EXPECTATIONS OF PRENATAL CARE IN A RURAL SETTING

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ABSTRACT

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Expectations for prenatal care can have an influence on the initiation and continuation of prenatal care. Increasingly, the provider of prenatal care has been identified as being an influential factor in meeting women's expectations of prenatal care. This secondary analysis compared rural physician providers and certified nurse-midwives on five dimensions of patient expectations with prenatal care. The sample consisted of 60 rural low income women from a small county in Michigan.

The findings revealed that pregnant women held similar expectations to receive personalized care from one provider, information, other services, and accessible quality care from certified nurse-midwife providers and physician providers. Advanced practice nurses can use these findings to improve rural low income women's accessibility and utilization of prenatal care when their expectations for care are met.

This study is lovingly dedicated to my family: Dominic and Margaret Conklin, Bill and Diane Conklin, and to my children: Kathleen, Jim, Don, Craig, Jeff and Mary-Martha. This thesis could never have been written without their faithful support, encouragement and prayers.

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INTRODUCTION

Background of the Problem

Prenatal care has been identified as a major factor in ensuring healthy pregnancies and favorable birth outcomes for all women regardless of socioeconomic status (Covington, Churchill, & Wright, 1994; Fischler & Harvey, 1995; Johnson, Primas, & Coe, 1994; Schaffer & Lia-Hoagberg, 1994). Although prenatal care is an effective intervention associated with improved pregnancy outcomes, data reveal poor and declining utilization of this key service in some populations (Higgins, Murray, & Williams, 1994; Knoll, 1990; Office of Technology Assessment, 1986). For rural women, prenatal care is not always available and when it is available, it is not utilized to its full potential (Fingerhut, Makuc, & Kleinman, 1987; Korenbrot, Simpson, & Phibbs, 1994). One major reason may be that pregnant women's expectations of prenatal care are not being met. Expectations of prenatal care can have an influence on the initiation and continuation of prenatal services (Brown, 1989; Omar, Schiffman, & Bauer, 1995). If pregnant women's expectations for prenatal care are met, they may be more apt to continue prenatal care (Brown, 1989; Kogan, Alexander, Kotelchuck, & Nagey, 1994). The type of prenatal care

provider the women goes to for prenatal care may have some bearing on her expectations. Identification of women's expectations of prenatal care is an important first step. The purpose of this study was to describe rural low income pregnant women's expectations of prenatal care by type of prenatal provider.

Expectations have been defined as optimistic or pessimistic viewpoints about a specific situation (Ross, Frommelt, Hazelwood, & Chang, 1987). King (1971, 1981) defines expectations as perceptions. Expectations of care have been defined by Oberst (1984) as a set of expectancies about health care outcomes, health care provider's behavior, and health care system's performance that the patient has formulated from prior experiences, health care needs, and interpretation of the situation. Women's expectations of health care include care that is personalized, where information is provided, and providers whose interactions are based upon trust and respect (Covington et al., 1994).

Women are more inclined to obtain prenatal care when choices of prenatal care providers are available to them (Brown & Lumley, 1993; Patterson, Freese, & Goldenberg, 1990). Increasingly, low income pregnant women have fewer choices of their prenatal care provider, particularly in rural areas where access to physician providers is diminishing (Hansell, 1991; Morten, Kohl, O'Mahoney, & Pelosi, 1991). Alternative providers of prenatal care services in rural areas are becoming more prevalent,

especially in areas where access to physicians is often limited (Knoll, 1990). Certified nurse-midwives (CNMs) are one group of alternative providers of prenatal care who are providing comprehensive prenatal care to rural women, including attending the delivery of the infant. It is important to understand rural low income pregnant women's expectations of prenatal care when receiving care from different types of providers.

The purpose of this study was to compare through a secondary analysis rural low income pregnant women's expectations of their prenatal care by type of provider, physician or certified nurse-midwife, in a small rural county in Michigan.

Statement of the Problem

Profiles of this county reveal a decrease in the availability of prenatal care services. This may be related to unmet user expectations. Current literature identifies the degree of the prenatal care provider's success in meeting pregnant women's expectations for prenatal care, which influences utilization and compliance (Covington et al., 1994). Prenatal care is provided by physicians and certified nurse-midwives to pregnant women who are residents of this county, a rural Michigan community.

This county in Michigan is a small rural area located in northwestern lower Michigan that had a documented population of 13,264 in 1996, and registered 152 live births (KIDS COUNT in Michigan, 1996). There exists no inpatient

facility within this county that offers obstetrical services. Some pregnant women currently are able to receive prenatal care within the county until early in their third trimester, at which time their care is transferred to a provider in a nearby county to continue prenatal care and delivery. All women must travel out of the county to receive prenatal care for the remainder of their pregnancy, which in some cases may be over 100 miles round trip.

The most recent available data for women receiving inadequate prenatal care in this county was 43% in 1990-1992 (Michigan Department of Public Health, 1994). It is unclear which factors may have interfered with these women not receiving adequate prenatal care. However, what is known is that even with expanded eligibility for low income women to receive prenatal care (Meikle, Orleans, Leff, Shain, & Gibbs, 1995) and the removal of barriers related to finances and transportation, some women still do not avail themselves of prenatal care (Johnson et al., 1994; Schaffer & Lia-Hoagberg, 1994). One important factor to consider may be women's expectations for prenatal care.

Differences in care by certified nurse-midwives and physicians have been depicted as putting into practice two different philosophies of care. Understanding pregnant women's expectations of their prenatal care may be helpful in determining if there is a difference in expectations by pregnant women by type of prenatal care provider.

Research Questions

1. What are the expectations of prenatal care of rural low income pregnant women seeking prenatal care from physician providers?
2. What are the expectations of prenatal care of rural low income pregnant women seeking prenatal care from certified nurse-midwife providers?
3. Is there a difference between the expectations of prenatal care of rural low income pregnant women by type of prenatal care provider, certified nurse-midwife or physician provider?

Importance of the Study

Multiple factors influence enrollment in and utilization of prenatal care. The literature suggests that women's expectations of care may be one factor that contributes to adequacy of prenatal care. The purpose of this study was to add to the body of knowledge by examining expectations of women based on the prenatal care provided. If expectations of various prenatal providers are identified, then evidence regarding the acceptance of the advanced practice nurse in rural areas may be obtained. Advanced practice nurses include nurse practitioners and certified nurse-midwives. With the changing and expanding role of the advanced practice nurse (APN), services including prenatal care, case finding, case management, and education of pregnant women could be partially provided by the APN to help fill the gap in this small community. This

information will aid in planning strategies in a manner that meet women's expectations of prenatal care and increase women's use of services.

Conceptual Framework

This section includes the conceptual definitions of the study variables. Secondly, the conceptual model using King's dynamic systems is described.

Definitions of the Variables

Type of Provider. For the purposes of this study, type of provider was defined as a provider of prenatal care who has met the proscribed educational requirements, is currently licensed or certified to provide prenatal care in the state of Michigan, and whose practice is differentiated by a specific philosophy of care (Yankou, Petersen, Oakley, & Mayes, 1993). Type of provider, for this study, was either a certified nurse-midwife or physician. Certified nurse-midwives practice using a philosophy of care which views pregnancy as a normal event and provides highly individualized, comprehensive prenatal care including emotional and spiritual support to women with an emphasis on teaching, health promotion and communication (Cavero, Fullerton, & Bartlome, 1991; Morten et al., 1991; Paine, Barger, Marchese, & Rorie, 1995). The practice philosophy of physician providers of prenatal care emphasizes the pathological nature of pregnancy and focuses on identifying medical problems with subsequent treatment while incorporating a more routine use of technology. All

providers of prenatal care are required to deliver prenatal care according to the standards set forth by the American College of Obstetricians and Gynecologists (ACOG), the American Academy of Family Physicians (AAFP), or the American College of Nurse Midwives (ACNM) (Freeman & Poland, 1992; Yankou et al., 1993).

The scope of practice of certified nurse-midwives includes the provision and management of care of essentially healthy women and their infants throughout the maternity cycle and care of nonpregnant women seeking gynecologic services (Fischler & Harvey, 1995). A certified nurse-midwife is a registered nurse who has completed an approved educational program in nurse-midwifery and passed the national examination for certification as a nurse-midwife. Certified nurse-midwives practice collaboratively with physicians and other members of the health care team according to the standards defined by the American College of Nurse-Midwives (ACNM) (Knoll, 1990). The philosophy of health care practiced by CNMs is focused on the ambulatory care of women with an emphasis on health promotion, education, disease prevention and views the woman as central in the provision of prenatal care (Knoll, 1990; Oakley, Murtland, Mayes, Hayashi, Petersen, Rorie, & Andersen, 1995). Nurse-midwives, which means "with women", are described by Paine et al. (1995) as being part of a profession that serves rather than controls women and their

birthing energy, and where emotional and spiritual support of childbearing women are hallmarks of their care.

Nursing is a blend of art and science whose purpose includes promotion of health, prevention of illness and restoration of health (King, 1981) while focusing attention on patients rather than on techniques (Meleis, 1991). King (1981, 1992) postulates that nursing is a process of interpersonal interactions where purposeful communication fosters goals of health and wellness. It is in the arena of this interpersonal relationship where certified nurse-midwives have been found to differ significantly from their medical counterparts in the delivery of prenatal care. Establishing caring, supportive relationships with patients via more therapeutic listening, and provision of information to promote wellness and prevent illness during pregnancy, is a major focus of nurse-midwifery care (Cavero et al., 1991; Fischler & Harvey, 1995; Knoll, 1990; Lehrman, 1981; Morten et al., 1991; Paine et al., 1995; Yankou et al., 1993). Therefore, for the purpose of this study, certified nurse-midwife is defined as a provider of care to childbearing women with an emphasis on individualized and holistic care, education and communication.

Obstetricians tend to provide prenatal care to low and high risk pregnant women as compared to family and general practitioners who often limit provision of prenatal care to low risk pregnant women. Physicians tend to view pregnancy as a potentially pathological event requiring medical care,

and expensive technology with subsequently more interventions as compared with CNMs (Fischler & Harvey, 1995; Summers & Price, 1993). Physician providers are more inclined than CNM providers to incorporate procedures as a standard of care (Reid, Carroll, Ruderman, & Murray, 1989; Turnbull, 1984). For the purpose of this study, physician providers of prenatal care included general practitioners, family practitioners, and obstetricians who are licensed to practice medicine in the state of Michigan. Therefore, physician is defined, for the purpose of this study, as a provider of care to childbearing women with an emphasis on identification of problems, subsequent treatment and use of technology.

Expectations for Prenatal Care. Expectations of prenatal care have been defined by Greeneich (1993) as the anticipation that an event will happen. The experience of these events - past, present, or future - results in expectations being met or unmet. Confirmation of women's expectationsof prenatal care becomes the critical determinant in women being satisfied with their prenatal care (Greeneich, 1993).

Women's expectations of prenatal care are influenced by attitudes, prior experiences and information which define women's expectations (Johnson et al., 1994; Ross et al., 1987; Thomas & Penchansky, 1984). Pregnant women develop a set of expectations regarding pregnancy outcomes, prenatal care provider behaviors, and performance of the prenatal

care system, which form the basis by which women determine their needs as being met or unmet (Greeneich, 1993; Inguanzo, 1992). These expectations of prenatal care are subject to change during the course of pregnancy and with interactions with the prenatal care provider. The pregnant woman's expectations of the prenatal care provider are the expected performance by the prenatal care provider (Ross et al., 1987).

Factors that have been identified in the literature relating to expectations of the prenatal care provider's performance include provision of information (Freda, Andersen, Damus, & Merkatz, 1993; Olivo, Freda, Piening, & Henderson, 1994; Omar & Schiffman, 1995), participation in decision-making and locus of control (Aaronson, 1987; Seguin, Therrien, Champagne, & Larouche, 1994), and continuity of care (Brown, 1989; Schaffer & Lia-Hoagberg, 1994; Turnbull, 1984). For the purpose of this study, expectations of the pregnant woman seeking prenatal care were defined as the pregnant woman's perceived anticipation of the prenatal care and services she expects to receive throughout her pregnancy, which encompasses personalized, accessible, quality care; information; and other needed services would be provided by the provider (adapted from Omar & Schiffman, 1995).

Theoretical Framework

The conceptual framework utilized for this study was King's (1992) dynamic interacting systems. King's framework

for nursing is based on certain assumptions about human beings and dyadic interactions. King postulates that it is through interactions between the prenatal care provider (CNM/physician) and the client (pregnant woman) where each individual comes together with his/her unique perceptions and through communication, set goals and explores the means to attain those goals (King, 1971, 1981, 1992; Meleis, 1991).

There are certain assumptions which are inherent in King's (1981, 1992) theory and relevant to this study. The perceptions of the prenatal care provider and the pregnant woman influence the interaction process. Individuals have a right to knowledge about their health. Prenatal care providers have a responsibility to share information that helps individuals make informed decisions about their health. Prenatal care providers have a responsibility to gather relevant information about the expectations of the pregnant woman for prenatal care so that their goals and the goals of the pregnant woman are congruent (King, 1992).

King's (1981, 1992) conceptual framework is based upon three dynamic interacting systems: personal system, interpersonal system, and social system. These three systems consist of individuals or groups that are reacting, transacting, and interacting with each other and their environment. Implicit in this process are the essential elements in the transaction: perception, communication, and

interaction. Each of these systems has goals, needs and expectations which influence the interaction process.

The personal system consists of the expectations that rural low income pregnant women have about their prenatal care. The interpersonal system is comprised of the certified nurse-midwife and physician providers of prenatal care and the pregnant woman. The social system incorporates the delivery of prenatal care services of which prenatal care providers (CNM/physician) are a part.

These three open interacting systems (Figure 1) are distinct and unique, but are not separate from each other. These open systems lend themselves to the collaborative and interdisciplinary approach to prenatal care. The broken lines represent openness and permeability which allows interaction to occur among the other systems. The arrows (Figure 1) represent the interrelatedness of the systems to one another. Each system proceeds into and from each other. The goal of identification of expectations about prenatal care is achieved through investigation of the client (pregnant woman) within the interpersonal system (prenatal care provider) and the the social system (prenatal care delivery system).

The personal system is the rural low income pregnant woman who enters the prenatal care system with certain expectations about prenatal care, the relationship with her prenatal care provider (CNM/physician), and the responsiveness of the prenatal care delivery system (King,

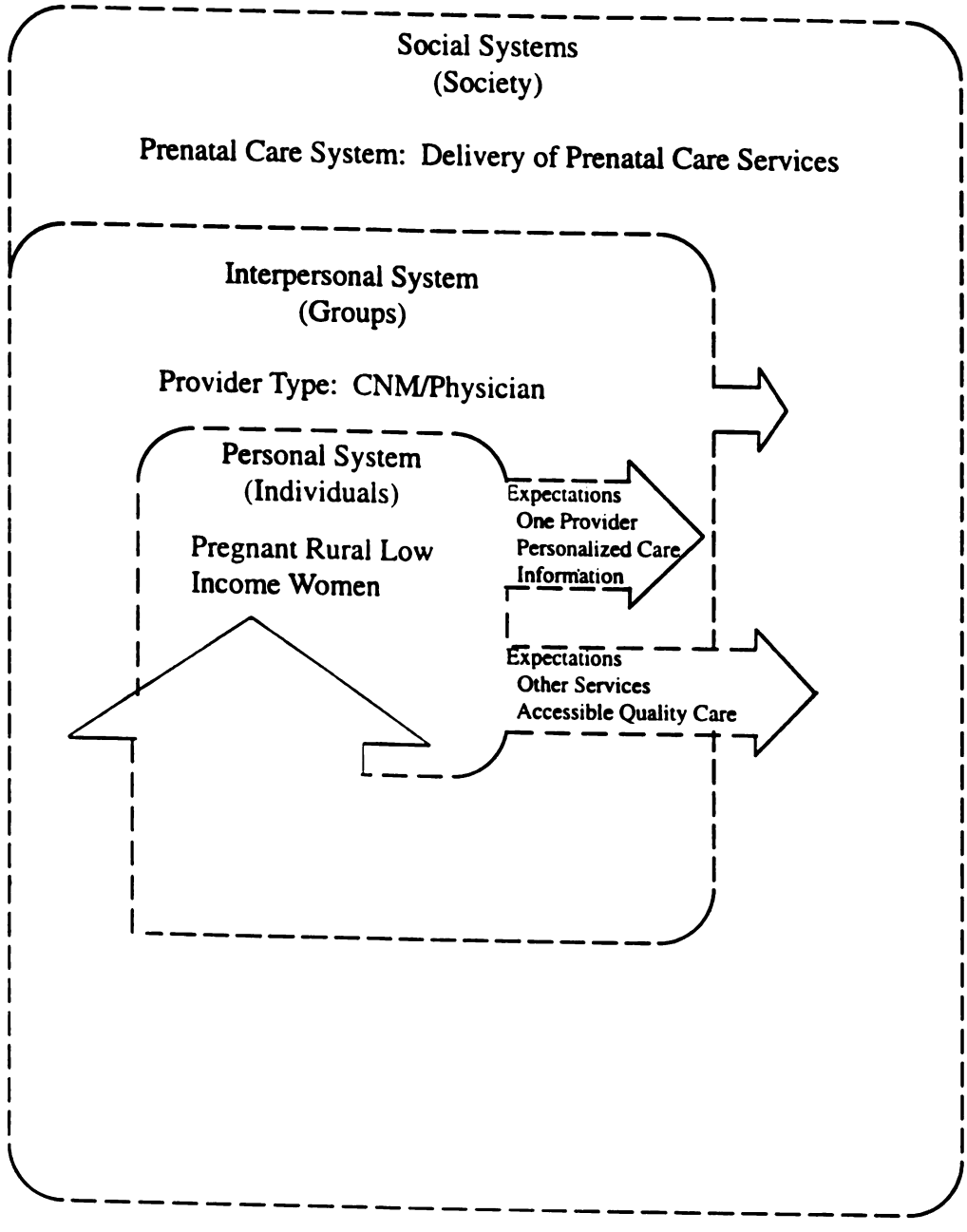

Figure 1. An adapted conceptual framework for prenatal care: dynamic interacting systems. From King's Conceptual Framework for Nursing (King, 1992, p. 20).

1981, 1992). These expectations are based upon her past life experiences and previous encounters with health care providers, which may be both positive and negative. Expectations are based upon her attitudes, perceptions of self, and her health care needs (Oberst, 1984). Her expectations may influence how she feels about prenatal care and her behavior is influenced by her expectations.

The interpersonal system focuses on human beings who function in groups (King, 1981). The prenatal care provider (CNM/physician) contracts with the rural low income pregnant woman to provide prenatal care. The prenatal care provider perceives and responds to the unique needs of the woman within the context of the provider-client relationship. Included in this relationship are the expectations about the consistency of having one provider for prenatal care (Schaffer & Lia-Hoagberg, 1994), having individualized attention (Covington et al., 1994), and receiving information (Freda et al., 1993) (Figure 1).

The social system as defined by King (1981) is an organized boundary of systems including social roles, behaviors, and practices which are developed to maintain its values and to regulate its practices and rules. The prenatal care system that provides prenatal care to rural low income pregnant women is comprised of prenatal care providers (CNM/physician) and other health care personnel. Authority, decision-making, organization, power and status are relevant characteristics found within the prenatal care

system which can affect the delivery of care. The prenatal care system includes the provision of other services such as nutritional counseling, financial assistance, and community health services (Higgins et al., 1994), as well as the use and quality of obtaining and receiving prenatal care services (Korenbrot et al., 1994). Expectations the rural low income woman has about the prenatal care system include expectations for receiving accessible quality care and other services (Figure 1).

The pregnant woman's expectations and needs influence how she reacts to interactions with the prenatal care provider (CNM/physician), with other prenatal care services, and the prenatal care delivery system. The focus in this study was the expectations women have about prenatal care based on the type of provider rendering prenatal care which may ultimately influence prenatal care utilization.

Review of the Literature

This section examines the empirical literature relevant to the variables under study. There are limited empirical studies about pregnant women's expectations about their prenatal care in general, and less about expectations based on type of prenatal care provider (Knoll, 1990; Office of Technology Assessment, 1986; Oakley et al., 1995; Powers, Jalowiec, Reichelt, 1984; Yankou et al., 1993).

While the focus of this study was on the expectations of rural low income women, only one study was found in the literature for this population. Therefore, literature was

reviewed pertaining to urban women's expectations for prenatal care. This author acknowledges there may be inherent differences between these two groups. There may be differences by setting: rural versus urban, as well as socioeconomic status: low income versus middle income. The literature revealed few studies that examined low income inner city and/or urban pregnant women's expectations for prenatal care.

Three retrospective studies (Giles, Collins, Ong, & McDonald, 1992; Oakley et al., 1995; Olivo et al., 1994) compared urban women's expectations for prenatal care by provider type (CNM/physician). Women receiving care from CNM's expected to have continuity of care, to receive information and prenatal education, and to have a positive birth experience. Women cared for by physicians did not expect to receive prenatal education or information, and expected to have a longer waiting time to be seen with less time spent with them. Women expected use of technology with physician providers as compared to low level technology use by CNMs.

Three other studies (Brown & Lumley, 1993; Freda et al., 1989; Seguin et al., 1989) identified urban pregnant women's expectations about their informational needs. Women expected to receive adequate information about fetal development, nutrition, and vitamins from their provider. Brown and Lumley (1993) also identified that women expected provider continuity with reasonable waiting time to be seen.

In a self-report study conducted by Patterson et al. (1990) which examined urban women's expectations of prenatal care by private versus public prenatal care delivery, women expected private prenatal care providers to be more caring as compared to providers at a public health clinic. Women expected to receive better prenatal care from a private provider as compared to receiving care at a public prenatal clinic. Provider type was not differentiated.

Summary and Critique of the Literature Review

Recurrent in the literature was the pregnant women's expectation to receive information (Brown & Lumley, 1993; Freda et al., 1989; Oakley et al., 1995; Patterson et al., 1990; Seguin et al., 1989). Some literature identified pregnant women's expectations for prenatal care by type of provider. The literature did reveal that urban women expected certified nurse-midwives to provide prenatal care that included adequate information and education within a supportive, personalized relationship with women with a minimum of technology-driven interventions (Giles et al., 1992; Oakley et al., 1995; Olivo et al., 1994). Pregnant women's expectations about prenatal care from physician providers included receiving care which included state-of-the-art technology.

Deficient in the literature was the lack of comparative studies of patient expectations by provider type for rural low income women. An additional limitation of the studies included the lack of prospective, large-scale studies. Of

the studies reviewed, only one employed a prospective design (Freda et al., 1993). Another limitation identified was that a majority of the comparative studies were done with middle/upper income women; only two of the studies reviewed included lower socioeconomic women (Brown & Lumley, 1993; Freda et al., 1993).

Confidence in the findings of the vast majority of retrospective studies reviewed was also questioned due to the length of time that elapsed after the patient encounter when the survey data was collected. One of the studies reviewed attempted to collect data shortly after the patient encounter (Patterson et al., 1990), in sharp contrast to several months that had elapsed in some of the other studies described (Brown & Lumley, 1993; Seguin et al., 1989). The remaining retrospective studies did not specify a time frame during which data were collected.

Clearly, the need exists for comparative analyses of dimensions of expectations of prenatal care with advanced practice nurse/CNM and physician delivered prenatal care services in rural, underserved, low income populations. This information would assist rural communities in planning for the provision of prenatal care services by using alternative prenatal care providers in areas where access is limited and utilization of available prenatal care services is poor. There are gaps in the literature between identification of rural low income pregnant women's

expectations of prenatal care with provider type which may influence prenatal care utilization.

Methods

Research Design

The research design was a descriptive study of patient expectations of prenatal care through a secondary analysis of data previously collected by Omar et al. (1995) using the Patient Satisfaction with Prenatal Care (PSPC) Instrument (Appendix A). The original study done by Omar et al. (1995) examined pregnant women's perceptions of barriers, expectations about prenatal care, satisfaction with prenatal care, utilization of prenatal care, and maternal and neonatal outcomes in a population of 61 rural low income women in a small county in northwestern lower Michigan using a prospective design with both a survey component and a chart review component. The data collection procedures are provided in Appendix B.

Sample

The original sample consisted of 61 rural low income pregnant women who were receiving prenatal care and resided in a small rural county in northwestern lower Michigan. Of the 62 women initially invited to participate in the study, 61 women agreed, which resulted in a 98% participation rate. The final sample for this study consisted of 60 rural low income women for whom there was complete data on all variables: 35 women received prenatal care from physician prenatal care providers, and 25 women received prenatal care

from certified nurse-midwives. One woman indicated that she saw a CNM and physician provider about equally and so was not included in this analysis.

Setting

The small rural county in this study was designated as medically underserved. There exists no inpatient facility in this county that offers obstetrical services. All women must travel out of the county for prenatal care and delivery services after 28 weeks gestation. This necessitates some women traveling in excess of 100 miles round trip (average 64 miles) to receive prenatal care services.

Operational Definitions of the Variables

Type of provider. Type of provider was defined as the provider the woman identified as seeing most often; this was item #87 on the Patient Satisfaction with Prenatal Care (PSPC) Instrument (Appendix A). Choices of provider type this sample selected were: (1) physician or (2) nurse midwife.

Patient Expectations of Prenatal Care. Patient expectations was defined utilizing the Expectations scale of the PSPC Instrument and consisted of five dimensions: (1) one provider; (2) other services; (3) information; (4) personalized care; and (5) accessible quality care. Expectations of prenatal care was operationalized using the subscale scores and total score on the Expectations of prenatal care scale, using 13 items on the PSPC Instrument (Appendix A) and included the following items. The ONE

PROVIDER scale (items 11, 12); the OTHER SERVICES scale (items 19, 20, 21); the INFORMATION scale (items 9, 10); the PERSONALIZED CARE scale (items 13, 14, 18); and the ACCESSIBLE QUALITY CARE scale (items 6, 8, 16). Because of the nature of the wording of the items on the ACCESSIBLE QUALITY CARE scale, these items were reversed scored. Scoring was done using a Likert scale of 1 to 6, which indicated the degree of expectation for each question from 1 (strongly agree) to 6 (strongly disagree). Mean scores were calculated for each scale and for the total scale of 13 items. The lower the score indicates the higher the level of expectations of prenatal care, the higher the score indicates a lower level of expectations of prenatal care.

Instrumentation

The instrument used was the Patient Satisfaction with Prenatal Care (PSPC) Instrument developed by Omar and Schiffman (1994) which measures patient expectations and satisfaction with prenatal care and services. The PSPC Instrument is a 108 item self-report instrument with questions that contain six point Likert scales without neutral points (Omar & Schiffman, 1994). The PSPC scale contains five scales: motivation, expectations, satisfaction with provider, satisfaction with staff, and satisfaction with the prenatal system. Only the Expectations scale was utilized for this study. The Expectations scale factored into five dimensions: one provider, other services, information, personalized care and accessible quality care.

Only those questions specifically evaluating patient expectations of prenatal care as previously noted, or questions regarding provider type, and demographic information were included. The Patient Satisfaction with Prenatal Care Instrument is designed for use with subjects at or below a sixth grade reading level, utilizing the Flesch-Kincaid Bavela Level formula.

The PSPC Instrument has demonstrated internal consistency reliability for four of the five scales and scale total (Appendix C). The alpha reliabilities of each subscale on the Expectations scale are .74, .80, .71, .62, and .48 for the five subscales for the Expectations scale, respectively: one provider, other services, information, personalized care and accessible quality care are acceptable. The alpha reliability for the total scale is .72.

Data Analysis

Data analysis was done using the SPSS/PC computer program. Descriptive statistics were calculated to present the demographic characteristics of age, race, level of education, marital status, insurance type, work status, gravidity, defined as the total number of times the woman was pregnant. Chi square analyses were performed on the demographic variables to determine any possible statistically significant differences between the women in the two provider groups.

Research Questions: (1) What are the expectations of prenatal care of rural low income pregnant women seeking prenatal care from physician providers? (2) What are the expectations of prenatal care of rural low income pregnant women seeking prenatal care from certified nurse-midwife providers? These two research questions were investigated using descriptive statistics which included measures of central tendencies, dispersion, and frequencies. Data were computed for the Expectations scale on the dimensions of one provider, other services, information, personalized care, accessible quality care, and total scale for both groups of providers.

Research Question (3) Is there a difference between the expectations of prenatal care of rural low income pregnant women by type of prenatal care provider, certified nurse-midwife or physician provider? Research Question 3 was tested using the inferential statistic, two-tailed parametric t-test to analyze differences between the two group means of expectations by type of provider for each dimension and scale total. A level of significance established at 0.05 was utilized for data analysis.

Protection of Human Subjects

The original study by Omar et al. (1995) was approved by the University Committee on Research Involving Human Subjects (Appendix D). The principal co-investigators have maintained the data utilized for this study on a disk. The subjects were entered by identification numbers only and did

not contain any personal identifiers. Consequently, no link could be made with the name of any subject in this study. The present study used secondary data from the original study and the researcher did not have access to the identities of the subjects. Approval to conduct secondary analysis for this study was obtained from Michigan State University Committee on Research Involving Human Subjects (UCRIHS) prior to initiating data analysis (Appendix D).

Research Assumptions

The assumption was made that subjects understood the questions asked and answered the questions honestly. Second, it was assumed all potential subjects were afforded the opportunity to participate and the data were coded and entered accurately.

Research Limitations

The absence of a random sampling procedure and small sample size are threats to the external validity of this study and limits generalizability to the target population. Large sample sizes are, however, difficult to acquire information about when studying rural populations, as are probability samples. Second, expectations may have been influenced by the prenatal care received since women completed the questionnaire in the third trimester of pregnancy and were asked to recall their expectations.

Results

Description of Sample

This study sample consisted of 60 women, with a mean age of 24 years (*SD*=5.24) of which slightly more than half (58%, *n*=35) received prenatal care from physician providers and 25 (42%) received prenatal care from certified nurse-midwife (CNM) providers (Table 1). Slightly more than four-fifths (88%, *n*=53) of the total sample was comprised of White/non-Hispanic women, with four-fifths (80% *n*=48) of the total sample having a high school or greater education. Three quarters of the total sample reported being married (*n*=45). Slightly more than three-fifths (63%, *n*=38) indicated being on Medicaid; however, half (*n*=30) of the women reported being employed outside of the home. The majority (55%, *m*=2.3) of women were experiencing their second pregnancy. The main significant finding was that almost half (49%) of the women receiving of care from physician providers reported having private insurance as compared to only 16% of the women in the CNM group (X^2 (1, *N*=60) = 6.80, *p*=.009).

Analysis of Research Questions

1. What are the expectations of prenatal care of rural low income pregnant women seeking prenatal care from physician providers?

The women in the physician group generally reported a slight level of expectations (Table 2). Women reported a moderate level of expectations for receiving personalized

Table 1.

Frequencies of Sample Demographics by Provider Type (N=60)

Demographics	CNM		Physician		Total	
	n	(%)	n	(%)	n	(%)
Race						
White	21	(84)	32	(91)	53	(89)
Hispanic	2	(8)	1	(3)	3	(5)
Native American	1	(4)	1	(3)	2	(3)
Other	1	(4)	1	(3)	2	(3)
Marital Status						
Single	4	(16)	6	(17)	10	(16)
Married	18	(72)	27	(77)	45	(75)
Separated	1	(4)	1	(3)	2	(3)
Divorced	2	(8)	0	(0)	2	(3)
Other	0	(0)	1	(3)	1	(2)
Educational Level						
No high school	0	(0)	2	(6)	2	(3)
Some high school	7	(28)	3	(8)	10	(16)
High School Grad	12	(48)	13	(37)	25	(42)
Some College/Tech	5	(20)	14	(40)	19	(32)
College Graduate	0	(0)	2	(6)	2	(3)
Post College	1	(4)	1	(3)	2	(3)
Medicaid						
Yes	16	(64)	22	(63)	38	(63)
No	9	(36)	13	(37)	22	(37)
MICH-Care						
Yes	7	(28)	3	(9)	10	(17)
No	18	(72)	32	(91)	50	(83)
Private Insurance						
Yes	4	(16)	17	(49)	21	(35)
No	21	(84)	18	(51)	39	(65)
Selfpay						
Yes	0	(0)	2	(6)	2	(3)
No	25	(100%)	33	(94)	58	(97)
Provider Gender						
Female	25	(100%)	3	(9)	28	(47)
Male	0	(0)	28	(80)	28	(47)
Both	0	(0)	4	(11)	4	(6)
Work Outside Home						
Yes	10	(40)	20	(57)	30	(50)
No	15	(60)	15	(43)	30	(50)
Work Time						
Fulltime	5	(20)	11	(31)	16	(27)
Parttime	5	(20)	8	(23)	13	(22)

Table 2.

Mean Scores and Standard Deviations for Expectations by Provider Type (N=60)

Expectations	Provider Type CNM (n = 25) M	SD	Physician (n = 35) M	SD
One Provider	2.1	1.1	2.1	1.2
Other Services	3.9	1.3	3.4	1.1
Information	3.6	1.5	3.1	1.6
Personalized Care	2.2	.87	2.0	.90
Accessible Quality Care	4.5	1.0	4.7	.67
Expectations Total	3.4	.70	3.1	.75

Note. Low scores indicate high expectations; high scores indicate low expectations.

care from one provider. These women indicated a slight level of agreement expecting to obtain information and to receive other services. These women had a low level of expectations for receiving accessible quality prenatal care (Table 2).

2. What are the expectations of prenatal care of rural low income pregnant women seeking prenatal care from certified nurse-midwife providers?

Women receiving care from certified nurse-midwives reported a slight level of expectations overall (Table 2). The women reported a moderate level of expectations for one provider and for receiving personalized prenatal care. The women indicated a slight level of agreement with the expectation of receiving information and a low level of

expectations to obtain other services and to receive accessible quality prenatal care (Table 2).

3. Is there a difference between the expectations of prenatal care of rural low income pregnant women by type of prenatal care provider, certified nurse-midwife or physician provider?

The inferential statistic, two-tailed parametric t-test, was used to answer this research question. The mean value for the One Provider subscale was 2.1 (CNM) and 2.1 (physician) with no significant difference between these two provider groups ($t(60) = 57$, $p=.901$). The mean value for the Other Services subscale was 3.9 (CNM) and 3.4 (physician) with no significant difference between the two provider groups ($t(60) = 58$, $p=.118$). The mean value for the Information subscale was 3.6 (CNM) and 3.1 (physician) with no significant difference between the two provider groups ($t(60) = 57$, $p=.303$). The mean value for the Personalized Care subscale was 2.2 (CNM) and 2.0 (physician) with no significant difference between the two provider groups ($t(60) = 58$, $p=.269$). The mean value for the Accessible Quality care subscale was 4.5 (CNM) and 4.7 (physician) with no significant difference between the two provider groups $t(60) = 58$, $p=.396$). The mean value for the total Expectations subscale was 3.3 (CNM) and 3.1 (physician) and there was no significant difference

indicated between the two provider groups ($t(60) = 57$, $p = .206$).

The data revealed there were no significant differences in expectations for prenatal care of rural low income pregnant women by type of provider, certified nurse-midwife or physician, on any subscale of Expectations or total Expectations scale. Both groups of women reported similar expectations for prenatal care.

Discussion

Sample

Overall, the women who participated in the study were a fairly homogeneous group. The majority of the sample were married, White/non-Hispanic women who had attained a high school or greater education. This is representative of the rural population of Michigan (Michigan Department of Public Health, 1994). There was a significantly higher percentage of privately insured women who received prenatal care from physicians than from certified nurse-midwives. Pregnant women who lack private insurance often do not have choices of obstetric providers (Fingerhut et al., 1987; Knoll, 1990; Patterson et al., 1990). The insurance status of the women from the physician provider group may have afforded the women more options in their choice of prenatal provider.

The literature has stated that low income women often are not as happy with prenatal care provided within a public clinic setting as compared to care delivered within the private sector (Brown & Lumley, 1993; Patterson et al.,

1990). Low income women often perceive that care received from private providers is better. This perception is based on the nature of the provision of prenatal care by site, for example, public versus private, rather than by type of prenatal care provider (Fischler & Harvey, 1995; Patterson et al., 1990). However, it has been reported that women have selected CNMs based on their expectations for supportive care, ease of communication and increased involvement with their prenatal care (Knoll, 1990). Women selecting CNMs have often been middle to upper class and having private insurance (Olivo et al., 1994). Rural low income women in this study may not be aware of prenatal care offered by CNMs because of their limited access and utilization of health care.

The referral system for certified nurse-midwives providing prenatal care to women in this county is another area for consideration. The practice structure for the CNMs is based on their employer contractual agreement which limits the CNMs' practice to women receiving Medicaid or because women may perceive they have no other choice of prenatal care provider. The literature documents that CNMs are more likely to be willing to accept patients enrolled in Medicaid (Aaronson, 1987; Morten et al., 1991; Office of Technology Assessment, 1986) and many physicians are turning away Medicaid patients due to reimbursement and litigation concerns (Knoll, 1990). In addition, the women living in this rural county with private insurance may have chosen

physician providers who provided prenatal care within the county until 28 weeks gestation and this may have afforded the women less travel time. Provision of prenatal care by CNMs within this county was not available.

Patient Expectations of Prenatal Care

This study did not reveal any statistical significance of expectations by provider type on any of the five dimensions (One Provider, Other Services, Information, Personalized Care, and Accessible Quality Care) or total scale of Expectations. Differences in expectations for prenatal care by provider type was not supported by the data.

The results of this study showed that women had moderate expectations to receive personalized prenatal care and having one provider, slight expectations to receive information and other services, and held low expectations to receive accessible quality care regardless of type of provider. A similar pattern of expectations was found on the different dimensions of Expectations by type of provider also. The women had overall moderate expectations for prenatal care regardless of provider type.

Consistent within this study and within the literature are women's expectations for a caring, personal relationship with their prenatal care provider (Giles et al., 1992; Patterson et al., 1990). The literature is replete with references identifying the prenatal care provider as being an important determinant in women's expectations of prenatal

care which include providing individualized and caring support regardless of type of provider (Omar & Schiffman, 1995; Patterson et al., 1990). Women in both provider groups expected to receive this type of care and expected their providers to be kind, courteous, caring and sensitive to their needs which is consistent with the literature (Eriksen, 1995).

Interestingly, women receiving prenatal care from both certified nurse-midwife providers and physician providers reported having only a slight level of expectations to receive information from their provider while the literature identifies pregnant women do generally expect to receive information (Freda et al., 1989; Seguin et al., 1989). It was surprising that women did not report as high a level of expectation on this scale.

The majority of these rural low income pregnant women were experiencing their second pregnancy and may have approached prenatal care with different knowledge levels and expectations regarding information provided. Perhaps they had obtained information from family, friends or other sources, such as staff or prenatal classes. Because this was their second pregnancy they may not have perceived a need for information especially if they were seeing the same provider. The women also may not have received prenatal care from CNMs previously and did not know what to expect.

Women reported slight expectations for receiving services from a nutritionist, social worker, or public

health nurse. This finding is consistent within the literature describing low income women residing in a rural area as having minimal access to prenatal services (Knoll, 1990) in addition to having a tenuous connection to the health care system (Brown, 1989). Perhaps the women in this study did not have any expectations other than to receive prenatal care because they did not perceive these services as important, they may be unaware that other services were available or considered part of prenatal care, or because they realize how difficult delivery of prenatal care is in rural areas.

Women in both the certified nurse-midwife and physician provider groups reported having low levels of expectations to receive quality accessible prenatal care which included prenatal care visits not taking a long time. The rural low income women in this study expected to have difficulty obtaining prenatal care, that visits would take a long time, and to receive poor care. The rural low income women may have had more difficulty accessing prenatal care because of the decreased number of providers, inconvenient clinic hours and insurance difficulties. Consistent with this study and within the literature, is that rural low income women have difficulty accessing prenatal care with one barrier being their area of residence (Johnson et al., 1994). Rural low income women have limited access to prenatal care due to great distances needed to travel for prenatal care services (McClanahan, 1992). In addition, the literature cites that

women receiving prenatal care at public clinics do not expect the prenatal care to be as good as from private providers (Brown & Lumley, 1993; Omar & Schiffman, 1995; Patterson et al., 1990).

Discussion of Results with the Conceptual Framework

The results of this study provide some support for the adapted conceptual model from King (1971, 1981, 1992). While the results supported expectations of pregnant women within the interpersonal and social systems, the results did not support the differentiation by provider type. Women in both groups had similar expectations of the provider and the system.

The pregnant women in this study reported a moderate level of expectations within the interpersonal system, such that they expected to receive personalized care from one provider regardless of provider type. These women expected their prenatal care provider to be attentive to them and to communicate personal caring. However, the women had only slight expectations to obtain information. These expectations may be based on past expectations with health care in general or prenatal care specifically since the majority of these women had already experienced a previous pregnancy. These findings, also, may be explained in part due to having given the survey after the women had experienced prenatal care, as they were in their third trimester of pregnancy. Therefore, the women may be representing what they were experiencing and perceived that

both the CNM and the physician were providing equivalent interpersonal prenatal care.

The social system is comprised of the prenatal care system of which prenatal care providers (CNM/physician) are a part. The rural low income pregnant women in this study had only slight expectations to receive services from a social worker, nutritionist and public health nurse and low expectations to receive accessible quality prenatal care. These women did not expect to receive good prenatal care. These are areas rural low income women have least control over and perceptions of the prenatal care system become negative.

In conclusion, King's adapted model is appropriate as the conceptual framework for expectations of rural low income pregnant women about the prenatal care provider and system. The expectations represent pregnant women's reality of prenatal care. These realities are based on prior experiences and information, which form women's expectations about prenatal care. Women's perceptions of how completely their expectations for prenatal care are met influence women's behavior of accessing and utilizing the prenatal care system (Eriksen, 1995; Omar & Schiffman, 1995). It was found that women do not have different expectations based on type of provider, rather their expectations are similar regardless of whom their prenatal care provider is. This has strong implications for nursing.

Implications for the APN as Prenatal Care Provider

This study found that overall rural low income pregnant women held various expectations for prenatal care for the different dimensions of prenatal care services, and that these expectations were not significantly different by provider type. Women reported moderate expectations for personalized care and having one provider. Women reported having slight expectations to receive information and other services, while they had low expectations to receive accessible quality prenatal care.

The APN can utilize these findings that women expect personalized care from their prenatal care provider, and they expect to be seen by the same prenatal care provider regardless of type of provider. This finding is encouraging for the APN. Advanced practice nurses have the opportunity to meet rural low income pregnant women's expectations about their provider. These findings indicate that these women would accept APNs as prenatal care providers as long as APNs met the women's expectations. The literature supports that APNs establish relationships with women that are individualized and personal while offering compassion and caring support (Cavero et al., 1991; Morten et al., 1991).

Women in this study reported slight expectations to receive information and other services. The APN is in an unique position to integrate health education into the relationship with pregnant women and meet their expectations. Teaching is an integral component of APN care

where specific topics and time allottment can be dictated by the needs and expectations of the pregnant women (Omar & Schiffman, 1995). The literature reports that APNs provide more information than do other health care providers (Morten et al., 1991). Regarding other services, marketing could be done to raise women's awareness of prenatal care services available within the community. Community presentations to groups such as 4-H, daycare centers, or the use of local radio spots to advertise available prenatal services could help accomplish this task of informing women of services. The literature identifies that APNs collaborate with other health care providers and make referrals (McGivern, 1993; Oakley et al., 1995). In the role as collaborator, the APN can refer women in need of nutrition counseling, financial assistance and public health nursing.

Women in this study reported low expectations for accessible quality care, which included problems getting care, visits that take too long, and poor care. The availability and distribution of prenatal care providers directly affect women's access to prenatal care. There are fewer practitioners providing prenatal care in rural areas (Klerman, 1994; Knoll, 1990), consequently, these women have limited access to prenatal care (Fischler & Harvey, 1995).

There is a need to increase the number of prenatal care providers to deliver high quality accessible prenatal care and services to rural low income pregnant women. Advanced practice nurses can offer prenatal services that would

increase access to prenatal care for rural women. The literature validates that APNs can manage normal pregnant women as well as physicians (Fischler & Harvey, 1995; Knoll, 1990). While the number of physician providers in rural areas continue to decrease, APNs choose to practice in rural areas and have the expertise to meet the expanding prenatal care needs of rural low income women (Morten et al., 1991). It has been documented in the literature that APNs can be utilized to improve access to prenatal care in rural areas (Knoll, 1990).

The APN providing prenatal care to rural low income pregnant women must remain cognizant that the majority of these women are employed and many need other opportunities for prenatal care, such as in the evenings, on weekends, and ideally within their own community. The APN could work with others within the community to coordinate offerings at times convenient for these women.

Women reported high expectations for long waiting time for prenatal visits. Long waits negatively affect women's perception of prenatal care (Lazarus & Philipson, 1990). The APN as a prenatal care practitioner is in an unique position to focus on interventions that can help make prenatal care a positive experience. Providing play areas for children, staggering appointments, providing amenities and services to women, while waiting to be seen by the provider could help change negative expectations.

Women expected long waits in accessing and using the prenatal care system. One reason for this expectation may be due to lack of prenatal care providers (Knoll, 1990). The APN can be a central figure in helping to eliminate this level of expectation providing the prenatal care delivery system is willing to accept and utilize APNs as prenatal care providers. The literature has documented APNs are more willing to work in rural areas than physicians (Brown, 1989; Morten et al., 1991).

Women had low expectations to receive quality prenatal care; rural low income pregnant women in this study expected to receive poor care. It has been documented in the literature that rural low income women do not receive quality prenatal care (Hansell, 1991). Advanced practice nurses (APNs) focus on health promotion and illness prevention, teaching and counseling, and continuity of care in a personal, caring relationship (Giles et al., 1992; Knoll, 1990; Paine et al., 1995). The literature reports that APNs can offer rural low income women good quality prenatal care (Cavero et al., 1991). Advanced practice nurses could improve the quality of prenatal care while increasing access and availability of these services for rural low income women by fulfilling their expectations for prenatal care.

The APN can address the expectation for low quality care by educating the community, health care planners as well as rural residents concerning the role of the APN. The

APN is qualified to provide prenatal care including childbirth classes and could provide the classes at the same site where prenatal care is rendered. Flexible hours and choices of providers could help with difficulties of long wait times. System and situational related barriers can especially be affected by many prenatal care services being provided by the APN in the county.

In summary, it has been shown that the APN is capable of meeting rural low income pregnant women's expectations for prenatal care, is able to provide continuity in a caring manner, meet the educational and informational needs, make appropriate referrals for other services, and provide an environment with less waiting time and quality care. However, the APN needs to inform rural communities of the role of the APN, work to establish collaborative practices within the community, and meet with health planners and residents. Community presentations to groups such as schools, day care centers, churches, parent groups and community agencies could help accomplish this goal.

Implications for the APN as Primary Care Provider

The advanced practice nurse (APN) is able to provide primary care to women before, during, and after pregnancy. In the role as a primary care provider, the APN can be a collaborator and educator of pregnant women and families. The APN can provide rural low income women with information and care needed to help them ensure a healthy baby during visits for routine health care. The APN can assist rural

low income women in accessing a prenatal care provider who can provide prenatal care and deliver their infant. Prior to the referral, the APN identifies women's expectations for a prenatal provider and identifies providers, CNM or physician, based on the women's expectations. The APN as collaborator remains in contact with the women, such as through phone contact, in addition to following up with the referred prenatal care provider to assure the continuity of care for these women. The APN in primary care can function as an educator to the women for questions and clarification of instructions and tests.

The APN in primary care can assist in the rural community's acceptance and utilization of the APN as a prenatal care provider by being a change agent to bring about alterations in the community's attitude toward prenatal care providers. The APN as an educator can inform women through the education system and civic groups of the role of the APN in the delivery of quality and personalized prenatal care.

As a consultant the APN can provide information of their expertise to other health care providers by networking with other prenatal care providers to provide credibility and respect for the APN's ability to manage pregnant rural women. The APN has an opportunity to display leadership skills within the community to advocate for women and their need for the delivery of comprehensive, community-based care, and to contribute to the implementation of integrated

health care systems that allow women to have expanded access to care.

In summary, the APN as a provider of primary care can be a collaborator and educator of pregnant women and their families while advocating for acceptance as prenatal care providers. The rural community offers opportunities for the APN to provide leadership in detailing women's need for prenatal care with assurance of their expectations for personalized care and one provider being met.

Implications for the CNM as Prenatal Care Provider

The certified nurse-midwife works closely with healthy women of childbearing age. The practice of the CNM includes the independent management of the care of healthy newborns and women throughout the childbearing cycle and the care of women seeking contraceptive care. Certified nurse-midwives practice within a prenatal care system that provides for medical consultation and collaboration. The CNM utilizes written policies and procedures which have been agreed upon with the collaborating physician and form the guidelines for CNM practice in rural areas. These guidelines form the basis for the CNM's autonomy in decision-making while caring for pregnant rural low income women and their infants.

The CNM provides care for essentially normal newborns and women throughout the childbearing years. The CNM is a nurse who is able to provide prenatal care to rural low income women seeking primary care services. The literature documents the focus of practice of the CNM is the care of

essentially healthy pregnant women and the CNM has been especially effective in the management of rural low income women (Knoll, 1990). The findings from this study suggest that women had the same expectations regarding their provider and their prenatal care services whether the provider was a physician or a CNM. This finding suggests that these women would accept CNMs as prenatal care providers as long as the CNMs met the women's expectations. The literature also strongly supports CNMs as qualified, capable prenatal care providers in rural communities (Fischler & Harvey, 1995; Morten et al., 1991; Paine et al., 1995).

Both APNs and CNMs offer rural communities a solution to the provision of prenatal care. The community, its commissioners and health planners, and other health care professionals need to be willing to accept and utilize these advanced practice nurses which are capable of meeting women's expectations of prenatal care similarly to physicians. Similar strategies described for educating the community about the APN can be implemented.

Recommendations for Further Research

This study failed to demonstrate a difference between type of provider (CNM/physician) and rural low income pregnant women's expectations of prenatal care. Previous studies have reported differences in women's expectations by provider type (Knoll, 1990; Oakley et al., 1995; Yankou et al., 1993). Failure to show a difference between type of

provider and expectations may be due to the small sample size in this study. Therefore, replication of the original study with a larger sample size is indicated. Secondly, when this study was undertaken, expectations were measured when the women were already receiving prenatal care. A study could be undertaken to study expectations prior to the initiation of prenatal care and compare the results with this study.

This study reported women had moderate expectations for having one provider and receiving personalized care. Conversely, women in this study reported low expectations for accessible quality care. Research needs to be done to assess how pregnant women prioritize their expectations.

Most of the women in this study already had at least one child. It would be important for prenatal care providers to know if women experiencing a first time pregnancy had different expectations about prenatal care than women not experiencing a first time pregnancy. This suggests future comparative research of primigravada and multipara women's expectations of prenatal care.

Patient expectations of health care services have been demonstrated to lead to new and return business (Greeneich, 1993). It is vital that advanced practice nurses promote research that examine those factors that lead to having expectations for prenatal care met for all populations of pregnant women, but particularly with rural low income pregnant women who have less access to care. Prenatal care

providers can then adapt their services to encourage increased utilization.

Summary

This study compared rural low income pregnant women's expectations of prenatal care with two groups of prenatal care providers, certified nurse-midwives and physicians. This study revealed that rural low income women had similar expectations for prenatal care from CNM providers and from physician providers. However, women in this study reported having moderate expectations for one provider and personalized care, reporting some expectations to receive information and other services. Women reported low expectations to receive accessible quality prenatal care.

Those who speculate on the future of prenatal care predict that there will be a tremendous need for cost-effective providers of primary care in the very near future, particularly in rural areas, to meet women's expectations for prenatal care (Lamm, 1996). Expectations for prenatal care have been linked with early and consistent prenatal care and compliance. It is important for the advanced practice nurse (APN) to be cognizant of rural low income pregnant women's expectations for prenatal care. Once these expectations for prenatal care are assimilated, then they may be met, and helping women have realistic expectations for care may further enhance utilization.

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APPENDIX A

PATIENT SATISFACTION WITH PRENATAL CARE SURVEY

PATIENT SATISFACTION WITH PRENATAL CARE

Mildred A. Omar, R.N., Ph.D.

Rachel F. Schiffman, R.N., Ph.D.

You indicate your voluntary consent to participate in this study by completing and returning this instrument. All responses to this survey will be kept strictly confidential.

Preparation of this instrument has been done with the assistance of Sigma Theta Tau International Honor Society of Nursing Research Grant, Mead Johnson Perinatal Nutritionals Research Grant, and Michigan State University College of Nursing Research Initiation Grant.

Listed below are expectations many women have about prenatal care. We want to know to what extent each of these statements describes what you expected to happen with your prenatal care. For each statement, please circle the number under the response which best describes how you feel about the statement.

Please note: When the word "provider" is used, it means either the doctor, the nurse midwife, or the nurse practitioner who does your exam, that is, who measures your abdomen, does your pelvic exam, listens to your baby's heartbeat. If you see more than one provider, answer the following items for whom you see most often.

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
I EXPECTED:						
6. to have problems getting prenatal care.	1	2	3	4	5	6
7. to be seen sooner for my first prenatal visit.	1	2	3	4	5	6
8. to have my prenatal visits take a long time.	1	2	3	4	5	6
9. to get more from my prenatal visits then just being weighed and having my baby's heart checked.	1	2	3	4	5	6
10. to receive information during my visits without having to ask so many questions.	1	2	3	4	5	6
11. to have one provider that I routinely see for my prenatal visits.	1	2	3	4	5	6
12. to have the provider that I routinely see deliver my baby.	1	2	3	4	5	6
13. to have personalized attention from my provider.	1	2	3	4	5	6
14. my provider to care how I felt mentally as well as physically.	1	2	3	4	5	6

PLEASE CONTINUE ON NEXT PAGE

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
I EXPECTED:						
15. my provider to be gentle during my physical exam.	1	2	3	4	5	6
16. to receive poor care.	1	2	3	4	5	6
17. someone to listen to my problems.	1	2	3	4	5	6
18. a referral when I tell the clinic/office staff about a problem.	1	2	3	4	5	6
19. the services of a social worker to be part of prenatal care.	1	2	3	4	5	6
20. the services of a nutritionist to be part of prenatal care.	1	2	3	4	5	6
21. the services of a public health nurse to be part of prenatal care.	1	2	3	4	5	6
22. childbirth education classes to be part of prenatal care.	1	2	3	4	5	6
23. to come for prenatal visits once a month during the first six to seven months.	1	2	3	4	5	6
24. to come for prenatal visits more than once a month during the last two to three months.	1	2	3	4	5	6

PLEASE CONTINUE ON NEXT PAGE

For the statements below, please check the response which best describes the provider you see most often, that is, who measures your abdomen, does your pelvic exam, listens to your baby's heartbeat. If you see more than one provider, answer the following items for whom you see most often.

---

87. The provider that I see most often for my prenatal exams is a:

____doctor

____nurse midwife

____nurse practitioner

____I see both a doctor and a nurse midwife/nurse practitioner about the same number of times

____do not know

88. The provider I checked above is a:

____woman — If you answered that your provider was a woman, SKIP TO QUESTION #90.

____man — If you answered that your provider was a man, GO TO NEXT QUESTION, #89.

____ — I see both a male and a female provider, GO TO NEXT QUESTION, #89.

89. If the provider that you checked above is a man, would you say that:

____this made no difference to you

____this made some difference to you

____this bothered you a lot

PLEASE CONTINUE ON NEXT PAGE

Now, we would like to know a little more about you. Please remember that all responses are confidential at no time will the researchers release any information linking you to the survey. For each statement, please check the response that best describes you. Please answer all the questions. Thank you for your help with this project.

---

92. Age _____ (in years)

93. Race (check only one)

_____ Asian
_____ Black
_____ Hispanic
_____ Native American
_____ White (Non-Hispanic)
_____ Other (Please Specify)_____

94. Mark the highest level of education you have completed (check only one):

_____ Less than high school
_____ Some high school
_____ High School Graduate/GED
_____ Some College/Technical School
_____ College Graduate
_____ Post College

95. Mark the response which currently describes your marital status (check only one):

_____ Single
_____ Divorced
_____ Married
_____ Separated
_____ Widowed
_____ Other (please specify)_____

96. Are you working outside the home?

_____ No
_____ Yes If yes, _____ Fulltime
_____ Parttime

97. What kind of insurance do you have? (Check all that apply)

_____ Medicaid
_____ Private Insurance
_____ Medicare
_____ None (Self Pay)

PLEASE CONTINUE ON NEXT PAGE

98. Counting this pregnancy, how many times have you been pregnant?_____

IF YOU ANSWERED "1", SKIP TO QUESTION #99; IF YOU ANSWERED 2 OR MORE, ANSWER QUESTIONS 98A AND 98B.

98a. If you have been pregnant more than once, did you seek prenatal care at this office/clinic for any of these pregnancies?
_____No _____Yes

98b. How many living children do you have? _____

99. How did you make your first prenatal appointment?

_____ by telephone
_____ in person
_____ other (please specify)_____

100. From the time you called or went to the office/clinic, how long did you wait for your first appointment? Identify the amount of time closest to the time you waited. Please check only one category.

_____ less than one week _____ two weeks _____ four weeks
_____ one week _____ three weeks _____ more than 4 weeks. How many___?

101. How far along in your pregnancy were you when you came for your first prenatal visit (Check only one)

_____ 1-3 months
_____ 4-6 months
_____ 7-9 months

102. How many weeks pregnant are you now?_____

103. Identify the amount of time closest to the total amount of time you usually spend at your clinic or office visit.

_____ less than 15 minutes _____ 31 minutes to 45 minutes _____ 61 minutes to 2 hours
_____ 15 minutes to 30 minutes _____ 46 minutes to 60 minutes _____ more than 2 hours

104. Check the one that best describes how many times have you been to the office/clinic for prenatal care.

_____ 1-5 times
_____ 6-10 times
_____ 11 or more times

PLEASE CONTINUE ON THE NEXT PAGE

APPENDIX B

PROCEDURES FOR DATA COLLECTION

ORIGINAL STUDY BY OMAR, SCHIFFMAN, AND BAUER

PROCEDURES FOR DATA COLLECTION

Original Study by Omar, Schiffman, and Bauer

Data collectors were chosen and prepared by the principal investigator and co-principal investigators, Omar, Schiffman, and Bauer (1995). Potential participants were identified by the data collector in conjunction with the staff at local health departments, physician offices, and childbirth education classes, and eligibility for participation was verified utilizing inclusion criteria. Solicitation for participation was done by the data collector explaining the study to potential women in the waiting rooms of the local health departments, physician offices, and at childbirth education classes. Women were in their third trimester of pregnancy, but all had attended at least three prenatal visits. Women needed to be able to read, write, and understand English, reside in the rural county in northwestern lower Michigan, and be of low income status as determined by the eligibility criteria for the women. Confidentiality was assured to all prospective participants. Informed consent to voluntarily participate in the study was obtained with a signed consent form prior to survey distribution. Willing and eligible participants were provided a cover letter explaining the study, the instrument, and an envelope in which to place the completed questionnaire. The women read the cover letter and instructions, and then completed the instrument. The data

collector was available to answer questions and provide instructions. Participants placed the completed questionnaire in the envelope provided, and received $10.00 as a cash incentive. The completed surveys were returned to the principal investigators. Data collection began in June 1994 and was completed in July 1995.

APPENDIX C

ALPHA RELIABILITIES AND FACTOR LOADINGS FOR THE DIMENSIONS OF THE EXPECTATIONS SCALE OF THE PSPCII INSTRUMENT

APPENDIX C

Table 3.

Alpha Reliabilities and Factor Loadings for the Dimensions of the Expectations Scale of the PSPCII Instrument

Dimension	Items	Factor Loading	Alpha
ONE PROVIDER	(Provider does delivery)	.98	.74
	(One provider routinely)	.47	
OTHER SERVICES	(Public Health Nurse)	.88	.80
	(Nutritionist)	.70	
	(Social Worker)	.67	
INFORMATION	(Information without asking)	.85	.71
	(To get more than weight and fetal heart beat)	.62	
PERSONALIZED CARE	(Cares about me mentally and physically)	.78	.62
	(Individualized attention)	.74	
	(Referral)	.32	
ACCESSIBLE QUALITY CARE	(Problems getting care)	.66	.48
	(Visits take long time)	.42	
	(Receive poor care)	.40	
TOTAL SCALE	13 Items	.72	

APPENDIX D

UNIVERSITY COMMITTEE ON RESEARCH INVOLVING HUMAN SUBJECTS

MICHIGAN STATE
UNIVERSITY

December 29, 1997

TO: Mildred Omar
A230 Life Sciences

RE: IRB#: 97-884
TITLE: EXPECTATIONS OF PRENATAL CARE IN A RURAL SETTING
REVISION REQUESTED: N/A
CATEGORY: 1-E
APPROVAL DATE: 12/24/97

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

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

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

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

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

Sincerely,

David E. Wright, Ph.D.
UCRIHS Chair

DEW:bed

cc: Katherine Conklin

OFFICE OF
RESEARCH AND GRADUATE STUDIES

University Committee on Research Involving Human Subjects (UCRIHS)

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