A PRENATAL BREASTFEEDING SCREENING TOOL FOR THE PRIMIGRAVIDA

By

Luanne Parks

A SCHOLARLY PROJECT

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF SCIENCE

College of Nursing

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ABSTRACT

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Promoters of infant health agree that breastfeeding is the best way to nourish an infant. Data suggest, however, that only slightly more than half of all pregnant women choose to breastfeed their infants. Literature suggests that the primigravida can be influenced by prenatal breastfeeding assessment and intervention. The purpose of this project was to design a breastfeeding screening tool for use with the primigravida to determine certain factors which may influence infant feeding after delivery. The screening tool is designed for administration during the initial prenatal comprehensive exam. Based on the Health Belief Model, the breastfeeding screening tool assesses for modifying factors, perceived benefits, and perceived barriers to breastfeeding. Assessment of the factors which influence breastfeeding could predict the likelihood of successful breastfeeding and provide the Advance Practice Nurse (APN) with information needed to develop an individual plan of care for the woman to promote and enhance the breastfeeding experience.

This project is lovingly dedicated to my husband, Jerry, who has supported and encouraged me to continue on.

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This author would also like to recognize the encouragement and support from family, friends, and colleagues during the development of this project, without which it would not have been possible.

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Introduction

The purpose of this scholarly project was to develop a screening tool that can be used in the primary care setting to determine a primigravida woman's modifying factors, perceived benefits, and perceived barriers to breastfeeding. Assessing these factors is necessary for health professionals in order to promote and support infant feeding decisions (Marchland & Morrow, 1994). Identifying the factors which influence breastfeeding is essential in the prediction of breastfeeding success and improvement of the breastfeeding experience. The information ascertained from this screening tool can be used to promote breastfeeding. The United States has a national goal of increasing the incidence and duration of breastfeeding (U.S. Dept. of Health and Human Services, 1990). Development of a screening tool to assess for modifying factors, perceived benefits, and perceived barriers to breastfeeding for primigravida women is needed for further realization of this goal. A breastfeeding screening tool utilizing concepts of the Health Belief Model (HBM) has been developed. The tool can be utilized during the first trimester of pregnancy to identify factors which influence breastfeeding.

Background of Problem

Promoters of infant health agree that breastfeeding is the best way to nourish an infant (Stashwick, 1994). In response to the increasing evidence that breast is best, Healthy People 2000 (1990), an initiative of the U.S. Department of Health and Human Services, included among its objectives increasing to at least 75% the proportion of mothers who breastfeed during the early postpartum period. The initiative also includes objectives to increase to at least 50% the proportion who continue to breastfeed until their babies are 5-6 months old. Since 1982, there has been a steady decline in initial and prolonged breastfeeding (Ryan, Fritz, Krieger & Lewandowski, 1991). Data suggest that only slightly more than half of all pregnant women choose to breastfeed their infants.

Many women initiate the breastfeeding experience, only to end it within 3 months (Stashwick, 1994).

To better understand this decline and envision ways to reverse it, factors influencing breastfeeding must be considered (Freed, 1993). Studies from several disciplines have demonstrated that sociopsychological factors such as attitudes, emotional states and culture have measurable effects on breastfeeding success (Kearney, 1987; Locklin & Naber, 1993). Other studies provide evidence that demographics such as age, education, socioeconomic status, and ethnicity influence breastfeeding (MacGowan, MacGowan, Sendula, Lane, Joesoef, & Cook, 1991) Successful efforts to promote breastfeeding depend on understanding the myriad of influences that affects women's infant feeding methods (Kieffer, Novotny, Welch, Mor, & Thiele, 1997). To date, these underlying reasons have been given only cursory attention (Rowley & Dixon, 1997).

The decision to breastfeed is often times made early in pregnancy or prior to conception. Screening of the factors which influence breastfeeding during that time may influence breastfeeding incidence and success (Lawrence, 1991; Newton, 1991). A personal assessment of a woman's perceptions of breastfeeding and those of people close and significant to her is required in the prenatal period to promote successful breastfeeding (Rowley & Dixon, 1997). The health professional in the primary care setting is in the ideal position to assess factors which influence breastfeeding because the care often precedes conception, extends through pregnancy and delivery, and continues postpartum (Williams, 1995). The Advance Practice Nurse (APN) in primary care can utilize his/her role as advocate, educator and practitioner to assess the influencing factors of the clients' infant feeding methods (Frantz, 1991).

Problem Statement

Primary care providers are one group of health care professionals responsible for incorporating the promotion of breastfeeding into prenatal care. The Surgeon General's report, Healthy People 2000 (1990), calls for improved support from health care

providers in overcoming the barriers to breastfeeding. Traditionally, many primary care providers have thought breastfeeding assessment and counseling not worthy of physician time and need only be performed by nurses at the time of delivery (Freed, 1993).

The American Academy of Pediatrics (AAP) and the American College of Obstetricians and Gynecologists (ACOG) have mutually developed The Guidelines for Perinatal Care (1997). These guidelines suggest that for the successful management of breastfeeding, it is important to begin preparation during pregnancy. The recommendation is that prenatal care should include discussion of feeding plans, with the decision to breastfeed reinforced. While ACOG supports breastfeeding, little attention is given in regards to the assessment of feeding method during pregnancy. Only one area on ACOG's standard prenatal form addresses feeding intentions. The APN in primary care has an obligation to further this assessment in order to promote the initiation and duration of successful breastfeeding (Moskosky, 1995).

Literature suggests that the primigravida woman can be most influenced by prenatal assessment and intervention (Sciacca, Phipps, Dube, & Ratliff, 1995). Modifying factors, such as sociopsychological and demographic data, perceived benefits, and perceived barriers of breastfeeding apply to all women of all gravida. The APN in primary care may be able to increase the rates of breastfeeding incidence and duration by assessing for these factors and providing specific interventions in the promotion of breastfeeding for the primigravida woman (Freed, Clark, Harris, & Lowdermilk, 1996).

Research has identified that health professionals, and nurses in particular, can increase rates of breastfeeding initiation and duration (Rajan, 1993). Yet despite the almost universal recognition of the benefits of breastfeeding, many primary care providers fall short in their assessment and support (Donnelly, 1994). Therefore, the development of a screening tool to assess modifying factors, perceived benefits, and perceived barriers of breastfeeding was conceptualized.

The purpose of this project was to develop a screening tool for the APN in the primary care setting to screen for modifying factors, perceived benefits, and perceived barriers to breastfeeding during the initial assessment of pregnancy to all primigravidas.

Conceptual Framework

Pregnancy is a period of significant life transition during which a woman must adjust to changes in self, prepare for her role of motherhood, and prepare for childbirth (Moskosky, 1995). Behaviors and beliefs are reflected upon during this time as well as the preconception period. Impressions are created and decisions are made which extend beyond the childbirth experience. Perceptions of breastfeeding are formed by the primigravida at varying times during this life transition. Solidification of these perceptions are complete for many women within the first trimester of pregnancy (Lawrence, 1991).

It is important to understand the modifying factors and perceptions which affect breastfeeding ideation during the early prenatal period to be able to predict breastfeeding success and to improve the breastfeeding experience. The behavioral theory of the Health Belief Model (HBM) has been demonstrated to be applicable in relation to studying breastfeeding behavior (Richardson & Champion, 1992). In the next section, the HBM is described and includes: (a) an overview of the Health Belief Model (HBM); (b) conceptual definitions of the project variables based on the HBM; and (c) development of a screening tool based on the HBM.

The Health Belief Model (HBM) was used in this scholarly project as the conceptual framework for the screening tool (see Figure 1). The HBM was developed in the early 1950's by a group of social psychologists, and was derived from the Social Cognitive Theory (Becker, 1974). The HBM was designed as a framework for exploring why some people who are illness free take actions to avoid illness, while others fail to take protective actions. The model was viewed as potentially useful to predict those individuals who would or would not use preventive measures and to suggest interventions

that might increase predisposition of resistant individuals to engage in health-protecting behaviors (Pender, 1996).

The HBM is most applicable with voluntary, health-related actions that involve an element of uncertainty. Because it is a psychological model, it is applicable only to behavior that can be explained by a person's attitudes and beliefs. The HBM encompasses a "value expectancy" approach which attributes behavior to the value an individual places on the expected outcome of the action and also to the perception by the individual that the specific behavior will result in the expected outcome (Janz & Becker, 1984).

The HBM hypothesizes that health related behavior occurs as a result of the interactive and combined effects of two factors: (a) readiness to comply with recommended action/s, and (b) modifying and enabling factors (Pender, 1996). The factors that influence readiness to act include those dimensions known as health beliefs, which include susceptibility, seriousness, benefits and barriers. The perception of a threat to health is conceptualized as a combination of how susceptible the individual perceives him/herself to be to a condition and how severe of an effect he/she believes the condition would have on his/her life. The individual must also believe that the action to be taken will result in the expected outcome and that there are not insurmountable barriers that preclude goal attainment.

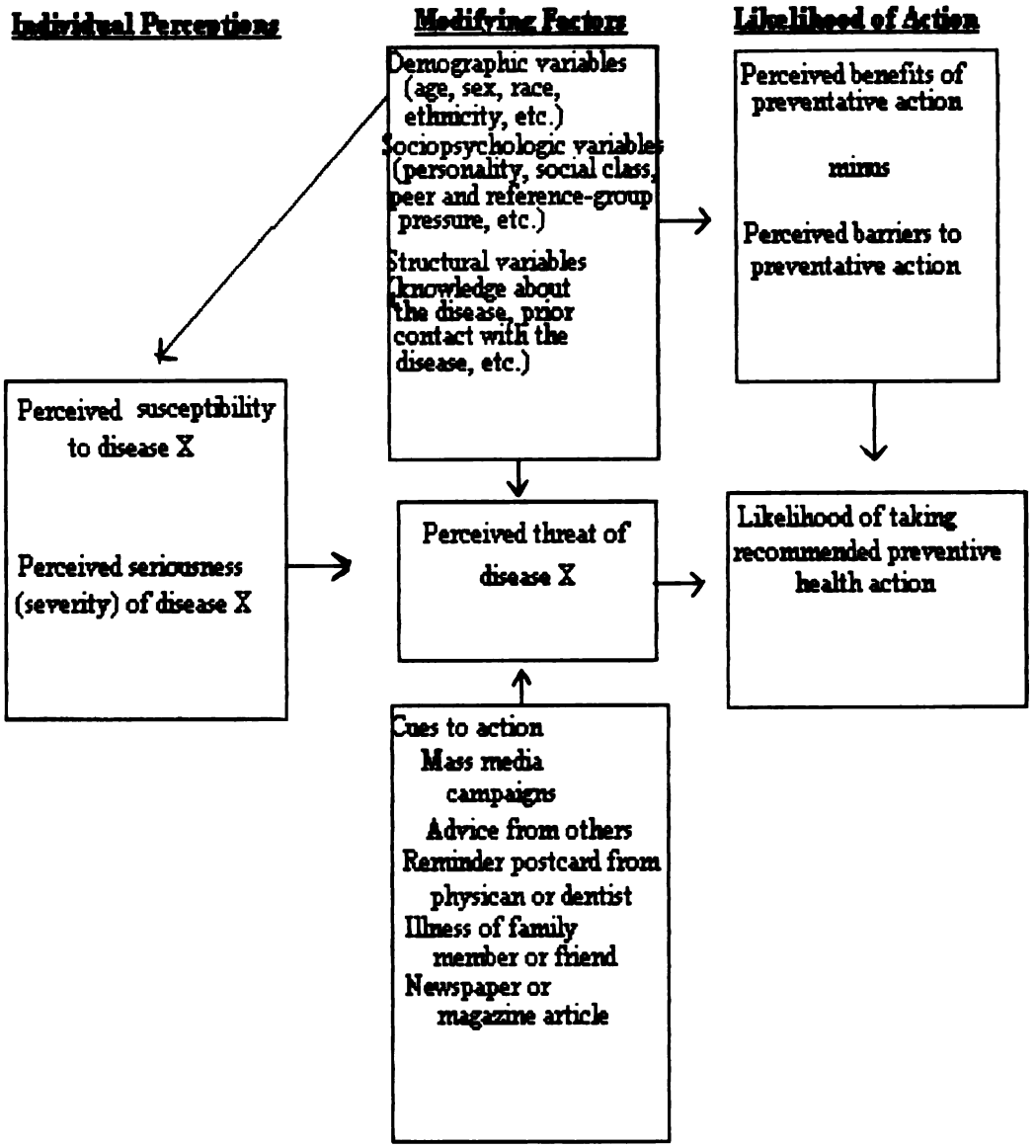

Figure 1. From "The Health Belief Model. Selected psychosocial models and correlates of individual health-related behaviors." by M.H. Becker and S.V. Kasl et al. (1977). Medical Care, 15, p. 27.

Perceived susceptibility refers to the subjective risks of a condition. It reflects the individual's feelings of personal vulnerability to a specific health condition. Individuals vary widely in their feelings of personal vulnerability to a condition (Pender, 1996). Perceived seriousness are convictions concerning the seriousness of a given health condition. They also vary from person to person. The degree of seriousness may be judged both by the degree of emotional arousal created by the thought of a health condition as well as the kinds of difficulties the individual believes a given health condition will create. These two dimensions of the HBM are beyond the scope of this scholarly project.

Some factors may function as cues to action, also characterized as "triggering mechanisms". Cues to action indirectly affect the perceived health action. They include mass media campaigns, advice from others, reminder postcards from physician or dentist, illness of a family member or friend, and newspaper or magazine articles. For the primigravida woman, pregnancy itself is an example of a cue to action in regards to the breastfeeding endeavor. For the purpose of this scholarly project, this factor will not be assessed.

Conceptual Definitions

Specifically, the HBM consists of the following dimensions known as health beliefs: perceived susceptibility, perceived severity, modifying factors, perceived benefits and perceived barriers. Modifying factors, perceived benefits, and perceived barriers provided the basis for the development of the breastfeeding screening tool. The tool was designed to determine the likelihood that a primigravida woman will breastfeed successfully, and was based upon the concepts of the HBM, perceived benefits and barriers. The modifying factors of demographic, sociopsychologic, and structural variables were also included because of their reported influence on breastfeeding success. These dimensions are further defined as follows.

Perceived Benefits. While acceptance of personal susceptibility to a condition believed to be serious was held to produce a force leading to behavior, it did not define the particular course of action that was likely to be taken. This was hypothesized to depend upon beliefs regarding the potential positive aspects of a particular health action. The primigravida would not be expected to accept the recommended health action of breastfeeding unless it was perceived as feasible and beneficial. For this scholarly project perceived benefits were defined as the beliefs of the primigravida about the positive aspects of breastfeeding.

Perceived Barriers. The potential negative aspects of a particular health action may act as impediments to undertaking the recommended behavior. In this dimension of the HBM the primigravida woman weighs the actions of breastfeeding's effectiveness against perceptions that it may be upsetting, unpleasant or painful, embarrassing, inconvenient and time consuming. These negative aspects of health action serve as barriers to action and arouse conflicting motives of avoidance. For this scholarly project perceived barriers were what primigravida women perceive as the negative aspects of the breastfeeding experience.

Modifying Factors. The modifying factors of the HBM include demographic, sociopsychological and structural variables. These factors are considered to have an indirect influence on health behavior by their effect on an individual's health motivation and perceptions. The three modifying factors are: a) demographic characteristics, such as age, sex, race, educational level and socioeconomic status; b) socio-psychological variables such as personality, culture, and reference-group pressure; and c) structural variables which includes knowledge about breastfeeding and prior contact with breastfeeding.

Development of a Breastfeeding Screening Tool Based on the HBM

A primigravida woman has perceptions of her breastfeeding endeavor. These thoughts or perceptions can occur before pregnancy or early in pregnancy and are

considered her own feelings of vulnerability and perceived seriousness of the breastfeeding experience. Such feelings are accepted by the woman and produce a force leading to breastfeeding. It does not define the particular course of action, however.

Modifying factors can influence the perceptions a primigravida woman holds in regards to her own breastfeeding experience. These factors have an indirect influence on her breastfeeding behavior by their effect on her motivation to breastfeed successfully and her perceptions of successful breastfeeding. These modifying factors affect the woman's individual perceptions and the likelihood that she take action to breastfeed successfully. Screening for the modifying factors involved in a primiparous woman's perceived ideas about the breastfeeding experience could provide predictive information to the APN. Anticipating certain behaviors, the APN could provide anticipatory guidance and interventions which may help to minimize the negative effects modifying factors have on perceived breastfeeding success.

Although modifying factors and individual perceptions create a perception of breastfeeding, perceived benefits and barriers to breastfeeding define the particular course of action the primigravida will take to breastfeed successfully. A woman would not be expected to accept recommended action unless it was perceived as feasible and beneficial (Janz & Becker, 1984). The potential negative aspects and perceived barriers of breastfeeding may act as impediments to the experience. To successfully breastfeed the perceived benefits must outweigh the perceived barriers. Screening of a woman's perceived benefits and perceived barriers could predict the likelihood of successful breastfeeding and provide the APN with information needed to assess further and develop an individual plan of care for the woman to promote and enhance the breastfeeding experience. Figure 2 depicts the integration of the prenatal breastfeeding screening tool within the HBM. Areas in bold were concepts addressed in the project.

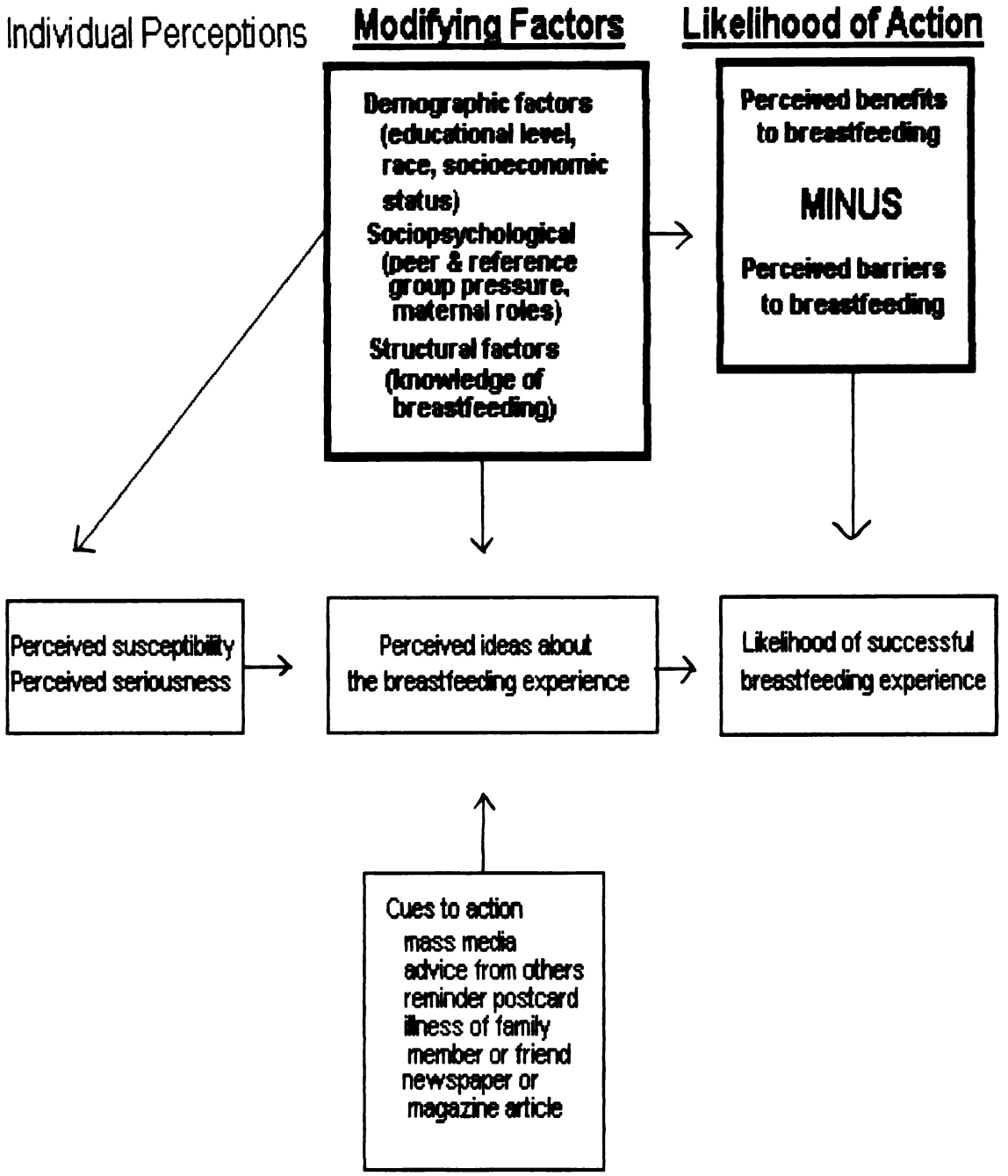

Figure 2. Adapted from "The Health Belief Model. Selected psychosocial models and correlates of individual health-related behaviors", by M. Becker, D. Hefner, and D.P. Kasl et al. (1977). Medical Care, 15, p. 27.

Literature Review and Critique

The literature is replete with scientific data on the incidence of breastfeeding and how women can be persuaded that 'breast is best' (Price & Price, 1995). Factors involving demographics, social systems, personal attitudes, perceived benefits, and perceived barriers play a role in the initiation and success of the breastfeeding experience. Examining beliefs fostering or inhibiting breastfeeding could increase breastfeeding initiation and success (Lubbus, Bush, & Hockman, 1997). Literature attests to complicated factors that must be taken into account to promote and support the breastfeeding endeavor, yet does not reflect a formal screening tool for these factors (Price & Price, 1995). The following sections address the literature and provide: (a) a literature review of the modifying factors, perceived benefits, and perceived barriers of breastfeeding as defined by the HBM; and (b) a critique of the literature.

Modifying Factors

Modifying factors of the HBM include demographic data, sociopsychological, and structural factors. These factors indirectly affect the tendency toward breastfeeding by the primigravida woman by affecting her motivation to breastfeed successfully and her perceptions of successful breastfeeding. Demographic data reveal issues which play an important role in the breastfeeding experience. Demographic data include educational level, age, race, and socioeconomic status. These are further explained.

Educational Level. The frequency of breastfeeding in the United States is decreased among low-income and low-education women (Lawrence, 1991). A higher education is positively correlated to breastfeeding (Ford & Labbok, 1990). Data from the National Survey of Family Growth (CDC, 1995) describe women with no high school diploma or GED breastfeed their infants only 43 percent of the time. This is in sharp contrast with those mothers with bachelors degrees or higher, who breastfeed their infants 80 percent of the time. The National Survey data show incremental increases in

breastfeeding incidence as education of the mother increases. The need for assessment and a better understanding of the role of educational level is needed in order to respond to the lack of breastfeeding in lower educated women (Ryan, Rush, Fritz, Krieger, & Lewandowski, 1991).

Age and Race. Age and race play an important role in breastfeeding initiation and success. The National Survey of Family Growth (CDC, 1995) provides data about age and race in regards to breastfeeding incidence. Only 45 percent of mothers under 20 years old breastfeed their infants, with 50.9 percent of mothers who are 20 to 24 years old breastfeeding, 55.9 percent of mothers 25 to 29 years old breastfeeding, and 71.1 percent of mothers 30 to 44 years old breastfeeding (CDC, 1995). A Caucasian female is more likely to breastfeed than an African American female (Ford & Labbok, 1990). The percent of breastfeeding women who are Caucasian is 61.2; Blacks, 27.5; and Hispanics, 67.4. Young, African American women often perceive that breastfeeding is old fashioned, embarrassing, and would tie a woman down (Taylor, 1991). The young and the minority are the most vulnerable segments of the population who would benefit by intensive assessment, study, and intervention regarding breastfeeding (Ryan, Rush, Krieger, & Lewandowski, 1991).

Socioeconomic status. Socioeconomic status is a strong determinant of breastfeeding success. Hill (1991) conducted research which identified variables that predicted breastfeeding duration for the first eight weeks postpartum. A total of 400 postpartum women completed the data collection survey. Content validity of the survey was established by literature review, the investigator's past experience, and use of some questions from past studies. Interim reliability of the survey was not addressed. Income was significantly correlated with breastfeeding initiation and duration ($p = 0.018$). The study suggests that this variable, among others, can be used to identify those at risk for unsuccessful breastfeeding. Locklin and Naber (1993) in a grounded theory study with in-depth interviews, collected data from 10 low income, minority women. The study

reported that when support from family, friends, and peers was available, low income and minority women breastfed successfully (Locklin & Naber, 1993).

Critique of Demographic Data Literature Review.

Educational level, age, race, and socioeconomic information is included in this review. The predominant data provided for educational level, age, and race was the Centers for Disease Control (CDC). The CDC was found to have the most current statistics. The CDC based the data on household interviews of samples of women in the childbearing ages. The most recent data obtained was from the National Survey of Family Growth, Cycle 5-1995. The methodology for data collection and sample selection were not identified in the report. The CDC did note that their sample was mothers interviewed in the first three months of 1995 with babies age three months and over.

Other literature cited (Ford & Labbok, 1990; Lawrence, 1991) studied data obtained in the1980's. The sample for the studies was, again, postpartum women. Utilizing demographic data, Locklin and Naber (1993) interviewed postpartum women also. The sample size, 10 low income, minority women, can be identified as too small a sample for generalization to larger populations. The study did supply valuable information about this population to guide further research. Hill (1991) provided a concisely written report on variables affecting breastfeeding incidence and duration. The sample size of 400 postpartum women was described and was considered a population which would lend itself to generalization to other populations. The content validity of the tool was described and verified by a team of experts. Results were documented and discussed.

In general, the studies reviewed about demographic data which affects breastfeeding were strong in the clarity of writing and result reporting. Weaknesses in the literature include a lack of theory based research and studies of prenatal intentions with postnatal practices.

Sociopsychological factors

In the HBM, sociopsychologic factors are part of the modifying factors affecting breastfeeding . Sociophychologic factors which influence breastfeeding include peer and reference group pressure and maternal roles. The following literature review illustrates these factors.

Peer and Reference Group Pressure. The support of the breastfeeding woman's significant other, her friends, and family was important to successful breastfeeding studies suggest (Lithman, Medendorp, & Goldfarb, 1994; Matich & Sims, 1992). A favorable attitude of partners towards breastfeeding is noted to be an important factor associated with a woman's initiation and success at breastfeeding (Guiglaini, et al., 1994; Kessler, Gielen, Diener-West, & Page, 1995). Findings suggest that breastfeeding is the outcome of a complex interaction of factors related not only to the mother but also to her environment (Lothian, 1994). Lothian confirms that women choose to breastfeed because they believe it is the best for the baby, and their network of family and friends also believe in the importance of breastfeeding. Lothian calls for greater prenatal screening and education to promote successful breastfeeding.

McClurg-Hitt and Olson (1994) piloted a questionnaire for their WIC clientele in an effort to better support breastfeeding mothers involved in the Missouri WIC program. The study was the pilot for the questionnaire. The number of questionnaires returned was 878. The population that completed the survey included 49 percent Caucasian women, 50 percent African American women, and one percent other ethnic groups combined. Rural and urban populations were included. The questionnaire was developed to include assessment of participants' attitudes about breastfeeding, breastfeeding habits, problems associated with the breastfeeding experience, sources of breastfeeding information, the participants' support structure, and hospital practices related to breastfeeding. Validity and reliability of the questionnaire was not reported. Limitations to the study include biases inherent in the survey process, lack of information about demographic data, and if

the client was enrolled in the WIC program. McClurg-Hitt and Olson suggest a revision of the questionnaire to include demographic information. The results of the questionnaire revealed that the main support for the breastfeeding endeavor were the women's husbands. While there are limitations of the assessment tool used, the study identifies the need to include husbands in breastfeeding preparation whenever possible (McClurg-Hitt & Olson, 1994).

Libbus and Kolostov (1994) found two factors that are positively associated with breastfeeding: women whose mothers had breastfed, and support from the woman's significant other. This suggests that social support and role modeling may be part of the determining components of breastfeeding inception and success (Libbus & Kolostov, 1994).

Maternal roles. Maternal role ideas of protection, nurturance, and training of children as part of the mother's personality favors the breastfeeding experience. The physical manifestation of providing nourishment to one's infant reinforces this feeling (Gigliotti, 1995). Locklin and Naber (1993) identified that mothers who breastfeed over an extended duration of time are reported to have a positive attitude toward the practice, to experience satisfaction and enjoyment from it, to feel encouraged, and to want to help others do it. In other studies, women who did not breastfeed felt uncomfortable with the idea of putting a baby to their breast (McClurg-Hitt & Olsen, 1994; Oxby, 1994). These feelings may be deep rooted in the individual's sense of self. A study by Barnes, Leggett, and Durham (1993) suggests that breastfeeding mothers are clearer in their maternal and sex role identification as well as in age, education, and economic status. Those more likely to choose to bottle-feed their infants were those women who showed an unclear sense of identity formation. The perception of how breastfeeding will fit into the mother's lifestyle also adds to this complex set of factors (Gigliotti, 1995). Gigliotti calls for a holistic view in regards to breastfeeding to provide the basis for assessment, mutual goal setting, and the development of sound interventions.

Critique of Sociopsychologic Factors Literature Review

Maternal support in regards to breastfeeding has been widely studied (Gugliani et al., 1994; Kessler, Guelen, Diener-West & Page, 1995; Littman, Mendendorp, & Goldfarb, 1994; Lothian, 1994; Matich & Sims, 1992; McClurg-Hitt & Olson, 1994). All studies confirm the conclusion that support from husband or significant other, family, and friends play an important role in breastfeeding initiation and success. McClurg-Hitt and Olson (1994) provided a clearly written research study. The study described the methodology of the research performed. Information about the tool used was identified. Validity and reliability of the tool was not reported. The sample used was large and contained representation of races from both urban and rural populations. McClurg-Hitt and Olson described the results succinctly and discussed the strengths an limitations of the tool and the research.

Studies providing maternal role information were varied in their methodology and procedures. This may be because of the very subjective and individual perceptions being measured. Gigliotti (1995) utilized a qualitative method, providing an interview type of format. Gigliotti's sample size, three women, makes the information less reliable for generalization. Gigliotti describes the research as a beginning in regards to evaluating women's and the nursing profession's personal values in regards to breastfeeding. No description of maternal tools for data gathering and analysis were discussed.

Barnes, Leggett, and Durham (1993) provide a clear, concisely written research report. A review of literature was followed by a description of the methodology. The sample was one of convenience and included 58 married primiparous women. No documentation was provided in regards to the sample descriptions of race, age, rural, or urban type of population. The instruments utilized were delineated a demographic questionnaire and the Bem Sex Role Inventory (BSRI). The BSRI was found valid and reliable by use in previous studies. No information was provided about the reliability or validity of the demographic tool. Research findings were statistically presented with

correlation between clear sex role identification and breastfeeding exhibited. Limitations to the study were discussed and included sample size and timing of the study in relation to the activity giving birth having relevance to the woman's perceptions.

Structural Factors

Structural factors are included in the modifying factors of the HBM. Structural factors influencing breastfeeding include knowledge about breastfeeding and prior contact with breastfeeding. Rentschler (1991) did a study of factors related to breastfeeding success. Breastfeeding success was defined as breastfeeding for at least 6 weeks. The sample was 150 married primigravidas planning to breastfeed. Of the 150 participants, 107 breastfed successfully. The pregnant woman's level of information about breastfeeding was found to be positively related to breastfeeding success (Rentschler, 1991). Providing breastfeeding education prenatally yields an increase in breastfeeding success, especially among low income women of color (Kistin, Benton, Rao, & Sullivan, 1990).

Critique of Structural Factors Literature Review

Rentschler (1991) provided literature about the level of information about breastfeeding and how that information correlated to successful breastfeeding. The report was clearly written with a review of pertinent literature, concise methodology, results reporting, and a discussion of the research. The instruments utilized for data gathering were identified, with reliability and validity established. The sample size consisted of 150 primiparous women who planned to breastfeed. The sample was identified as average age of 28, married, 94 percent Caucasian, average income of $31,000-40,000, all with high school degrees, and 77 percent had attended college. The author acknowledges limitations to the study. These limitations include a relation between the demographic characteristics of the sample and the results, and that the analysis could not extrapolate the reasons for the relationship between breastfeeding and educational level.

Perceived Benefits

According to the HBM, perceived benefits are beliefs about the effectiveness of breastfeeding. Perceived benefits and barriers help to define the particular course of action the primigravida will take to breastfeed successfully. A woman would not be expected to accept a course of action unless it was perceived as beneficial and feasible. To breastfeed successfully, perceived benefits must outweigh perceived barriers.

It is generally accepted by women that breast milk is nutritionally superior and more natural than any other form of infant supplementation. Enhanced mother-infant bonding during the breastfeeding experience is also perceived as a benefit (Alexy & Carter, 1994; Gigliotti, 1995; Marchland & Morrow, 1994). Prevention of infant ear infection (William & Pan, 1994), convenience and decreased expense are also perceived benefits of breastfeeding (Dungy, Losch, & Russell, 1994; McClugg-Hitt & Olsen, 1994). A family history of milk allergies also influence women's reasons for breastfeeding (McClurg-Hitt & Olsen, 1994). Health benefits of the breastfeeding mother, such as decreased risk of breast and endometrial cancer also are considered benefits (Gwinn, Lee, Rhodes, Layde, & Rubin, 1990). Screening of perceived benefits to breastfeeding may reinforce the breastfeeding decision (McClurgg-Hitt & Olsen, 1994). In a study by Alexy and Carter-Martin (1994), perceived benefits and barriers between women who planned to breastfeed, those who were uncertain, and those who did not plan to breastfeed were investigated. One hundred and forty two women participated in the study. Volunteers were obtained from rural and urban prenatal clinics. Half the women were married, the average age was 23, 38 percent were African American, 25 percent had not graduated from high school, and 46 percent were planning to return to work. The tool consisted of 13 items to measure benefits, 15 to measure barriers, and open-ended questions. The authors reported that women who were interested in breastfeeding perceived more positive factors and fewer perceived barriers. Women who were not interested in breastfeeding indicated fewer perceived positive factors and greater perceived barriers.

Alexy & Carter-Martin (1994) conclude that perceived benefits are important to assess when working with expectant women.

Perceived Barriers

The HBM describes perceived barriers as the most important aspect involved in the application of the health promoting behavior of the individual. Perceived barriers to the breastfeeding experience are the negative aspects of the experience. The potential negative aspects of breastfeeding may act as impediments to the experience. Perceived barriers must factor less than perceived benefits for a successful breastfeeding experience to occur.

Intent to return to work after the baby's birth is considered a significant reason for not breastfeeding, and shortening the breastfeeding experience (Alexy & Martin, 1994; Wilson-Clay, 1996). Not feeling comfortable with putting the baby to breast is also a highly recognized barrier to the infant feeding experience (McClurg-Hitt & Olsen, 1994; Oxby, 1994). Frequently cited in the literature is the perception of the mother of the inability of others to feed the infant (Libbus, Bush & Hockman, 1997). Other barriers include those of perceived physical inability to breastfeed and include insecurities of insufficient milk from breasts, inverted nipples, physical discomfort, and breasts too small (Marchland & Morrow, 1994; McClurg-Hitt & Olsen, 1994). Perceived barriers and benefits are important to screen when working with expectant women (Alexy & Carter-Martin, 1994).

Critique of the Perceived Benefits and Perceived Barriers Literature Review

A variety of research regarding the benefits to breastfeeding were identified in the literature. Most research validated findings of other studies (Alexey & Carter-Martin, 1994; Gigliotti, 1995; Marchland & Morrow, 1994). Alexy and Carter-Martin (1994) provided a concise study involving the benefits and barriers to breastfeeding by women in rural and urban settings. The methodology of the study was outlined with identification of the sample, instrument, procedures, and data analysis performed. The instrument was

determined to have validity and reliability for use. Data analysis was documented and utilized chi-square, analysis of variance, and discriminant function analysis. The results were reported with the use of percentages and associated "p" values. The discussion portion address strengths of the study, findings, and need for further study. Limitations to the study were not addressed.

The literature review, in general, provided information regarding various aspects involved in breastfeeding incidence and success. The data provided did not address any type of prenatal screening tool for the primigravida to assess for the factors identified as affecting breastfeeding incidence and duration. A lack of theory application to the literature was also very evident during this review. Despite these weaknesses, the studies reviewed did demonstrate sound research.

Fifty three percent of women decide upon an infant feeding method prior to their second trimester of pregnancy (Newton, 1991). It is hypothesized that a formal screening tool would be beneficial to the encouragement of breastfeeding during that time. To screen modifying factors, perceived benefits, and perceived barriers to breastfeeding using the Health Belief Model concepts may provide information that could be used to improve the breastfeeding experience and predict breastfeeding success. Although it is not currently proven that screening of these factors will influence the decision to breastfeed, future study of this may provide useful information.

Can prenatal identification of modifying factors, perceived benefits and perceived barriers to breastfeeding within the primary care setting affect primigravida women's breastfeeding experience postpartum? Research has done much to identify perceptions and factors involved in successful breastfeeding. Implications of these studies suggest further screening and assessment of the modifying factors, perceived benefits and perceived barriers to breastfeeding within the primary care setting may be beneficial to promoting successful breastfeeding. Little research has been done, however, on the implementation of a prenatal screening tool, as well as how it affects the primigravida

woman's breastfeeding experience. This opens an opportunity for the APN in primary care to not only potentially increase breastfeeding rates, but contribute to the furthering of knowledge in regards to infant feeding decision making.

Development of a Breastfeeding Screening Tool for the Primigravida

Design and Administration

There are no specific tools available for the screening of modifying factors, perceived benefits, and perceived barriers to breastfeeding. The development of such a screening tool may benefit the breastfeeding experience. In developing a breastfeeding screening tool for the primigravida, the current project built upon previous work on modifying factors, perceived benefits, and perceive barriers to breastfeeding. This process generated an item pool from which the questions were formed. This tool is designed to be self-administered and is formatted using a Likert scale representing a spectrum of emotion about a particular question. Some demographic questions are short answer. The tool is to be introduced during the initial prenatal assessment of the primigravida. The reading level of the tool was at a third grade level as determined by the Flesch-Kincaid Reading Grade Scale.

The target population for which this screening tool was developed for was those primigravida women of childbearing status, ages 19-40, who have sought prenatal care through the health care system. The tool was designed for use with all educational levels, socioeconomic status, marital status, ethnicity, and women who can read at a third grade level.

The tool is to be used in any setting that delivers prenatal care via primary care physician, obstetritian, or nurse practitioner. The tool is intended to be given to the primigravida in the waiting room for completion. Office staff will need to be introduced to the tool and how the primigravida should complete it, so they can give proper instruction to the woman. The tool should take approximately five to ten minutes to complete by the primigravida, depending on how long she contemplates the questions.

The completed tool should then be added to the chart so the provider can review the information prior to assessing the primigravida.

Prenatal Breastfeeding ScreeningTool Development

The Prenatal Breastfeeding Screening Tool for the Primigravida consists of 17 questions pertaining to modifying factors, perceived benefits, and perceived barriers to breastfeeding in the following content areas: (a) demographic data (5 items); (b) sociopsychologic perceptions (8 items); (c) knowledge about breastfeeding (1 item); (d) perceived benefits of breastfeeding (1 item); and (e) perceived barriers to breastfeeding (1 item). The tool is preceded by a provider guide (Appendix A) to familiarize the provider with the design and administration of the tool. An introduction page is also included (Appendix B) for the woman.

The screening tool (Appendix C) was designed with key questions in each of the designated areas. It was believed that a written, in-depth tool would be too time consuming, not practical, and not useable in the primary care setting. Additional information may be gleaned with the tool as the provider's source of screening information for further assessment of the factors influencing breastfeeding. It was this author's intent that the administration of the tool would facilitate further discussion by the APN and the primigravida woman regarding breastfeeding. The APN needs to carefully review the information from the self-administered tool with the woman to clarify answers and discuss pertinent issues during the initial exam of the primigravida. If time does not allow for a full discussion of the issues identified in the breastfeeding screening tool during the initial visit, further discussion can be incorporated during other prenatal visits with the woman.

Demographic Data. Questions one through six of the screening tool address demographic data. Age, race, income, and education information comprise this section. Marital status and feeding intentions are also included in this group of questions. It is believed by the author that feeding intentions, although not identified in the demographic

data during the literature review, is vital information to know when planning interventions which facilitate the breastfeeding experience.

Structural Data. Structural information is obtained by question 8 of the screening tool, where the woman provides her perception of her own knowledge about breastfeeding. This can be further explored by the APN during the interview process. Research indicates that the level of knowledge concerning infant feeding is closely linked to breastfeeding (Labbok & Simon, 1988). This would suggest the probable advantage of breastfeeding education and promotion during antepartum visits. Exploring this question with the woman gives the APN direct information about knowledge deficits so that proper intervention could be implemented. Demographic information can be utilized to present educational material appropriate for the age and educational level of the woman.

Maternal Roles. Maternal roles are addressed in questions 7, 9, 15, and 16. These questions are not all encompassing, but were chosen as screening questions in this area. Knowledge about how a woman feels about motherhood, how it could fit into her lifestyle, if she is comfortable with the idea of putting her baby to her breast, and what she thinks breastfeeding will be like can give the provider clues to the woman's maternal role idealizations. The answers obtained on the screening tool can be explored between the woman and provider. Clear maternal role ideas are associated with successful breastfeeding (Gigliotti, 1995). Strong maternal role idealization can be a predictor of the breastfeeding decision and success. Maternal role views provide the basis for assessment, mutual goal setting, and development of sound intervention. Identification of maternal attitudes concerning breastfeeding provides an opportunity to implement strategies that support breastfeeding (Dungy, Losch, & Russell, 1994).

Social Support. Social support is one of the key influences in a woman's decision and success with breastfeeding (Littman, Mendendorp, & Goldfarb, 1994). Questions 11,12,13, and 14 obtain information about the support of family, friends, and significant other in regards to breastfeeding for the woman. Strong approval of breastfeeding by

support systems is associated with a high incidence of breastfeeding (Littman, VanderBrug-Mendendorp, & Goldfarb, 1994). Important support people could be included when discussing breastfeeding. Cultivation by the woman of a supportive social system for breastfeeding may assist her in her breastfeeding endeavor. Strategies that involve the support system or partner during prenatal counseling might increase understanding and support (Alexy & Carter-Martin, 1994). If an area is found to be scored low on the Likert scale, the APN can further analyze, facilitate education, and incorporate involvement of other support systems.

Perceived Benefits. Alexy and Carter-Martin (1994) describe perceived benefits as the most important predictor of the breastfeeding decision. Question 10 asks the woman if she feels there are benefits to breastfeeding. This is intended as a screening question to be followed-up with further discussion with the provider.

Perceived Barriers. Perceived barriers are addressed in question 17. Asking the woman if there are things that could keep her from breastfeeding provides the APN with an idea of the woman's perception of barriers to the breastfeeding experience. As with many of the other questions, this is designed as a screening for further discussion. To attempt to incorporate all aspects of assessment into one tool would be a monumentous task. Description of a woman's perceived barriers can occur verbally with the APN. Women's negative feelings and thoughts about breastfeeding should be discussed and clarified (Dix, 1991). Interventions to increase breastfeeding incidence and success should provide women with the abilities to overcome possible breastfeeding problems prior to the birth of the child (Sciacca, Dube, Phipps, & Rattliff, 1995). If the barriers are rated higher than benefits, the APN must focus on ways to decrease those barriers. Guided exploration of the woman's benefits and barriers may provide useful information to promoting a successful breastfeeding experience.

Using this screening tool the APN can address individual areas which influence breastfeeding for that individual and formulate with that woman a plan to promote

successful breastfeeding. Identifying areas of intervention allows for individualized planning. Current literature contains little information about successful use of intervention during the prenatal period. It is hoped that this screening tool may spur such information.

Preliminary Review of the Breastfeeding Screening Tool. A formal pilot testing of the tool was not conducted for this scholarly project; instead the tool was presented at the Lakeshore Nurse Practitioner Network's January 1999 meeting for comments. Four family nurse practitioners, which provide prenatal care in their practices, evaluated the provider guide and the screening tool. Comments about the screening tool included positive remarks about the length and easily understandable questions. Other positive comments included the support, maternal role, and benefit/barrier areas of questioning, since these areas are not well represented in current prenatal forms. All four nurse practitioners requested information on interventions which could be applied to promote breastfeeding in their clientele. One nurse practitioner asked if she could start to use the form immediately with her patients. Very little attention was given to the provider's guide. It is this author's observation that the guide appeared too wordy for the nurse practitioners to pay full attention to it. A shorter, more succinct guide may be more useful. The tool was also presented to a committee of professors with experience in women's health and prenatal care. Upon their recommendation, some of the questions were revised for easier understanding. There was also concern about the inclusion of demographic data on the tool, since that information could be gleaned from the chart without asking the woman. It was noted that some patient charts may not have all the information presented on the breastfeeding screening tool, and since it is important information to screen for, it should remain on the form until a pilot is performed.

The screening tool was also given to a pregnant, Caucasian, 25 year old woman for her completion and to evaluate for ease of use and understanding. The woman felt they all were good questions, spurring her to reflect on her own ideas of motherhood and

breastfeeding. She had no difficulty understanding what was being asked of her, stating "it was a good basic survey".

Discussion

Implications for the Advanced Practice Nurse

Various attempts have been made to direct women down the path of successful breastfeeding. From education to incentives, women have been lured in the direction that practitioners and educators believe is the correct path to promote the breastfeeding endeavor. These well-intentioned efforts have had varying results. Research, as yet, is unable to reproduce interventions which provide effective results to improve breastfeeding incidence and duration. Prenatal screening of the factors which affect breastfeeding should be considered the first step toward support of a successful breastfeeding endeavor. It is hoped by this author that the information obtained by the prenatal breastfeeding screening tool will lead to unique and appropriate interventions which promote successful breastfeeding.

Implications for Practice. The APN in primary care is in an excellent position to utilize the prenatal breastfeeding screening tool. Since the APN has the specific task of health promotion, the screening and promotion of breastfeeding falls easily into the APN's domain. Applying nursing knowledge, the APN can screen the modifying factors, perceived benefits, and perceived barriers to breastfeeding by the primigravida. The APN can then formulate an individual plan of care for the woman to support and enhance her breastfeeding endeavors.

Not only can the APN educate women about breastfeeding, the APN can utilize his/her knowledge base in the formation of a breastfeeding plan of care incorporating information obtained from the prenatal breastfeeding screening tool. The APN in primary care can also educate collaborators and peers in the use of the prenatal breastfeeding screening tool, so it's usage is more widespread. Interventions which work can be shared with peers to increase the incidence and duration of the breastfeeding experience.

One must consider the definition itself of successful breastfeeding when applying this screening tool. The APN must be cognizant that his/her ideas of successful breastfeeding may not be the same as that of the breastfeeding woman. Implementing interventions during the prenatal period must reflect the woman's own definition of successful breastfeeding.

In the zeal to make the Healthy People 2000's (1990) goal of increasing the incidence and duration of breastfeeding a reality, care must be taken to ensure that feelings of guilt are not instilled in those who choose to bottle feed their infants. Breastfeeding is not for everyone. Some barriers to breastfeeding may be insurmountable. The final outcome of all should be the happiness and fulfillment of both infant and parent.

Implications for Research. Further research is needed to refine the Prenatal Breastfeeding Screening Tool. A pilot should be performed to refine and promote initial support of the tool for use. The necessity of the demographic data on the tool should be explored. Demographic information is important in the screening of the woman, however, the information could be gleaned from other areas in the patient's chart. An evaluation of the quality of the tool, based primarily on evidence of the tool's reliability and validity should be performed.

Other populations, such as adolescents, could benefit from the screening tool. The tool could be adapted for use with these populations. The applicability of the tool in the second or third trimester of pregnancy should also be explored, since it is unknown if assessment of the factors which influence successful breastfeeding would be beneficial at that time. The breastfeeding screening tool implementation also needs postpartum follow-up to determine the effectiveness of the tool's use. This could be performed at the six week check up and again at six months during postpartum exams.

Not all primary care providers understand breastfeeding enough to perform further breastfeeding assessment. This could decrease the screening tool's effectiveness

and usability. The development of a protocol to guide the provider through the screening tool and to further assess for breastfeeding success would be beneficial.

The APN has an unique opportunity to utilize the prenatal breastfeeding screening tool for further research in breastfeeding intervention. The use of a Likert scale for individual responses in the self-administered portion of the screening tool lends itself more easily to the application toward research. Screening of modifying factors, perceived benefits, and perceived barriers to breastfeeding is the first step to identifying factors and applying interventions which could increase the incidence and success of breastfeeding.

Further research is also needed to examine whether prenatal breastfeeding screening actually does increase the incidence and successfulness of the breastfeeding experience. What types of prenatal screening and use of the information once retrieved is of importance if one is to expand breastfeeding knowledge. The APN in primary care is in an advantageous position to perform this research.

Implications for Education

Healthy People 2000 (1990), in the quest to increase breastfeeding incidence and duration, calls for professional education and improved support from health care providers. Studies have shown that health professionals, and nurses in particular, can improve breastfeeding initiation and success. However, nursing education may not prepare students for effective breastfeeding promotion. It has been reported that almost three quarters of nursing students were confident in their own breastfeeding assistance abilities, yet one forth to one half showed deficiency in fundamental breastfeeding knowledge when examined (Freed, Clark, Harris, & Lowdermilk, 1996). These findings suggest that nursing programs do not adequately prepare student nurses for their role in breastfeeding promotion. Incorporating the prenatal breastfeeding screening tool and the theory behind it, along with other aspects of breastfeeding education may improve nursing student competence in the promotion of successful breastfeeding.

Primary care providers are a frequent source of both prenatal and postnatal health care for women. Pediatricians, obstetricians, and family practice providers have the most frequent opportunities to provide breastfeeding promotion and assistance. Considerable evidence suggests that physicians are ill-prepared to offer prenatal breastfeeding advice (Freed, 1993). A more thorough incorporation of breastfeeding into medical school curriculums would better prepare physicians to provide breastfeeding promotion and support in their practices.

The Prenatal Breastfeeding Screening Tool for the Primigravida was developed to provide the primary care provider with a tool to screen prenatally for factors which would influence the breastfeeding experience of women. The quality of the tool's application is dependent on the provider's interest in furthering successful breastfeeding. It is hoped that the tool is embraced and utilized by those with that goal in mind. It is also hoped that this tool will spur the creation of effective interventions to encourage and support the breastfeeding endeavor.

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APPENDICES

APPENDIX A

Appendix A

Provider Guide for the Primigravida Breastfeeding Screening Tool

The prenatal breastfeeding screening tool is designed for use prenatally with the primigravida to screen for certain factors which may influence infant feeding after delivery. It was developed to increase the incidence and success of the breastfeeding experience. The tool is composed of a self-administered portion utilizing a Likert scale format for the screening of factors which influence breastfeeding. Demographic data is asked directly in the tool. The screening tool is developed for administration during the initial prenatal comprehensive exam. The receptionist may provide the self-administered tool to the client to be completed while in the waiting room. The receptionist should be instructed to give the screening tool to all primigravidas between the ages 19-40 when scheduled for their initial prenatal comprehensive exam, not an exam which confirms pregnancy.

The prenatal breastfeeding screening tool is based upon the Health Belief Model (HBM) and incorporates modifying factors, perceived benefits, and perceived barriers to the breastfeeding experience. The completed tool is to be reviewed by the primary care provider in order to develop a plan of care that promotes a successful breastfeeding experience. This can be accomplished throughout the prenatal visits. Identifying areas of intervention allows for individualized planning. There is space provided for notes. Using this screening tool, the provider can formulate with the woman a plan to promote successful breastfeeding. The information is categorized as follows: modifying factors, including demographic data, sociopsychological, and structural factors; perceived benefits; and perceived barriers.

Modifying factors:

Demographic data. Age (question 1): The younger the primigravida, the lower the incidence of breastfeeding incidence and success. Of primigravidas under 20 years old, 45% will breastfeed successfully. For 20 to 24 year olds, 50.9% will breastfeed successfully. Fifty six percent of pregnancy women ages 25 to 29 years old will breastfeed successfully. The highest incidence of successful breastfeeding occurs with a maternal age of 30 to 44, who breastfeed successfully 71 percent of the time.

Race (question 2). Caucasian women breastfeed successfully 61 percent of the time, African Americans 27.5 percent, and Hispanics 67 percent.

Socioeconomic status (question 3). Low income correlates with decreased incidence and success of the breastfeeding endeavor.

Education (question 4). Those with no high school diploma or G.E.D. have the lowest breastfeeding incidence and success (43 percent). There are incremental increases in the incidence and success of breastfeeding as education increases, with those pregnant women with Bachelors degrees or higher having the highest incidence and success breastfeeding (80 percent).

Sociopsychological. Maternal role perceptions (questions 7, 9, 15, and 16) are identified in the literature as areas which influence breastfeeding incidence and success. Women with a strong sense of identity about themselves and their maternal role breastfeed over an extended duration of time and are satisfied with the successfulness of their breastfeeding experience.

Social support. A primigravida's significant other, family, and friends (questions 11, 12, 13, and 14) are identified in the literature as factors which influence breastfeeding incidence and success. Husbands are the most influential. The woman's mother and friends also influence the primigravida's breastfeeding initiation and success. A

primigravida is more likely to breastfeed successfully if she has a mother who breastfed her children and friends who have breastfed. When support and encouragement is provided by the significant other, family, and friends, breastfeeding incidence and success is increased.

Structural factors. Perception of knowledge about breastfeeding (question 8) identifies how much the woman thinks she knows about breastfeeding. This can provide useful information to the provider regarding whether the woman has any misconceptions about breastfeeding and can lead to an assessment of her actual knowledge about the breastfeeding endeavor. Research has identified that the more knowledge the pregnant woman has about breastfeeding, the greater the breastfeeding incidence and success.

Perceived Benefits and Perceived Barriers. The perception of benefits to breastfeeding by the woman (question 10) and the perception of things that could keep the woman from breastfeeding (question 17) strongly influence breastfeeding initiation and success. To breastfeed successfully, the woman must perceive that the benefits to breastfeeding outweigh the barriers. Every woman has individual perceptions, weighing each perception differently. It is the provider who must help the woman to identify these perceptions and increase the perceived benefits to breastfeeding by the primigravida.

The Health Belief model guides the practitioner in the incorporation of the information obtained from the prenatal screening tool. Modifying factors have an indirect influence on breastfeeding behavior by their effect on motivation to breastfeed successfully and perceptions of successful breastfeeding. These factors affect the likelihood that the woman will take action to breastfeed successfully. The screening of modifying factors involved in a primigravida woman's perceived ideas about the breastfeeding experience could provide predictive information to the APN. Anticipating certain behaviors, the APN could provide anticipatory guidance and interventions which

would help to minimize negative effects the modifying factors may have on perceived breastfeeding success.

Perceived benefits and barriers to breastfeeding define the particular course of action the primigravida will take to breastfeed successfully. A woman would not be expected to accept recommended action unless it was perceived as feasible and beneficial. The potential negative aspects and perceived barriers of breastfeeding may act as impediments to the experience. To successfully breastfeed the perceived benefits must outweigh the perceived barriers. Screening of a woman's perceived benefits and perceived barriers could predict the likelihood of successful breastfeeding and provide the APN with information needed to create an individual plan of care for the woman to promote and enhance the breastfeeding experience.

APPENDIX B

Appendix B

Introduction to the Prenatal Breastfeeding Screening Tool

Congratulations on your pregnancy. Your health care provider is here to care for you during this time of change. Among the many things to think about is how you plan to feed your baby. Please complete the following short survey about your infant feeding ideas. Your answers are intended to give your health care provider information that can help support your infant feeding decisions. All responses are confidential. There are no right or wrong answers, so feel free to tell us just how you feel. Your responses are greatly appreciated.

APPENDIX C

Appendix C

A Prenatal Infant Feeding Tool for You and Your Provider

Welcome. Please take a few moments to answer the following questions. Place an X in the space which best describes you and your situation. Your honest answers will help your provider to support your infant feeding decision.

1. **How old are you? _____ years**

2. **What is your race?**
   _____ Caucasian _____ Hispanic
   _____ African American _____ Native American _____ Other

3. **What is your yearly household income?**
   _____ Under 15,000 _____ $15,001 to $25,000
   _____ $25,001 to $35,000 _____ $35,001 +

4. **How many years of education have you completed?**
   _____ Grade school _____ G.E.D.
   _____ No high school diploma _____ College, less than Bachelors Degree
   _____ High school diploma _____ College, Bachelors degree or more

5. **Are you: _____ Single _____ Single, living with significant other**
   _____ Married _____ Divorced _____ Widowed _____ Separated

6. **Have you given any thought to how you might feed your baby? _____ yes _____ no**
   If yes, are you planning to:
   _____ Breastfeed _____ Bottle feed _____ Undecided

Please circle the number on the scale or place an X in the blank which describes how strongly you feel about the question. One response is no better than any other. Your answers help your provider to support you.

7. **How excited do you feel about becoming a mother?**
   (afraid) 1 2 3 4 5 (excited)

8. **Do you feel you are knowledgeable about breastfeeding?**
   _____ yes _____ no

9. **How do you believe breastfeeding would fit into your life?**
   (not at all) 1 2 3 4 5 (very well)

10. **Do you feel there are benefits to breastfeeding?**
    _____ yes _____ no _____ don't know

11. **Do you have friends that have ever breastfed?**
    _____ yes _____ no _____ don't know
    If yes, was it a good experience for them? _____ yes _____ no _____ unknown

12. **How supportive is your family of breastfeeding?**
(not at all) 1 2 3 4 5 (very supportive)

13. **Did your own mother breastfeed her children? _____ yes _____ no**
Was it a good experience for her? _____ yes _____ no _____ don't know

14. **How supportive is your significant other of breastfeeding?**
(not at all) 1 2 3 4 5 (very supportive) _____ not applicable

15. **How comfortable/uncomfortable do you feel about putting your baby to your breast?**
(uncomfortable with the idea) 1 2 3 4 5 (comfortable)

16. **How easy/difficult do you think breastfeeding will be like for you?**
(difficult) 1 2 3 4 5 (easy)

17. **Do you think you will have any difficulties if you breastfeed your baby?**
_____ yes _____ no _____ don't know

(Please do not write below this line)

Provider Notes