%). In contrast, 50% of the bottlefeeders believed that their husband or boyfriend would <u>not</u> like them to breastfeed (23% were unsure). Some studies have found the support of the male partner to be a significant variable in prediction of breastfeeding behavior (Baranowski et al., 1983; Grossmen et al., 1990; Kaufman & Hall, 1989) while

other studies have questioned the importance the male partner plays in the breastfeeding decision (Dusdieker et al., 1985). It seems that for women in Eastern Tennessee the support of the male partner may improve the chance that breastfeeding behavior will occur.

The bottlefeeders were more likely (than the breastfeeders) to have mothers who would suggest formula feeding (46%) while the breastfeeders were more likely to have mothers who would recommend breastfeeding (59%). Interestingly, 38% of the bottlefeeders believed their mothers would also suggest breastfeeding (even though most of these mothers apparently did not breastfeed themselves). The majority of bottlefeeders and over half the breastfeeders were bottlefed as infants. If the subjects were themselves bottefed, it could logically cause one to predict that the subjects' mothers would be more likely to suggest bottlefeeding. However, this does not appear to hold as a strong prediction. Similarly, it has been found that the method by which an individual was herself fed is a strong predictor of how she will feed her own infant (Entisle, Doering, & Reilly, 1982). This statement would seem to be true for the bottlefeeders since the majority were bottlefed, however it would not predict the breastfeeders, 56% of whom were bottlefed.

Analysis of Cultural Values and Beliefs

The cultural values and beliefs component represented the largest subgroup of culture questions. Thirteen questions composed this group so that the highest score possible was 65. For this component, the bottlefeeding group had a range of scores from 33 to 55 (range=22) while the breastfeeding group demonstrated slightly higher scores from 45 to 63 (range=18). Mean scores for bottlefeeders and breastfeeders were 45 and 52 respectively (see table I for mean scores).

Similarities in the cultural values and beliefs were noted in five of the responses, with three of the five having almost identical responses (see table IV for cultural values and beliefs items). Both groups agreed strongly (over 88%) that most doctors and nurses believe that breastfeeding is best for babies, and 80% of the bottlefeeders and 100% of the breastfeeders agree that breast milk is the better food for infants.

The culture question which states, "Only women who are very poor would breastfeed" received strong disagreement from both groups (over 91% of total disagree). One individual even wrote in the remark "what does money have to do with it?" under her response.

Similar responses from both groups were also

Table IV. Cultural Values and Beliefs: Differences and Similarities in responses Among Breastfeeding and Bottlefeeding Groups.

Culture Question #	Bottle Group N=52	Breast Group N=27
SIMILAR RESPONSES		
Breastmilk is better for the baby than formula.	80.% agree	100% agree
* Breastfeeding would keep me from eating/drinking what I enjoy.	40% agree 23% unsure	41% agree 14% unsure
* I believe it is wrong to breastfeed in public if strangers may see part of the breast.	52% disagree	56% disagree
* Only poor women breastfeed.	92% disagree	89% disagree
* Most doctors and nurses think breastmilk is best for infants.	88% agree	93% agree
RESPONSES THAT DIFFER		
* Bottlefeeding is easier than breastfeeding.	21% disagree	74% disagree
* Most woman can make enough milk to breastfeed.	42% agree 44% unsure	85% agree 11% unsure
Breastfeeding can cause the breasts to lose shape (49.37% of total unsure).	23% disagree 58% unsure	52% disagree 33% unsure
Women with small breasts can still breastfeed (51% of total unsure.	35% agree 60% unsure	67% agree 33% unsure
My body could make enough milk to breastfeed.	67% agree 31% unsure	96% agree 4% unsure
It would bother me if I could not see how much milk the baby took.	50% agree 13% unsure	19% agree 22% unsure
Mothers who breastfeed are closer to their infants.	42% agree	70% agree
Most women who breastfeed have plenty of money.	66% disagree 26% unsure	44 disagree 41% unsure

* Indicates extreme difference or similarity; 40% or greater difference or within 5% similarity.

evident for questions concerning breastfeeding in public and breastfeeding interfering with eating/drinking what is enjoyed. About half of all the subjects believed it is not wrong to breastfeed in public (even if a part of the breast is visible). It seems that many of the women of Eastern Tennessee, whether or not they want to breastfeed, believe it is appropriate to breastfeed in public. The belief that a woman should be able to breastfeed in public appears to be strong for both bottlefeeders and breastfeeders. An almost equal percentage of both bottlefeeders and breastfeeders (approximately 40%) were concerned that breastfeeding would cause them difficulty in eating /drinking what they enjoy. Since very little difference was noted between the two groups on this item, it may not be a significant barrier to breastfeeding.

A great deal of variation was found between the responses of the groups on the issues of which method of feeding is easier and the whether most women can produce enough milk to feed a baby. As might be expected, the breastfeeders tended to think breastfeeding is easier (74.4%) and the bottlefeeders believed bottlefeeding is easier (only 21% disagree that bottlefeeding is easier, see table IV).

Ninety six percent of the breastfeeders expressed

confidence that their body could produce enough milk to breastfeed compared to 67% of the bottlefeeders. Eighty five percent of the breastfeeders believed that most women can produce enough milk to breastfeed in contrast to only 42% of the bottlefeeders sharing this belief. It is interesting that less than half of the bottlefeeders agreed that most women can produce enough milk to breastfeed. This finding may indicate that the folk systems of these Tennessee women or perhaps even health professionals in the area have produced a lack of knowledge or confidence in the ability of women to breastfeed. Bryant et al. (1985) cited lack of confidence in ability to breastfeed as a barrier to breastfeeding among low income women, and the findings of this study seem to concur.

The bottlefeeding group demonstrated a lot of uncertainty about whether or not small breasted women can breastfeed (60% unsure) and whether breastfeeding causes the breasts to lose their shape (58% unsure). The breastfeeding group demonstrated less uncertainty as 67% agreed women with the statement that women with small breasts could breastfeed, and 52% disagreed that breastfeeding caused the breasts to lose shape. Since both these items show a great deal of uncertainty among bottlefeeders but no strong conviction, it is possible that neither are very significant in determining the

feeding method chosen. The breastfeeding group demonstrated a greater tendency to believe that breastfeeding mothers are closer to their babies and to be less concerned about being able to measure how much milk the baby drank, when compared with the bottlefeeding group (see table IV).

Analysis of Economic Data

Seven items comprised this component allowing for a total possible score of 35. The bottlefeeding group had scores ranging from 13-26 (range=13) with a mean of 20. Scores for the breastfeeding group were higher than the bottlefeeders' scores with the range of scores from 17-32 (range=15) and a mean score of 27 (see table I).

An extremely similar response was noted between the two groups for the culture question which states, "Breastfeeding could save me money," as both groups strongly agreed that breastfeeding could save them money (see table V for list of items composing economic factors). Both groups also tended to be unsure about whether employers would allow them time to pump their breasts (perhaps a reflection of the fact that the majority are unemployed). Fifty-nine percent of the breast group knew that breastfeeders could receive

Table V. Economic Factors: Differences and Similarities in Responses Among Breastfeeding and Bottlefeeding Groups.

Culture Question #	Bottle Group N=52	Breast Group N=27
SIMILAR RESPONSES		
* Breastfeeding could save me money.	90% agree	85% agree
Breastfeeding mothers and bottlefeeding mothers receive equal help from WIC (43.04% of total unsure).	40% agree 46% unsure	59% agree 37% unsure
* Most employers would allow time to pump breasts (54.4% of total unsure).	54% unsure 27% agree	56% unsure 33% agree
RESPONSES THAT DIFFER		
A new mother can work and breastfeed.	48% agree	78% agree
* If I return to work soon after baby is born I will bottlefeed my baby.	98% agree	22% agree
* If I could save $60 a month by breastfeeding I would breastfeed.	16% agree 35% unsure	85% agree 11% unsure
Breastfeeding is too difficult for women who work.	38% disagree	74% disagree

* Indicates extreme difference or similarity; 40% or greater difference or within 5% similarity.

equal benefits from the WIC program, but only 40% of the bottlefeeders were aware of this fact. Many individuals in both groups, however, answered "unsure" to the WIC question.

As mentioned, a large degree of difference is found between responses of the two groups to economic factors. The major issues that varied were factors relating work and breastfeeding, and the question dealing with saving money as a motivation to breastfeed. Ninety-eight percent of the bottlefeeders stated that they would bottlefeed if they returned to work soon after delivery, whereas only 22% of the breastfeeders would bottlefeed in this situation. How much influence returning to work has on the decision to bottlefeed is not apparent from this question for the bottlefeeders, as many may choose to bottlefeed regardless. For those who stated they intend to breastfeed, most (all except 22%) would stick to that decision in spite of returning to work.

Saving $60 a month by breastfeeding does not appear to be a motivating factor to the bottlefeeding group as only 16% would breastfeed if they believed this were true. In contrast, 85% of the breastfeeders would breastfeed if they could save $60 a month. Whether or not saving the money is a motivating force for these women to breastfeed is difficult to determine

in a group of women who have already decided to breastfeeding.

In the two questions concerning the feasibility of women returning to work and breastfeeding (see table V, RESPONSES THAT DIFFER) the breastfeeding group tended to respond in favor of working and breastfeeding (78% and 74% agree women can work and breastfeed as measured by the two questions concerning working and breastfeeding) whereas the bottlefeeding group showed much less support for working and breastfeeding (49% and 38% agree women can work and breastfeed as measured by the two questions concerning working and breastfeeding).

Analysis of Educational Factors

Of the four components of social structure utilized in this study, educational factors appears to demonstrate the highest degree of similarity between the two groups. There were five questions asked in this section with a total possible score of 25. The range of both scores were very close, 6-24 (range=18) for the bottlefeeders and 11-24 (range=13) for breastfeeders. The mean scores are 14 and 17 respectively (see table. I).

When asked if they remembered being taught about

breastfeeding in school, both groups (58% bottlefeeders and 52% breastfeeders) responded that they did not remember being taught. Likewise, both groups seemed to have read some about breastfeeding, and both groups expressed the need to learn more if they choose to breastfeed (see table VI describing the educational factors).

Eighty-one percent of the breastfeeding group reported that a health professional had talked with them some to a lot about breastfeeding; fewer of the bottlefeeders agreed (55%) with that statement. Interestingly, only 9% of the total study (seven women) responded that a health professional had not spoken to them at all about breastfeeding. The fact that 63.49% of the entire sample had talked with a health professional some to a lot about breastfeeding and 22% had talked a little would indicate that health professionals in Hamblen County are making an effort to communicate with prenatal patients about breastfeeding.

In general, there appears to be a great deal of similarity in the educational opportunities the women have experienced concerning breastfeeding. The only extreme difference noted between the two groups in the educational category is the desire of the groups to learn more about breastfeeding. While 100% of the women intending to breastfeed expressed a desire to

Table VI. Educational Factors: Differences and Similarities in Responses Among Breastfeeding and Bottlefeeding Groups.

Culture Question #	Bottle Group N=52	Breast Group N=27
SIMILAR RESPONSES		
I remember being taught about breastfeeding in school.	58% disagree 13% unsure	52% disagree 22% unsure
Have read books or pamphlets about breastfeeding.	60% agree	74% agree
If I chose to breastfeed I would need to learn more about it first.	74% agree	59% agree
RESPONSES THAT DIFFER		
* I would like to learn more about breastfeeding.	45% agree	100% agree
My doctor, nurse, or WIC nutritionist has talked with me some to a great deal about breastfeeding.	55% agree 27% talked a little	81% agree 11% talked a little

* Indicates extreme difference or similarity; 40% or greater difference or within 5% similarity.

learn more, only 45% of the bottlefeeders shared this desire, producing the majority of the variation between the two groups seen within this component.

Analysis of Demographic Data and Written Comments

Question #37 of the tool asked the subject to write in the main reason she would choose either breast or bottlefeeding. Of the eighty-five subjects, sixty-eight wrote in a main reason. Thirty-nine of the bottlefeeders wrote in a main reason and as table VII illustrates, these reasons are rather varied. The reason provided most frequently (by 9 individuals) for the bottlefeeders was that bottlefeeding is easier and more convenient. The next most frequent reason offered was that breastfeeding would interfere with work or schedule (7 individuals). Six individuals responded that they would simply "feel more comfortable" bottlefeeding, while three individuals remarked that breastfeeding was either out of style or that no one breastfeeds anymore. Three individuals wrote in that they were going to bottlefeed for reasons of poor health or a previous breastfeeding failure, but they expressed belief that breastfeeding is better for the baby.

Twenty-six breastfeeders offered a main reason

for their choice and by far the most common reason (16 individuals) was that breastfeeding is better for the baby. Closeness to baby and convenience were also cited as main reasons (see table VII).

The subjects were also asked who they would depend on the most for advice about caring for the baby. The largest percentage of the total group (36%) stated they would depend most on their doctor while (35%) of the total would depend most on their mother. Husband or boyfriend was the next most frequently cited category with 13% of the total checking this response.

It is interesting that of the 35% who would depend on their mother primarily for advice, 30% stated an intent to bottlefeed. Fifty percent of those intending to breastfeed expected to depend primarily on their doctors; 29% of the bottlefeeders expected that as well. The response nurse was checked only once, although 47% of the subjects already had children and this researcher expected that these subjects would have encountered helpful nurses at some point during their child care experiences.

The two groups were fairly equal in regard to age and income levels. The breastfeeders tended to have slightly more years of education than the bottlefeeders. Fifty-one percent of the bottlefeeders were high school graduates as compared to 74% of the

Table VII. Main Reasons Subjects Choose to Breastfeed or Bottlefeed.

Reason	Percentage Bottlefeeders	Frequency Bottlefeeders
BOTTLEFEEDERS		
1. Bottlefeeding is easier/more convenient	23%	N=9
2. Breastfeeding would interfere with work/schedule.	18%	N=7
3. Bottlefeeding would feel more comfortable to me.	15.4%	N=6
4. Just want to Bottlefeed (no specific reason cited)	15.4%	N=6
5. Breastfeeding is out of style/ nobody breastfeeds.	7.7%	N=3
6. I am not in good enough health to breastfeed.	5.13%	N=2
7. If I could I would breastfeed because it is better for baby, but I must bottlefeed.	4.6%	N=3
8. Various other reasons.	7.6%	N=3
BREASTFEEDERS		
1. Breastfeeding is better for the baby.	61.5%	N=16
2. Breastfeeding brings mother and baby closer.	6.2%	N=4
3. Breastfeeding is more convenient.	6.2%	N=4
4. Various other reasons.	7.7%	N=2

breastfeeders. Thirty percent of the breastfeeders had attended college compared to 15% of the bottlefeeders.

The last question (#50) offered the subjects a chance to comment about breastfeeding if they wished. Twenty-two individuals chose to make a comment, and of these, nineteen were very positive toward breastfeeding, one was negative, and two were classified as neutral. Most of the positive responses were classified can be classified under the theme that breastfeeding is better/healthier for the baby. Other themes included closeness to baby, more natural, and personally fulfilling. One mother commented that she wished for more education about breastfeeding, and another wrote " I hope I have the courage to try it."

It is interesting that seven of the positive comments were written by bottlefeeders. The theme surrounding those comments was that breastfeeding is a good thing for those who can or are willing to do it. These comments included such remarks as "it is a fine thing if it is what you want to do" or " I value breastfeeding but feel it would be too difficult for me since I must return to work." The two comments classified as neutral both stated that breastfeeding is good for some people but not for others.

Summary

Of the eighty-five pregnant women who participated in this study, 61.2% stated that their planned intent is to bottlefeed and 32% stated that their planned intent was to breastfeed; 7% were undecided. When the results of the responses to the culture questions were compared for the two groups by use of analysis of variance of the mean scores for the culture questions, a significant difference was found to exist in the responses of the two groups ($p = .0001$). Analysis of each individual question reveals many similar responses among the two groups as well as a great deal of variation for some of the questions.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS FOR FUTURE RESEARCH AND ACTIVITIES

This chapter addresses the research questions and draws conclusions from the data obtained. Suggestions are offered that may promote breastfeeding in Eastern Tennessee. Ideas for future research are explained.

Conclusions

From the data obtained in this project, the research question, "In what ways does the social structure of women in Eastern Tennessee influence their stated intent to breast or bottlefeed?" can now be addressed. The individuals from the culture of Eastern Tennessee participating in this study exhibited many similar viewpoints toward infant feeding methods, as would be expected in any culture. Yet, as with all cultures, some variations among the individuals existed. A larger percentage of breastfeeders than bottlefeeders consistently responded to every culture question with higher scores (although responses to some culture questions were very similar between the groups). Responses to eight of the culture questions

showed an extreme variation between the two groups: (a) Support for breastfeeding from husband/boyfriend, (b)Embarrassment associated with breastfeeding among strangers, (c) Perception of men in general supporting breastfeeding for their wives, (d) The ability of most women to breastfeed, (e) The convenience of bottlefeeding verses breastfeeding, (f) Subject returning to work and breastfeeding, (g) Saving money as a motivation to breastfeed, and h) Desire to learn more about breastfeeding.

Two items included in the cultural values and beliefs component (these items listed in table IV) exhibited extreme variation (defined as a difference of 40% or greater between the two percentages compared) between the two groups, as did two items from the economic factors (listed in table V). The kinship and social factors component had three questions exhibiting extreme variation(as listed in table III). Educational factors (listed in table VI) appeared to show the least variation between the two groups with only one question showing extreme variation and the means of the two groups being the most similar.

The women who participated in this study tended to believe that breastfeeding is better for infants, that the general public agrees, and that most health care providers also support breastfeeding. Eighty percent

of the bottlefeeding women agreed that breastfeeding is better for a newborn, yet they did not intend to breastfeed. This finding supports the work of others (Cunningham, 1990; Hally et el., 1984; Hill, 1987; Lazarov, 1986) who also found that knowledge and belief in the superiority of breast milk for newborns does not necessarily translate into breastfeeding practice and that education alone does not typically improve breastfeeding rates significantly.

The majority of the women studied believe that breastfeeding could save them money. Saving money in itself did not appear to be a motivating force to those who had intent to bottlefeed, as only 16% of the bottlefeeders agreed they would breastfeed for this reason. Previous research has shown that the likelihood of a woman to breast or bottle feed is determined before she even becomes pregnant and is "assumed to be the consequence of a long history of socialization" (Entwisle et al, 1982, p. 259). Even the ability of health care providers to influence women who have strong convictions to bottlefeed (to try breastfeeding) has been found to be weak (Dusdieker et al., 1985). Therefore, it follows that the objections women have toward breastfeeding may not be readily overcome by the ability to save some money.

The culture of low income women in Eastern

Tennessee appears to be characterized by the majority of women choosing to bottlefeed. Most of the women report that their friends would be more likely to bottlefeed. The majority of the bottlefeeders report having few relatives or friends who breastfed and most were themselves bottlefed. Of the twenty-seven individuals who cited their mother as the primary person they would depend on for advice about baby care, twenty-three were intending to bottlefeed. While 38% of the bottlefeeders felt their mother would suggest they breastfeed, the fact that most were bottlefed indicates their mothers may have had little personal experience with breastfeeding.

Because new mothers depend on the experiences, support, and teachings of others (La Leche League, 1981) in their culture to help them successfully initiate any infant feeding method, the lack of close friends and relatives who are knowledgeable and supportive about breastfeeding may be a significant reason many women choose not to breastfeed. Support from spouse, mother, other family, friends, and the overall culture has been found by many researchers to be very important in influencing a mother's choice of infant feeding method and the length of time that method is used (Hally et el, 1985; Lazarov, 1986; Lucas et el, 1988; Ray & Estok, 1984). The low income women

of Eastern Tennessee, particularly the group intending to bottlefeed, appear to have few contacts with other women who have breastfed. This lack of personal experience with breastfeeding behavior may be a major reason many women choose not to breastfeed.

Consistent with the idea that the culture of low income women in Eastern Tennessee does not appear to offer much support for breastfeeding are the reasons given by some bottlefeeders for their choice. The comments that bottlefeeding would "just feel more comfortable" or breastfeeding is "out of style/no one breastfeeds" indicates that these women may feel uncomfortable going against what they perceive as the social norm (see table VII). A lack of exposure to or familiarity with breastfeeding behavior may cause breastfeeding to seem foreign and therefore uncomfortable to these individuals.

The entire study group was found to be homogeneous in terms of perceived opportunities available for education about breastfeeding. Over half the women did not recall being taught about breastfeeding in school. Since the majority of the women are not educated beyond high school, it seems that teaching about breastfeeding in the school system is needed if these women are to learn to about breastfeeding before they become pregnant. Most have talked, at least a little, with a

health care provider about breastfeeding. Slightly more breastfeeders have read books or pamphlets than bottlefeeders. However, the breastfeeders express a much greater desire for more knowledge of breastfeeding than do those intending to bottlefeed. Since the breastfeeders responded to questions about the ability of women to breastfeed (see RESPONSES THAT DIFFER; table IV) with less "unsure" responses than did those intending to bottlefeed, the breastfeeding group appears to have more knowledge about breastfeeding and may be more motivated to take better advantage of the learning opportunities.

It is encouraging to note that health care providers in Hamblen County are perceived by the women as supporting breastfeeding. This fact perhaps indicates that health care providers in the area are taking the time to talk with prenatal patients about breastfeeding and could possibly reflect the efforts of the Best Start program in influencing these professionals. However it appears that physicians, not nurses, are the professionals these women intend to turn to for advice about infant feeding.

The entire study group demonstrated strong disagreement to the question that stated "only poor women would choose to breastfeed" (92% of the bottlefeeders and 89% of the breastfeeders disagreed).

The notion that low income women may reject breastfeeding because they perceive it as an activity of poorer or low class individuals is refuted strongly by this study.

Major variations between the breastfeeding group and bottlefeeding group occur on the issues of embarrassment about breastfeeding in front of strangers and on perceived support of breastfeeding from the spouse/boyfriend. As might be predicted, the breastfeeders were more likely to believe their spouse would like them to breastfeed and perceived less embarrassment if breastfeeding in front of strangers. The fact that the majority of the women in the study believed that it would bother most people to see a women breastfeed in public provides a clue as to possible reasons for embarrassment. Social attitudes toward and sexual connotations of the breasts in the culture may play a major part in perceived breastfeeding embarrassment, and may also play a role in the lack of support the bottlefeeding women feel from their spouse/boyfriend. The large variation between the two groups concerning these issues may signify important differences between the individuals who feel comfortable with breastfeeding and those who do not. If breastfeeding is to become the norm, the task of breastfeeding promotors may be as great as

changing the attitudes of the culture toward breastfeeding.

The need for new mothers to return to work shortly after the birth of their baby does not appear to be a major deterrent to breastfeeding in the culture. While the bottlefeeders show a lot more distaste for mixing breastfeeding and work than do the breastfeeders, the majority of both groups do not plan to return to work shortly after the birth. Therefore, the need to return to work does not seem to play an important role in the decisions of these woman concerning feeding method.

A new mother's lack of confidence in her ability or the ability of other women to produce enough milk to breastfeed has been cited as deterrent to breastfeeding (Hally et el, 1984; Lazarov, 1986). The bottlefeeding group in this study also had less confidence and demonstrated more uncertainty in these areas than did the breastfeeders (see unsure responses, table IV.). Education about breastfeeding could help women gain a better understanding of the ability of all women to breastfeed. However, the acceptance of the teachings of health providers would be more likely if they are supported by experiences within the women's folk system. Knowing others who have successfully breastfed may increase the confidence of women in their own ability to do the same. It may also allow the women

the opportunity to make a more informed decision about which method is more convenient.

Previous studies have found that it is the more highly educated woman who is likely to breastfeed (Grossmen et al, 1990; Hally et el, 1984; Heilings, 1985). This study represents only low income women, the majority of whom have high school education or less. Still, there does appear to be an association between those with more education and intent to breastfeed. Of the bottlefeeders, 48% have not graduated high school, 36% have a high school education, and 15% have been educated beyond the high school level. These figures compare to 25%, 44% and 30% of the breastfeeding group respectively.

The percentage of low income women stating intent to breastfeed (32%) is only slightly less than the 36.3% found in 1990 to be breastfeeding at hospital discharge in the East South Central area of the nation (personal communication, Ross Laboratories, Columbus Ohio). It is also similar to the number of WIC participants reported to initiate breastfeeding in the Tennessee area; 37.3% (Lazarov et al, 1989). Since previous work has shown that prenatal intentions are excellent predictors of infant feeding practices (Entwisle, Doering, & Reilly, 1985; Hally et el, 1984) the breastfeeding intent expressed by the study

participants is likely to closely estimate those who will actually initiate breastfeeding. Since 7% of the women in this study were undecided as to how they intend to feed their infants, these individuals may also contribute to the number who will breastfeed at hospital discharge. Data from this investigation indicates that the breastfeeding rate among low income women in Tennessee does not appear to have changed significantly in the past several years.

Application of Leininger's Theory To Results of Study

The results of this study have provided nurses and other health care personal with information concerning how the culture of low income women in Eastern Tennessee influences their intent to breast or bottle feed. The theory of transcultural care diversity and university is utilized to explain and predict human care patterns of culture and nursing care practices:

> Folk, professional, and nursing care values, beliefs, and practices, as well as institutional norms can be explained by the theory. From these knowledge sources, three kinds of culturally-based nursing care actions are predicted to be congruent with

> and beneficial to clients. They are: 1) cultural care preservation... 2) cultural care accommodation...; and 3) culture care repatterning (Leininger, 1985, p.210)

According to Leininger, (1985) the role of the nurse is to interact with the Professional Health Subsystem (in this case the health department, the local physician's offices, and the hospitals in Eastern Tennessee) and with the Folk System (the nonprofessional local system that offers traditional home or folk care to the low income women of Eastern Tennessee) to provide care (see the Sunrise Model of Transcultural Care Diversity and Universality, appendix A). The type of care that appears to be required to promote breastfeeding in Eastern Tennessee is Cultural care repatterning which "refers to the reconstructed or altered designs to help clients change health or life patterns that are meaningful to them" (Leininger, 1985, p.210).

Nursing has been cited by Leininger to be a subculture within the society of the United States which espouses norms that are somewhat different than those of other health professional groups (such as medicine and social work). Nursing as a profession values breastfeeding, as breastmilk has been shown repeatedly to be superior to formula for the health of

infants.

Nurses, as they attempt to care for the women of Eastern Tennessee must be careful not to force their values on these women but to work with them over a period of time to bring about cultural care repatterning. In the past their has been a tendency for health personal to approach clients in an ethnocentric manner, that is to assume our health values were superior. Clients who did not wish to change their values were labeled as "difficult" or "uncooperative." Attempting to force others to accept the norms nursing values has not been too successful as it often leads to isolation of the client. Therefore, "efforts to effect changes in the health practices of people whose cultural backgrounds differ from ours should be accompanied by as through an understanding of the indigenous health beliefs as possible, and a carefully developed plan for working with the people to effect changes in their health practices" (Leininger, 1970, p.47).

The findings of this study increase understanding of the attitudes and beliefs of the women of Eastern Tennessee toward breastfeeding. Health personal should use these findings when planning nursing care and should expect more effective (but probably more time consuming) results. Suggestions of how the findings of

this study may be used to promote better nursing care and increase breastfeeding follow.

Implications for Future Research and Activities

This study is a descriptive study with the primary goal being to gain an understanding of the influence of social structure on the intent of low income women in Eastern Tennessee bottlefeed or breastfeed their infants. An assumption is made that the social structure of an individual is a strong determinant of the behavior of that individual. This study is the first investigation of this type of which the author is aware to specifically address women in Eastern Tennessee. A much greater understanding of the reasons women in this area tend to reject breastfeeding is needed. Similar research that incorporates a larger sample, utilizes a broader geographical region of East Tennessee, and uses random sampling might better represent the low income population studied and allow for more reliable inferences to be made about the defined population. Future studies that utilize the tool developed for this project may further establish the reliability and validity of the tool as well support or reject the conclusions reached in this study.

The fact that only one individual indicated that she would depend most on nurses for advice about infant care (while many will depend on the physician) is very disappointing to the researcher. Research to reveal why nurses in the area are not better utilized or highly regarded as resources to these women is strongly suggested.

The data from this research project indicate that in order for the breastfeeding rate among low income women in Eastern Tennessee to increase, breastfeeding must begin to be viewed by these women as a social norm. Educational opportunities to learn about breastfeeding should continue, but much more than education appears to be needed. What may be needed is a greater exposure of low income women and their culture to breastfeeding behavior. If women, their spouses, families, and friends viewed other women discretely breastfeeding in public, had opportunities to talk with breastfeeding women, and were frequently exposed to breastfeeding behavior, perhaps overtime they would come to see it as familiar, not embarrassing, convenient, and gain confidence in the ability of all women to breastfeed.

From the data gathered in this project, the author strongly supports the suggestions proposed by Croenwett and Reinhjardt (1987) and by the Tennessee

Breastfeeding Promotion Project (Lazarov, 1989). Their suggestions include techniques that attempt to familiarize the entire culture with breastfeeding behavior while incorporating breastfeeding into many systems that compose the social structure (Croenwett & Reinhjardt, 1987):

> To influence more people to try breastfeeding initially, professionals may have to use the media, elementary and secondary school systems, churches, governments, day-care centers, and other influential institutions. If workplaces had electric breastpumps and a private space for breastfeeding mothers, if pictures of early family life in children's textbooks included pictures of nursing mothers of all social classes and ethnic backgrounds, if the benefits of breastfeeding were taught in health classes along with the benefits of not smoking...perhaps the culture would change, and people would be socialized to think of breastfeeding when they think of infant feeding (p. 202).

Projects that attempt to follow some of the above suggestions are currently being tried in some areas by the Best Start Program. Longitudinal studies will be needed to test the effectiveness of such programs as they slowly attempt to change the cultural attitudes

toward breastfeeding. Programs such as the Best Start Program along with other attempts to familiarize the culture of low income women to breastfeeding behaviors deserve support and testing of future research projects.

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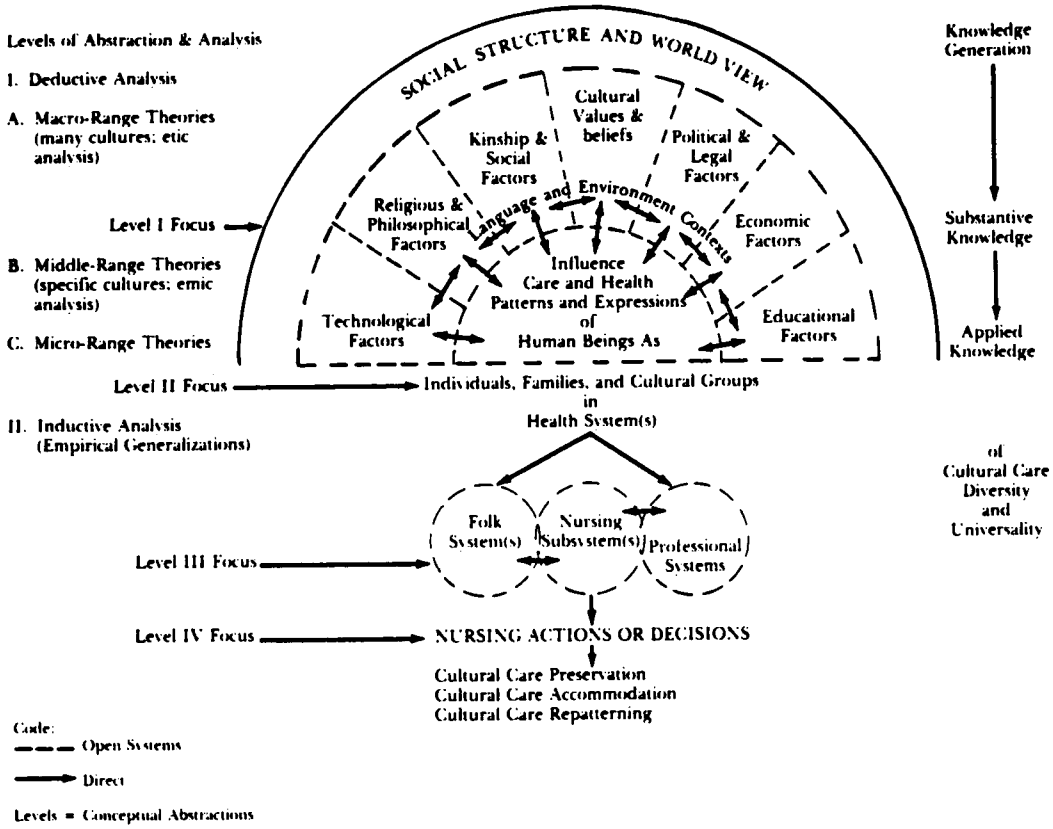
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APPENDIXES

APPENDIX A

Leininger Sunrise Conceptual Model

Leininger Sunrise Theoretical/Conceptual Model of Transcultural Care Diversity and Universality: A Theory of Nursing



Code:
Open Systems
Direct
Levels = Conceptual Abstractions

From "Transcultural Care, Diversity, and Universality: A Theory of Nursing" by M. Leininger, 1985, Nursing and Health Care, 6(4) p. 211.

APPENDIX B

Cover sheet for questionnaire.

Infant Feeding Study

If you are pregnant, you are invited to participate in this study. Mrs. Martie Anderson, R.N., a graduate student at the University of Tennessee, is conducting this study to learn about the reasons women chose to bottlefeed or breastfeed their babies. Understanding what women like you feel about feeding your new baby can help nurses plan better teaching programs for new mothers. Your health care will not be affected in any way, whether you fill out a questionnaire or chose not to. Since your name or any other information that could identify you is not asked in this study, there are no anticipated risks to you (like loss of privacy) if you choose to complete a questionnaire. Your thoughts and opinions are valuable to this project. Please take 10 to 15 minutes and complete the questionnaire.

When you have completed the questionnaire, please drop it in the wooden box in the lobby marked "Infant Feeding Study." If you complete and return the questionnaire, thank you for giving your consent to participate in this study.

Do not put your name or any other information on the questionnaire that would identify you. The information on the questionnaire will be used ONLY for the purposes of this study and will not be read by anyone other than the researcher and her teachers at the University of Tennessee.

PLEASE COMPLETE ONLY ONE QUESTIONNAIRE. Questions? Contact:

Martie Anderson ph. 586-1733

1008 Drinnon Dr.

Morristown, Tn. 37814

THANK YOU FOR SHARING

YOUR OPINIONS!

VITA

Martha Anderson graduated from the University of North Carolina in 1977 with a B.S. degree in Nursing. She has had over seven years experience working in women's health, particularly in obstetrics. A major interest for her during her career has been teaching and assisting mothers with breastfeeding. She has been a member and a leader of groups whose purpose is to support breastfeeding mothers in several of the locations she has lived.

This thesis was written in partial requirement for the Master of Science degree in Nursing. The author's focus while earning this degree has been the Family Nurse Practitioner concentration.