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PATIENT SATISFACTION WITH PRENATAL CARE PROVIDERS IN A RURAL SETTING

By

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ABSTRACT

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By

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Increasingly, the provider of care has been identified as being a major determinant of patient satisfaction. This secondary analysis compared rural physician providers and certified nurse-midwife providers on two dimensions of patient satisfaction with the prenatal care provider: the caring relationship and the provision of information. The sample consisted of 60 rural low income women from Benzie County, Michigan.

Although findings revealed that the pregnant women were satisfied with both groups of providers on both dimensions measured, a significant difference was found on the provision of information dimension. Women were significantly more satisfied with the certified-nurse midwives on this dimension, than with their physician counterparts. Advanced practice nurses can use these findings to improve the provision of information to all pregnant women in a manner that increases women's satisfaction with their prenatal care provider.

This study is lovingly dedicated to my husband, Greg, my children, Lyndsey and Logan, my parents, Michael & Patricia Magee, and my sister, Colleen.

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Healthy People 2000 (USDHHS, 1990) asserts: "Ensuring all infants a healthy start in life and enhancing the health of their mothers must be a top priority in the 1990's if we are to ensure the future health of our nation" (p.170). The provision of prenatal care services is a vital link in achieving this goal. Unfortunately, some women do not avail themselves of early and regular prenatal care for a variety of reasons. One major reason may be patient dissatisfaction. Clearly, if pregnant women are dissatisfied with the prenatal care received, they are less likely to obtain or continue with this care.

Various dimensions of prenatal care satisfaction are now being identified; one major dimension of satisfaction with prenatal care is satisfaction with the prenatal care provider (Aaronson, 1987; Brown & Lumley, 1993; Giles, Collins, Ong, & MacDonald, 1992; Graveley & Littlefield, 1992; Office of Technology Assessment, 1986; Olivo, Freda, Piening, & Henderson, 1994; Omar & Schiffman, 1995; Seguin, Therrien, Champagne, & Larouche, 1989).

Of increasing importance is the recognition of the influence patient satisfaction with prenatal care has with respect to prenatal care utilization (Omar, Schiffman, & Bauer, 1995; Sable, Stockbauer, Schramm, & Land, 1990). Satisfaction with the prenatal care provider is one aspect of prenatal care which

can have an influence on the initiation and continuation of prenatal care sevices. If pregnant women are satisfied with the prenatal care they receive from a caring provider, they may be more likely to continue with their prenatal care throughout the pregnancy (Brown, 1988).

The provider of prenatal care is an important factor in determining patient satisfaction with prenatal care. Omar and Schiffman (1995) found that the pateint-provider relationship had the greatest impact on satisfaction with prenatal care, regardless of the amount of time spent with the patient. Another determinant of patient satisfaction with the prenatal care provider is the provision of information by providers (Giles et al., 1992; Seguin et al., 1989; Turnbull, 1984).

Increasingly, the "gold standard" of receiving prenatal care from a private physician is often not available to low income pregnant women, particularly those who reside in rural areas (Brown, 1988; Nesbitt, Connell, Hart, & Rosenblatt, 1990). It becomes increasingly evident that there exists a need for alternative providers of prenatal care services in rural areas where access to both physicians and prenatal care is often limited. Certified nurse-midwives are one group of alternative providers of prenatal care able to provide comprehensive prenatal care to women, including attending the delivery of the infant.

There exists empirical evidence documenting that pregnant patients are highly satisfied with the prenatal care received from certified nurse-midwives (Giles et al., 1992; Office of Technology Assessment, 1986; Olivo et al., 1994).

Pregnant women need to perceive these alternative providers as delivering the same prenatal care in a caring manner, in order to access and utilize their services. Therefore, it is important to understand rural low income pregnant women's perceptions of satisfaction with their prenatal care provider, and to compare their level of satisfaction by provider type, i.e., physician or certified nurse-midwife. This is the purpose of this study.

County profiles in Benzie County, Michigan, reveal underutilization of prenatal care services. This may be related, in part, to user dissatisfaction. Prenatal care is provided by both physicians and certified nurse-midwives to pregnant women who are residents of Benzie County, a rural Michigan community. Understanding pregnant women's satisfaction with their prenatal care provider may be helpful in determining if there is a difference in satisfaction perceived by pregnant women by type of prenatal care provider. This information will aid in planning strategies in a manner that increases both women's satisfaction with their prenatal care provider and women's use of services.

Statement of the Problem

The purpose of this study was to measure rural low income women's satisfaction with prenatal care provider and to compare pregnant women's satisfaction with prenatal care provider by type of prenatal care provider, certified nurse-midwives (CNM's) or physicians, on two dimensions of satisfaction with the provider: caring relationship and provision of information, in Benzie County, Michigan.

Benzie County, Michigan, is located in Northwestern Michigan and had a documented population of 12,200 in 1994, and registered 152 live births (Michigan Department of Public Health, 1994; KIDS COUNT in Michigan, 1994). The percent of women receiving inadequate prenatal care in Benzie County in 1994 was 12.5%; the percent of women receiving intermediate prenatal care was 21.7% (Michigan Department of Public Health, 1993, 1994; KIDS COUNT in Michigan, 1992, 1994).

There exists no inpatient facility within Benzie County that offers obstetrical services. Some pregnant women are able to receive prenatal care within the county until the early third trimester at which time their care is transferred to a provider in a nearby county for continuing care and delivery. Others must travel over 100 miles round trip to receive prenatal care for the duration of the pregnancy. Prenatal care is provided by both private physicians and certified nurse-midwives to low income pregnant residents living in Benzie County.

It is not clear what factors may have prohibited these women from obtaining adequate prenatal care. However, what is known is that even when major barriers of finances and transportation are removed, some women still do not avail themselves to prenatal care (Brown, 1988). One important factor to consider may be a woman's satisfaction/dissatisfaction with her prenatal care provider which may increase or decrease her full utilization of prenatal care.

Comparative studies of the differences in care delivered by advanced practice nurses and physicians reveal relatively consistent findings. Advanced

practice nurses generally score better than physicians on such dimensions as the amount and depth of information provided, encouragement of questions, therapeutic listening and support, and subsequent patient satisfaction with the caring relationship established (Giles et al., 1992; Office of Technology Assessment, 1986; Olivo et al., 1994; Prescott & Driscoll, 1980). Certified nurse-midwives specifically have been documented to place greater emphasis on counseling and education (Knoll, 1990; Lehrman, 1981). This provides support for the research hypotheses posed in this study.

It is vital that adequate prenatal care be promoted for rural low income pregnant women in Benzie County. It is increasingly evident that dimensions of satisfaction with prenatal care, particularly satisfaction with the prenatal care provider's caring relationship and provision of information be identified for these women, to ascertain possible differences in satisfaction among the provider groups, and to subsequently make recommendations for increasing utilization of prenatal care services in rural underserved areas.

Research Questions

The research questions were:

(1) What is rural low income pregnant women's level of satisfaction with the provider caring relationship for certified nurse-midwife providers?

(2) What is rural low income pregnant women's level of satisfaction with the provider caring relationship for physician providers?

(3) What is rural low income pregnant women's level of satisfaction with the provision of information for certified nurse-midwife providers?

(4) What is rural low income pregnant women's level of satisfaction with the provision of information for physician providers?

(5) Is there a difference between rural low income pregnant women's level of satisfaction with the caring relationship for certified nurse-midwife providers as compared to physician providers?

(6) Is there a difference between rural low income pregnant women's level of satisfaction with the provision of information for certified nurse-midwife providers as compared to physician providers?

Research Hypotheses

(1) Rural low income pregnant women are more satisfied with the caring relationship displayed by the certified nurse-midwife as compared to the physician provider.

(2) Rural low income pregnant women are more satisfied with the provision of information by the certified nurse-midwife as compared to the physician provider.

Conceptual Definitions of the Variables

Type of Provider

Type of provider is defined as a provider of prenatal care who has met the proscribed educational requirements, and is licensed and if applicable, certified, as set forth by law, to practice in the state of Michigan in the provision of prenatal care services. For the purpose of this study, type of provider was either a physician or certified nurse-midwife. All providers of prenatal care are required to deliver prenatal care as per the standards set forth by the American

College of Obstetricians and Gynecologists (Freeman & Poland, 1992). However, there are inherent differences in the approach to care by certified nurse-midwives and physicians (Allan & Hall, 1988; Knoll, 1990).

The scope of nurse-midwifery practice includes "the independent provision and management of care of essentially healthy women and their infants throughout the maternity cycle and care of nonpregnant women seeking gynecologic services. Nurse-midwives practice collaboratively with physicians and other members of the health care team according to standards defined by the American College of Nurse-Midwives" (Knoll, 1990, p.607).

Nursing is defined as "a unique blend of art and science, applied within the context of interpersonal relationships for the purpose of promoting wellness, preventing illness, and restoring health" (Wilkinson, 1992, p.1). King (1981, 1992) posits that nursing is a process of interpersonal interactions via purposeful communication with the goal directed at maintenance of health. It is within this interpersonal context that certified nurse-midwifery care has been found to differ from the practice of medicine in the delivery of prenatal care. Establishing caring relationships with patients via more therapeutic listening and support, and provision of information to promote wellness and prevent illness during pregnancy, is a major focus of nurse-midwifery care (Knoll, 1990; Lehrman, 1981).

Physicians are defined as those who are licensed to practice medicine in the state of Michigan. For the purpose of this study, physician providers of prenatal care services included general practitioners, family practitioners, and

obstetricians. Physicians deliver care according to the standards defined by ACOG, The American College of Obstetricians and Gynecologists (Freeman & Poland, 1992), wherein the focus of prenatal care is on the identification of medical problems (diagnosis) and subsequent treatment (diagnosis-treatment-cure) (Allan & Hall, 1989).

Satisfaction with Prenatal Care Provider

Patient satisfaction has been described in terms of various dimensions. The literature suggest that satisfaction is not easily defined or measured. LaMonica, Oberst, Madea, and Wolf (1986) define satisfaction with care as "the degree of congruence between patients' expectations of nursing care and their perceptions of care actually received" (p.44). Omar and Schiffman (1992) defined prenatal care satisfaction as a positive or negative feeling or attitude that a pregnant woman formed about prenatal care.

Factors that have been identified in the literature relating to satisfaction with the prenatal care provider include the provision of information (Giles et al., 1992; Olivo et al., 1994; Omar & Schiffman, 1995; Omar et al., 1995; Seguin et al., 1989), participation in decision making and locus of control (Aaronson, 1987; Seguin et al., 1989), and clinic structures (Graveley & Littlefield, 1992).

For the purpose of this study, satisfaction with the prenatal care provider is defined as adapted from Omar and Schiffman's (1992) definition, as the pregnant woman's positive or negative attitude/feelings towards the caring relationship exhibited by the prenatal care provider, and the provision of information given by the prenatal care provider.

The provision of information has been a recurrent theme in the literature influencing patient satisfaction with the prenatal care provider (Giles et al., 1992; Olivo et al., 1994; Seguin et al., 1989). Information is provided by those in teaching and educative roles. For the purpose of this study, provision of information by the provider is defined as the explanations given by the prenatal care provider about aspects of the pregnancy (Omar & Schiffman, 1994).

The caring relationship has been studied to a lesser extent, but is increasingly emerging as a major factor influencing provider satisfaction as well (Omar & Schiffman, 1995; Omar et al., 1995). Caring has been conceptualized as treating the individual as a person, concern and empathy, personalized characteristics of the provider, communication process, and extra effort (Watson, 1988). For the purpose of this study, the caring relationship reflects the pregnant woman's perception of the way in which she was treated by the prenatal care provider.

Conceptual Framework

The conceptual framework utilized in this study is 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 the process of human interaction between the health care provider (CNM/physician), and client (pregnant woman), whereby each party comes together with unique perceptions and through communication, set goals, and explore means by which to achieve these goals (King, 1971, 1981, 1992; Meleis, 1991).

Certain assumptions inherent in this theory and relevant to this study are as follows. The perceptions of the provider and the client influence the interaction process. Individuals have a right to knowledge about their health. Providers have a responsibility to share information that helps individuals make informed decisions about their health. Providers have a responsibility to gather relevant information about the perceptions of the clients so that their goals and the goals of the client are congruent (King, 1992).

King's (1981, 1992) conceptual framework is based upon three interacting systems: personal system, interpersonal system, and social system. These three interacting systems consist of individuals or groups which are interchanging, transacting, and interacting with each other and their surrounding world. Each of these systems has goals, needs, and values which influence this interaction process. For this study, the focus is on the interpersonal system. The interpersonal system is comprised of the prenatal care provider (CNM/ physician) and the pregnant woman, and is subset of the prenatal care (social) system. The personal system is comprised of the pregnant rural low income woman.

The three open interacting systems (Figure 1) are distinctly unique but not separate. The broken lines represent openness and permeability which allows interaction to take place within the other systems. The arrows represent integrality of systems to one another. Each system proceeds of and into each other. The goal of identification of elements of satisfaction with the prenatal

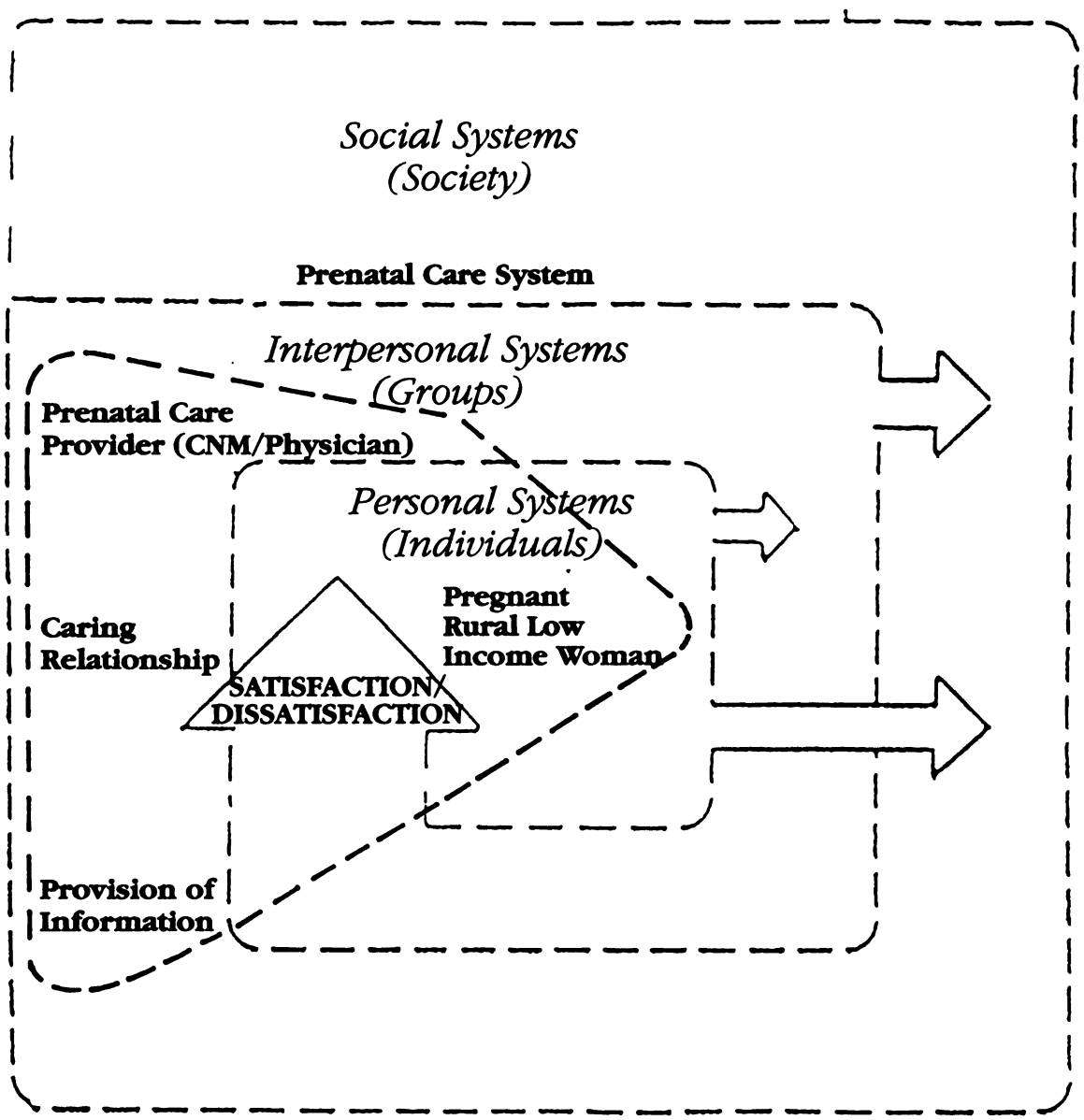

Figure 1. An adapted conceptual framework for prenatal care: Dynamic interacting systems. From King's Conceptual Framework for Nursing (King, 1992, p.20).

provider is achieved through investigation of the client (pregnant woman), and the provider (CNM/physician), within the interpersonal system.

The personal system is the rural low income pregnant woman who enters the prenatal care system with perceptions based upon her past life experiences, and previous experiences with health care providers, which may be both positive and negative. Her perceptions may determine how she feels about prenatal care and her behavior is influenced by her perceptions.

The interpersonal system focuses on human beings who function in groups. In the provision of prenatal care, the prenatal care provider (CNM/physician) contracts with the pregnant woman. The prenatal care provider perceives and responds to the unique needs of the woman within the context of the provider-client relationship. The prenatal care provider also provides information to the pregnant woman. The result of this interchange determines the degree of satisfaction/dissatisfaction the pregnant woman perceives with respect to the nature of the provider-client relationship and the information received. The conceptual model is limited in that it does not delineate the direction of the research hypotheses.

Review of the Literature

There is a scarcity of studies conducted that measure patient satisfaction with prenatal care providers in rural settings and with low income women. A recurrent topic in the literature review was comparisons of maternal and neonatal outcomes by type of provider (Cavero, Fullerton, & Bartlome, 1991; Condon, 1994; Giles et al., 1992; Graveley & Littlefield, 1992; Olivo et al., 1994).

Increasingly, the provider of care has been identified as being the most influential determinant of patient satisfaction (Handelsman, 1991; Omar & Schiffman, 1995; Omar et al., 1995). The literature review revealed that the majority of studies exploring patient satisfaction examined provider characteristics. Provision of information was identified as a major factor influencing satisfaction with a prenatal care provider (Giles et al., 1992; Office of Technology Assessment, 1986; Omar & Schiffman, 1995; Omar et al., 1995; Seguin et al., 1989; Turnbull, 1984). However, the caring relationship of the provider has not been studied to the same extent.

Many studies were identified in the literature that investigated patient satisfaction with health care providers in general.

Satisfaction with Health Care Providers

A number of studies have identified factors influencing patient satisfaction with health care in general (Handelsman, 1991; Lochman, 1983; Powers, Jalowiec, & Reichelt, 1984; Prescott & Driscoll, 1980; Turnbull, 1992), and fewer yet with prenatal care (Graveley & Littlefield, 1992; Higgins, Murray, & Williams, 1994; Omar & Schiffman, 1995; Omar et al., 1995; Seguin et al., 1989). Fewer studies exploring aspects of satisfaction with prenatal care have been conducted as compared to those exploring satisfaction with intrapartum and postpartum care. Some satisfaction studies have made comparisons by type of provider (Brown & Grimes, 1995; Office of Technology Assessment, 1986; Powers et al., 1984; Prescott & Driscoll, 1980).

Factors identified in the literature as influencing satisfaction with health care providers in general were numerous. Some of the more common factors include provider competence, effective communication, caring behaviors, the provision of information, and overall quality of care (Handelsman, 1991; Lochman, 1983; Powers et al., 1984; Prescott & Driscoll, 1980; Seguin et al., 1989; Turnbull, 1992).

Comparative studies between advanced practice nurses and physicians have also been done on patient satisfaction. An experimental field study (Powers et al., 1984) comparing nurse practitioner and physician care for nonurgent emergency room patients revealed that 77% of those receiving care from nurse practitioners (n = 24) were completely satisfied with their care as compared to 48% of those receiving care from physicians (n = 15). An interesting and notable finding from this study was that twice as many of the nurse practitioner patients cited the fact that explanations were provided by the NP as a positive reason for satisfaction.

Similarly, nurse practitioners scored favorably in studies conducted by Guyther and Sobal (1982) and Mainous, Bertolino, and Harrell (1992). The former study examined patient satisfaction with a nurse practitioner in a family practice setting and found that 39% (n = 35) of the patients surveyed were satisfied with the care received, and 50% (n = 45) were very satisfied. The purpose of this study was to measure patient acceptance of a nurse practitioner in a family practice setting. Study authors (which included a physician and no nurses) concluded that the implementation of a nurse practitioner in the practice

setting studied was a success. Factors linked to dissatisfaction were related to the expectation of seeing a physician provider, and the expectation of being charged a lowered fee when seeing the nurse practitioner, as patients were charged the same fee regardless of provider.

The latter study (Mainous et al., 1992) was a telephone survey conducted with Kentucky residents investigating the use of physician extendors, namely nurse practitioners and physician assistants. Of the 25% (n = 173) surveyed who had utilized the services of physician extendors, 90% (n = 156) were satisfied with the care received. A high degree of satisfaction was reported with respect to the treatment and advice provided by physician extendors. Reasons for dissatisfaction were not reported. The purpose of the study was to determine the extent of use of physician extendors in Kentucky, and subsequent satisfaction with services provided to make recommendations for improved delivery of primary health care in rural, underserved areas.

A retrospective survey study comparing physicians and nurse practitioners on communication at a health appointment in a university health care setting was conducted by Turnbull (1992). Findings revealed that the sample of 100 subjects, (all female), were highly satisfied with levels of communication from both groups of health care providers. Additionally, significant findings revealed that female physicians and nurse practitioners scored higher in communication than male physicians (Turnbull, 1992). The results of this study suggest that younger women perceive higher levels of

communication with female providers. One must question if the majority of women of childbearing age hold this perception as well.

A number of meta-analyses have been performed examining factors leading to patient satisfaction with advanced practice nurse delivered care, and some have made comparisons with physicians and physician assistants. Three of these were reviewed.

Various aspects of physician delivered vs. nurse practitioner and certified nurse-midwife delivered care were compared in a meta-analysis examining 53 studies from the 1970's and 1980's (Brown & Grimes, 1995). Results comparing nurse practitioners and physicians revealed that overall, nurses achieved higher scores than did physicians on patient satisfaction and compliance. It was revealed that the interpersonal skills of nurse practitioners and certified nurse-midwives are better than those of physicians. Further, nurse practitioners provided more health promotion activities than did physicians, and scored higher on quality-of-care measures. Patient knowledge was equivalent between these groups.

A 1986 policy analysis of nurse practitioners, physician assistants, and certified nurse-midwives posited that patients appear to be more satisfied with the care they receive from nurse practitioners than with care from physicians, in regard to several factors: personal caring exhibited, reduction in the professional mystique of health care delivery, and the amount of information provided (Office of Technology Assessment, 1986).

Prescott and Driscoll (1980) performed a review of 26 nurse practitioner-physician comparison studies. Their findings revealed that nurse practitioners scored higher on patient satisfaction with interest and personal concern of the provider, and with patients' knowledge about the plan of care.

Overall, these studies reveal high levels of patient satisfaction with nurses in advanced practice roles, with consistent findings from early studies to current provider satisfaction research. Some of the studies suggest that advanced practice nurse delivered care leaves patients more satisfied than physician delivered care.

Satisfaction with Prenatal Care Providers

The importance of the provider as a major determinant influencing patient satisfaction has been established with the literature reviewed. The following studies examined factors influencing satisfaction with the prenatal care provider.

Pregnant women's perceptions of prenatal care were explored in a qualitative study by Omar and Schiffman (1995) utilizing focus groups. The attentiveness of the prenatal care provider was found to the most common factor influencing satisfaction/dissatisfaction among the 22 women studied. The study sample consisted of low income women as well as women of higher socioeconomic status. Two main elements of the provider relationship influencing satisfaction that emerged from the study included the caring relationship displayed by the provider, and the provision of information by the provider.

The 1989 study conducted by Seguin et al. examined components of satisfaction with pregnant women's medical care. Women who delivered vaginally identified participation in decision making as the most important factor influencing satisfaction with their prenatal care provider (physicians). The provision of information was identified as the second most important factor for this group. Those women experiencing cesarean births reported the provision of information was the most important factor influencing satisfaction with their medical care provider. Nearly 63% of the women (n = 590) reported family incomes over $20,000. This study suggests that higher socioeconomic women, who are often thought to seek information on their own and who have higher rates of attendance at childbirth education classes, highly value being provided information by their prenatal care provider.

A study conducted by Brown and Lumley (1993) examined levels of satisfaction by type of prenatal care provider and socioeconomic status of 790 pregnant women. Findings revealed that women who attended private obstetricians were the most satisfied, followed by those who saw general practitioners. Women attending public hospital clinics were the least satisfied, and these women were of the lowest socioeconomic status. Unfortunately, the providers of care in the public clinics were not delineated. The study authors conclude that "women who are most likely to be dissatisfied are those whose social and economic circumstances mean they are most likely to be in need of sensitivity from caregivers" (Brown & Lumley, 1993, p.102). Despite methodological shortcomings of this study, the findings lend credibility to the

belief that receiving care form private sources is considered the so called "gold standard" of care.

Graveley and Littlefield (1992), in analyzing three staffing alternatives for prenatal clinics, conducted a comparative analysis of patient satisfaction among clinics staff with physicians, with physician and advanced practice nurse (APN) combinations, and with advanced practice nurses. Women cared for by the advanced practice nurses in solo practice were most likely to be on Medicaid. This retrospective survey revealed that satisfaction scores were the highest among the clinic staffed with clinical nurse specialists, and the lowest among the clinic staffed with physician and advanced practice nurse combinations. Factors influencing satisfaction with care were more related to clinic structures, than with characteristics of the providers, themselves. The women at the clinic staffed with physicians and APN's reported the highest inconsistency of providers, and study authors conclude that this inconsistency may have been a causative factor of dissatisfaction.

High acceptance of antenatal care by midwives in comparison to obstetricians was revealed in a study by Giles et al., (1992) citing appreciation of the continuity of care, and provision of information as major determinants of satisfaction. Nurse-midwives scored higher than physicians on all aspects of providing information about the perinatal period, and scored higher on confidence in caregiver. Additionally significant is the finding that more respondents chose the midwives' clinic when questioned about which clinic they

would rather attend for future pregnancies. The sample consisted of 89 women; socioeconomic status of the participants was not reported.

A study by Aaronson (1987), of characteristics of women seeking prenatal care from certified nurse-midwives (CNM's) vs. obstetricians, revealed that CNM clients consistently viewed their providers as holding stronger attitudes regarding health seeking behaviors and supporting them to engage in same. These clients also scored higher on internal locus of control. The women in this study were similar in regards to socioeconomic status and education with 55% graduating from or attending college, and the average income was $20-30,000 per year. The sample consisted of 244 women who were assumed to have chosen between the two options for their care. This study demonstrates that CNM clients are more likely to engage in health seeking behaviors, and more likely to be compliant in keeping prenatal care appointments. It must be considered, however, that women who choose to seek prenatal care from a certified nurse-midwife when their socioeconomic status affords them choices, may be more likely to be self-motivated.

A descriptive study of patient satisfaction by type of provider, certified nurse-midwives and physicians, revealed that the CNM group scored higher on answering questions, and overall satisfaction with care provider (Olivo et al., 1994). Further, 89.8% ($\underline{n}$ = 256) of the CNM group would use their provider again vs. 82.4% ($\underline{n}$ = 145) of the physician group, and 96.1% were knowledgeable of the various types of providers available to care for them. Women receiving care from a certified nurse-midwife were more likely to have

completed 16 years or more of formal education than the physician group. Again, the women are assumed to have self-selected themselves into each provider group. This study contradicts that higher socioeconomic women who have more choices of care providers will necessarily seek out a physician provider.

Upon conducting a policy analysis of nurse practitioner, physician assistant, and certified nurse-midwifery practices, the Office of Technology Assessment (1986) revealed that certified nurse-midwives communicate and interact more with their patients than do physicians. Further, the OTA posited that CNM care differs in the personal attention patients receive vs. physician care which is more episodic. In a final report issued by Omar et al. (1995) of a study they conducted exploring barriers, expectations, and patient satisfaction as predictors of prenatal care utilization and maternal and infant outcomes in Benzie County, Michigan, it was revealed that the 61 rural, low-income women surveyed were satisfied with the caring relationship and the provision of information by their prenatal care providers, consisting of both physicians and certified nurse-midwives. There were no significant differences found on provider satisfaction by adequacy of prenatal care, despite there being a high percentage of women receiving inadequate prenatal care within the county. Perhaps provider satisfaction is not an influential determinant in the initiation and continuation of prenatal care services in this rural community.

Summary of the Literature Review

As evidenced by the literature review, there exist more similarities than differences in factors that lead to satisfaction with health care providers in general, when compared to factors leading to satisfaction with prenatal care and prenatal care providers. There are a number of issues that factor into pregnant women's satisfaction with their prenatal care provider. Recurrent in the literature is the provision of information (Giles et al., 1992; Office of Technology Assessment, 1986; Omar & Schiffman, 1995; Omar et al., 1995; Seguin et al., 1989; Turnbull, 1984), and less commonly, the caring relationship exhibited by the provider (Handelsman, 1991; Office of Technology Assessment, 1986; Omar & Schiffman, 1995; Omar et al., 1995). Perhaps the caring relationship of the provider has not been studied to the same extent secondary to the difficulties inherent in measuring caring. Also deficient is the lack of patient satisfaction studies of certified nurse-midwife care for low income women. These latter issues deserve more investigation.

Additional limitations of studies identified in the literature include the lack of prospective, large scale studies, and the paucity of studies conducted in rural, underserved areas. Of the studies reviewed, four employed a prospective design (Handelsman, 1991; Omar & Schiffman, 1995; Omar et al., 1995; Powers et al., 1984), and one was conducted in a rural setting (Omar et al., 1995). Another limitation identified is that most comparative studies were done with middle/upper income women; only five of the studies reviewed included lower

socioeconomic women (Brown & Lumley, 1993; Graveley & Littlefield, 1992; Higgins et al., 1994; Omar & Schiffman, 1995; Omar et al., 1995). These limitations have been cited by Brown and Grimes (1995) as well.

Confidence in the findings of the vast majority of retrospective studies reviewed is also questioned secondary to the length of time after the patient encounter that the satisfaction survey data were collected. Five of the studies reviewed attempted to collect data shortly after the patient encounter (Giles et al., 1992; Graveley & Littlefield, 1992; Handelsman, 1991; Higgins et al., 1994; Powers et al., 1984), 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 in which the data were collected.

Clearly the need exists for comparative analyses of dimensions of satisfaction with advanced practice nurse 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 alternate prenatal care providers in areas where access is limited and utilization of available prenatal care services is poor.

Methods

Research Design

The research design was a descriptive study of patient satisfaction with prenatal care provider, 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 purpose of this study was to measure pregnant rural low income women's satisfaction with prenatal care provider and to compare pregnant women's satisfaction with prenatal care provider by type of prenatal care provider, certified nurse-midwives (CNM's) or physicians, on two dimensions of satisfaction with the provider: caring relationship and provision of information.

The original study done by Omar et al. (1995) examined pregnant women's perceptions of barriers, expectations about prenatal care, satisfaction with prenatal care, prenatal care utilization, and maternal and infant outcomes in a population of 61 rural low income women. Three major satisfaction themes were explored: (1) satisfaction with provider; (2) satisfaction with staff; and (3) satisfaction with the prenatal care system. Surveys were distributed between June 1994 and July 1995. Subjects were recruited from childbirth education classes, from three rural health departments, and from private physicians and certified nurse-midwives' offices/clinics.

The PSPC Instrument was developed and revised by Omar and Schiffman (1994). The instrument was developed to measure patient expectations of and satisfaction with prenatal care and prenatal care services. The data collection procedures for the original study are provided in Appendix B.

Sample

The original sample consisted of 61 low income pregnant women who were receiving prenatal care and resided in Benzie County, Michigan. Of the 62 women initially approached to participate in the study, 61 women agreed,

resulting in a 98% participation rate. The final sample for this study consisted of 60 women for whom there was complete data on all variables: 35 received prenatal care from physician prenatal care providers, and 25 women received prenatal care from certified nurse-midwives.

Inclusion criteria for the original study (Omar et al., 1995) were: (1) third trimester of pregnancy, and attended at least three prenatal visits; (2) able to read, write, and understand English; (3) reside in Benzie County, Michigan; and (4) be of low income status as determined by the eligibility criteria for the Women, Infants, and Children (WIC) program, i.e., being at or below 185% poverty level.

Operational Definitions of the Variables

Type of provider. Type of provider was defined as the provider the woman identified on item 87 of the Patient Satisfaction with Prenatal Care (PSPC) Instrument as seeing most often (Appendix A). If more than one provider was seen during the pregnancy, the respondent was asked to choose the one that was most often seen. Choices of provider type were: (1) doctor; (2) nurse midwife; (3) nurse practitioner; (4) I see a doctor and a nurse midwife/nurse practitioner about the same number of times; or (5) do not know (Omar & Schiffman, 1994). For the purpose of this study, type of provider was defined as doctor or nurse midwife. Women in this study did not select any of the alternate options. Type of doctor is not distinguished in the instrument and could be any physician who provides prenatal care, i.e., general practitioner, family practitioner, or obstetrician.

Patient satisfaction with provider. Patient satisfaction with provider was defined utilizing the Satisfaction with Provider scale of the PSPC Instrument and consists of two dimensions: "Provider Caring Relationship", and "Provider Information". The items identified to define each of the scales were determined following factor analysis and reliability analysis (Omar & Schiffman, 1994), therefore not all items from the instrument in Appendix A were used.

Provider Caring Relationship was operationalized using seven items on the PSPC Instrument (Appendix A) reflecting the way the woman perceived she was treated by her provider (items 29, 30, 32, 33, 42, 43, and 44). These items ascertain how the pregnant woman feels the provider treats her, if the provider takes her complaints seriously, treats her situation privately, how the physical exam is conducted, her perception of quality care, if she is able to ask questions without embarrassment, and the degree to which she is made to feel she is wasting the provider's time. The lower the score indicates the more the pregnant woman is satisfied with the provider caring relationship. The higher the score indicates the less the pregnant woman is satisfied regarding her relationship with her provider.

Provider Information was operationalized using five items on the PSPC Instrument (Appendix A) concerned with the explanation given by the prenatal care provider about aspects of the pregnancy (items 25, 26, 27, 39, and 40). These explore the provision of information as it relates to medical procedures, the pregnancy, prenatal visits, labor and delivery, and parenting. The lower the score, the more the pregnant woman was satisfied with the provision of

information. The higher the score, the less the pregnant woman was satisfied with the information provided.

Instrumentation

The Patient Satisfaction with Prenatal Care (PSPC) Instrument was developed and revised by Omar and Schiffman (1994), as a measure of patient expectations of and satisfaction with prenatal care services. The PSPC Instrument is a 108 item self-report instrument with questions containing six point Likert scales with no neutral points (Omar & Schiffman, 1994). The PSPC contains five scales. The first scale is the motivation scale. The second scale is the expectations scale. The third scale is the satisfaction with provider scale, and is the scale that was utilized for this study. The satisfaction with provider scale factored into two dimensions, the caring relationship and the provision of information, and contains 12 items that were determined by factor analysis and reliability analysis. The fourth scale is the satisfaction with staff scale, and the fifth scale is satisfaction with the prenatal care system. For this study, not all instrument items were used or operationalized. Only those questions specifically evaluating patient satisfaction with the prenatal care provider as previously delineated, or questions regarding demographic information were included.

Responses on the six point Likert scale range from 1 (strongly agree) to 6 (strongly disagree). The lower the score for each scale, the higher the motivation, the higher the expectations, and the higher the satisfaction.

Conversely, the higher the score for each scale, the lower the motivation, the expectations, and the satisfaction.

The PSPC Instrument has demonstrated acceptable reliability, and internal consistency of scales (Appendix C, Table 2). The alpha reliabilities of .91 and .90 for the two dimensions of the satisfaction with provider scale: "provider caring relationship" and "provider information" respectively, are high and acceptable. These two dimensions for the satisfaction with provider scale are highly correlated, but factored distinctly into the two dimensions: provider caring relationship and provider information.

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.

Data Analysis

The following demographics ascertained from The Patient Satisfaction with Prenatal Care Instrument (Appendix A) were included to describe the sample population: age, race, level of education, marital status, insurance type, work status, and gravidity, defined as the total number of times pregnant. Additionally, the gender of the provider was identified. Chi square analyses were performed on the demographic variables to ascertain possible statistically significant differences between the two provider groups.

The research questions for this study were investigated using various statistical analyses. Data were computed for the satisfaction with provider scale dimensions of "provider caring relationship" and "provider information", for both

groups of providers. To answer Research Questions 1-4, descriptive statistics which included measures of central tendencies, dispersion, and frequencies were used to answer the research questions about the level of satisfaction for the two dimensions of provider caring relationship, and provision of information, for the two provider groups. Research Questions 5 and 6 and the two companion research hypotheses were tested using a one-tailed parametric t-test to analyze differences between the two groups means for each of the two dimensions of provider satisfaction by type of provider. It was hypothesized that rural low income pregnant women were more satisfied with the provision of information and the caring relationship displayed by the certified nurse-midwife as compared to the physician provider. The SPSS statistical software package was utilized for data analysis, with level of significance established at 0.05.

Protection of Human Subjects

The original study used volunteer subjects who had the opportunity to have all questions about the study answered by a trained data collector. No potentially dangerous or adverse effect to women for participating was known or identified. The original study (Omar et al., 1995) was approved by Michigan State University's University Committee on Research Involving Human Subjects (Appendix D). The data utilized for this study has been maintained on a disk by the principal co-investigators (Omar et al., 1995). The subjects were entered by identification numbers only and did not contain any subject identifiers. Thus, no link could be made with the name of any subject for this study.

Approval to conduct secondary analysis for this study was obtained from Michigan State University's University Committee on Research Involving Human Subjects (UCRIHS) prior to initiation of data analysis (Appendix D).

Research Assumptions

It was assumed that the professional and support staff and prenatal care environments at each data collection site were comparable in quality of services. It was assumed that data were collected and logged accurately. Further, it was assumed that interrater reliability was high among data collectors, and all potential subjects were given the opportunity to participate. The assumption was also made that subjects understood the instructions provided and were able to read the instrument, and understood the questions asked, or were provided sufficient explanations by the data collectors in which to candidly and honestly answer the questions. It was assumed that the data were accurately entered.

Research Limitations

The absence of a random sampling procedure, and 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 ascertain when studying rural populations, as are probability samples. There also may have existed an underrepresentation of women who were so dissatisfied that they did not utilize the prenatal care system, or utilized it so infrequently that they did not meet inclusion criteria. An additional limitation of this study is that neither provider continuity nor clinic structure were examined as possible factors influencing provider satisfaction.

Results

Description of Sample

This study sample consisted of 60 women, mean age of 24 years (SD = 5.24), of which slightly more than half (58%, n = 35) received care from physician providers, and 25 (42%) received care from certified nurse-midwife (CNM) providers (Table 1). Close to nine-tenths (88%, n = 53) of the total sample was comprised of White/non-Hispanic women, with four-fifths of the total sample having a high school education or greater. Three quarters of the total sample reported being married (n = 45). Slightly more than three-fifths (63%, n = 38) reported being on Medicaid, however, half (n = 30) of the women reported employment outside of the home. Most of the women were experiencing their second pregnancy.

Women receiving care from physicians were on average older than the women receiving care from the certified nurse-midwives, with a mean age of 25 and 22 years, respectively. Women receiving care from physicians also reported higher levels of education, and higher rates of employment outside of the home (Table 1). Additionally, more of the employed women who saw physician providers were engaged in full time work as compared to the employed women in the CNM group. There was more racial diversity among the women receiving care from certified nurse-midwives, and more of the women in the physician group were married.

It is acknowledged that there are innate differences between the two provider groups that may account for the study results. Significant differences

Table 1

Frequencies of Sample Demographic Variables by Provider Type

Demographic Variable	CNM n (%)	Physician n (%)	Total n (%)
Race			
White	21 (84%)	32 (91.4%)	53 (88.3%)
Hispanic	2 (8%)	1 (2.9%)	3 (5.0%)
Native American	1 (4%)	1 (2.9%)	2 (3.3%)
Other	1 (4%)	1 (2.9%)	2 (3.3%)
X^2 (3, N = 60) = .977, p = .807			
Marital Status			
Single	4 (16%)	6 (17.1%)	10 (16.1%)
Married	18 (72%)	27 (77.1%)	45 (75.0%)
Separated	1 (4%)	1 (2.9%)	2 (3.3%)
Divorced	2 (8%)	0 (0.0%)	2 (3.3%)
Other	0 (0%)	1 (2.9%)	1 (1.7%)
X^2 (4, N = 60) = 3.63, p = .458			
Educational Level			
Less than high sch	0 (0%)	2 (5.7%)	2 (3.3%)
Some high school	7 (28%)	3 (8.6%)	10 (16.7%)
High School Grad	12 (48%)	13 (37.1%)	25 (41.7%)
Some College/Tech	5 (20%)	14 (40.0%)	19 (31.7%)
College Graduate	0 (0%)	2 (5.7%)	2 (3.3%)
Post College	1 (4%)	1 (2.9%)	2 (3.3%)
X^2 (5, N = 60) = 8.47, p = .132			
Medicaid			
Yes	16 (64%)	22 (62.9%)	38 (63.3%)
No	9 (36%)	13 (37.1%)	22 (36.7%)
X^2 (1, N = 60) = .008, p = .928			
MICH-Care			
Yes	7 (28%)	3 (8.6%)	10 (16.7%)
No	18 (72%)	32 (91.4%)	50 (83.3%)
X^2 (1, N = 60) = 3.96, p = .047			

(Table Continues)

Table 1 (cont'd).

Demographic Variable	CNM n (%)	Physician n (%)	Total n (%)
Private Insurance			
Yes	4 (16%)	17 (48.6%)	21 (35.0%)
No	21 (84%)	18 (51.4%)	39 (65.0%)
X^2 (1, N = 60) = 6.80, p = .009)			
Selfpay			
Yes	0 (0%)	2 (5.7%)	2 (3.3%)
No	25 (100%)	33 (94.3%)	58 (96.7%)
X^2 (1, N = 60) = 1.48, p = .224			
Provider Gender			
Female	25 (100%)	3 (8.6%)	28 (46.7%)
Male	0 (0%)	28 (80.0%)	28 (46.7%)
Both	0 (0%)	4 (11.4%)	4 (6.7%)
X^2 (2, N = 60) = 48.98, p = .000			
Work Outside Home			
Yes	10 (40%)	20 (57.1%)	30 (50.0%)
No	15 (60%)	15 (42.9%)	30 (50.0%)
X^2 (1, N = 60) = 1.71, p = .190			
Work Time			
Fulltime	5 (20%)	11 (31.4%)	16 (26.7%)
Parttime	5 (20%)	8 (22.9%)	13 (21.7%)
X^2 (1, N = 29) = .165, p = .685			

were found on several of the demographic characteristics between the two provider groups. Less than one-fifth (16%, n = 4) of the women receiving care from the certified nurse-midwives were privately insured as compared to almost half (49%, n = 17) of the women receiving care from physicians. Another significant finding was that just over one-fourth (28%, n = 7) of the women receiving care from CNM's were on MICH-Care, as compared to less than one-tenth (8.6%, n = 3) of the women receiving care from physicians. As expected, the certified nurse-midwife providers were all female, and four-fifths of the women in the physician group (n = 28) reported seeing male providers (Table 1).

Analysis of Research Questions and Hypotheses

(1) What is rural low income pregnant women's level of satisfaction with the provider caring relationship for certified nurse-midwife providers?

The women in the CNM group reported high levels of satisfaction with the caring relationship displayed by their provider (M = 1.68, SD = .63).

(2) What is rural low income pregnant women's level of satisfaction with the provider caring relationship for physician providers?

The women in the physician group reported high levels of satisfaction with the caring relationship displayed by their provider (M = 1.95, SD = .76).

(3) What is rural low income pregnant women's level of satisfaction with the provision of information for certified nurse-midwife providers?

The women in the CNM group reported a high level of satisfaction with the provision of information from their provider (M = 1.62, SD = .43).

(4) What is rural low income pregnant women's level of satisfaction with the provision of information for physician providers?

The women in the physician group reported being somewhat satisfied to satisfied with the provision of information by their providers (M = 2.22, SD = .96).

(5) Is there a difference between rural low income pregnant women's level of satisfaction with the caring relationship for certified nurse-midwife providers as compared to physician providers?

Although both groups reported being satisfied with the caring relationship displayed by the provider, and the women attending the certified nurse-midwives reported slightly higher levels of satisfaction with this dimension of provider satisfaction, the difference was not large enough to be statistically significant, $t(60) = 1.46$, $p = .448$. The hypothesis that rural low income pregnant women are more satisfied with the caring relationship displayed by the certified nurse-midwife as compared to the physician provider was not supported by the data in this study.

(6) Is there a difference between rural low income pregnant women's level of satisfaction with the provision of information for certified nurse-midwife providers as compared to physician providers?

The women in the CNM group reported significantly higher levels of satisfaction with the provision of information from their provider as compared to the physician group, indicating that there was a significant difference between these two provider groups on this dimension of prenatal care provider satisfaction, $t(60) = 3.31$, $p = .007$. The hypothesis that rural low income

pregnant women are more satisfied with the provision of information by the certified nurse-midwife as compared to the physician provider was supported by the data.

Discussion

Sample

In this descriptive study using secondary data, a total of 60 rural low income pregnant women's responses were analyzed on the variable, patient satisfaction with prenatal care provider on two dimensions of provider satisfaction: caring relationship and provision of information. The sample was representative of the pregnant population of this rural county as it was drawn from physician offices, childbirth education classes, and from the local health departments where women were receiving services. Thirty-five women in this sample were seen by physician providers for their prenatal care and 25 women received prenatal care from certified nurse-midwife providers. The majority of the sample consisted of married, White/non-Hispanic women who had achieved a high school education or greater. Although not significantly different, the women in the physician provider group were older and had achieved a higher level of education.

When comparing the two provider groups, three significantly different demographic findings were found: (1) provider gender; (2) private insurance; and (3) MICH-Care coverage. Not unexpected, all of the certified nurse-midwife providers were female, and the majority of the physician providers were male. There was a significantly higher percentage of privately insured women

receiving care from physicians than from certified nurse-midwives; conversely a significantly higher percentage of women who were enrolled in MICH-Care were receiving their prenatal care from the certified nurse-midwives. MICH-Care is a type of state subsidized insurance available to pregnant employed low income women who would not otherwise qualify for state assistance if they were not pregnant (Michigan Department of Social Services, 1994).

Pregnant women who lack private insurance often do not have choices of private obstetric providers (Fingerhut, Makuc, & Kleinman, 1987; Knoll, 1990). These findings are consistent with the findings of this study such that despite being low income, the insurance status of the women from the physician provider group afforded them more choices, and they, therefore, may have been more likely to seek out a physician provider. Conversely, the women who were on MICH-Care may have had fewer choices as to their prenatal care provider. Also to be considered is the referral system for certified nurse-midwives providing prenatal care to Benzie County women. The practice structure for the CNM's based on their employer contractual agreement limits the CNM's practice to women on Medicaid or MICH-Care. Further it has been documented in the literature that CNM's are more likely to be willing to accept patients enrolled in Medicaid (Office of Technology Assessment, 1986), and many physicians are turning away Medicaid patients due to reimbursement and litigation concerns (Knoll, 1990).

The demographic characteristics of the overall sample are consistent with the literature describing rural populations. Urban poor women of childbearing

age are more likely to be unmarried, a member of a minority group, have less than a high school education, and be unemployed (Sherman, 1992). Conversely, rural low income women in need of prenatal care tend to be married, White/non-Hispanic, have completed high school, and employed (Sherman, 1992), the so-called "working poor".

A larger percentage of the employed women receiving care from physician providers were employed full-time, as compared to the employed women in the certified nurse-midwife group. This may explain the higher percentage of women enrolled in MICH-Care in the CNM group; women employed part-time often do not receive health care benefits from their employers. These sociodemographic differences suggest a different approach to the provider relationship and the provision of information.

Satisfaction with the Caring Relationship

Although certified nurse-midwives scored slightly higher than physicians on the caring relationship dimension of provider satisfaction, the hypothesis that rural low income pregnant women are more satisfied with the caring relationship displayed by the certified nurse-midwife as compared to the physician provider was not supported.

Collectively, the two groups were both satisfied with the caring relationship displayed by the provider. One must question why there was not a significant difference found on this dimension of provider satisfaction when the literature is consistent in demonstrating that advanced practice nurses overall, score better than physicians on such dimensions as therapeutic listening and

support and patient satisfaction with the caring relationship established (Giles et al., 1992; Office of Technology Assessment, 1986; Olivo et al., 1994; Prescott & Driscoll, 1980).

Additional components of nurse-midwifery care that have contributed to high levels of satisfaction are continuity and flexibility of care, as well as family-centered, unhurried, participative care nurse-midwives offer (Knoll, 1990; Lehrman, 1981). Certified nurse-midwives historically are very good at adapting care to focus on the woman in the context of her family and newborn, while remaining flexible in varying her approach to care, including the woman in the planning of care, and providing continuity of care throughout the perinatal period (Knoll, 1990; Lehrman, 1981). Perhaps these factors were present in both provider groups, and were deemed highly important to the rural low-income pregnant women in this sample, the majority of whom were married, experiencing their second pregnancy, had to travel a substantial distance to receive prenatal care, and had to juggle work schedules. Experiences with prior pregnancies and perhaps the inconveniences of travel and work increased expectations of the provider caring relationship for the women.

In light of the findings both the certified nurse-midwives and physicians were found to be effective at establishing caring relationships with their prenatal care patients in Benzie County, Michigan, and this is a very encouraging finding. It is well documented that there exists a precipitous decline of physicians practicing in rural underserved areas, and the majority of physicians who choose to practice in these areas are not specialists such as obstetrician/gynecologists,

but rather family and general practitioners (Knoll, 1990; Nesbitt et al., 1990). The rural low income women in this study, many of whom did not have choices as to their provider, may have felt very grateful, either to have a prenatal care provider at all, or may have felt indebted to the few providers left practicing in Benzie County, reflecting high satisfaction with the caring relationship dimension. Further, the majority of women in this sample were experiencing their second pregnancy. Perhaps they had a previous ongoing relationship with their prenatal care provider and again felt indebted to them, causing them to respond favorably.

There are other possible reasons why the lack of statistical significance between the two groups on the caring relationship is not surprising. Caring is a very difficult concept to measure quantitatively (Watson, 1988), and has, therefore, been studied to a much lesser extent than other provider satisfaction measures. Also to be considered is the small sample size which may have contributed to the inability to detect a statistically significant finding on this measure. Nevertheless, the caring relationship has been established as an important factor leading to satisfaction/dissatisfaction with the prenatal care provider (Omar & Schiffman, 1995), and should continue to be investigated.

Satisfaction with the Provision of Information

A significant difference was found between rural low income pregnant women's level of satisfaction with the provision of information for certified nurse-midwife providers as compared to physician providers. The hypothesis that rural low income pregnant women are more satisfied with the provision of information

by the certified nurse-midwife as compared to the physician provider was supported. Collectively, the women were once again satisfied with both groups on this dimension of provider satisfaction, but significantly moe satisfied with the certified nurse-midwives.

Consistent within this study and within the literature, advanced practice nurses have scored better than physicians on the amount and depth of information provided and the encouragement of questions (Giles et al., 1992; Office of technology Assessment, 1986; Olivo et al., 1994; Prescott & Driscoll, 1980). A major component of nurse-midwifery care identified within the literature is education and counseling, described as the provision of knowledge and guidance from the certified nurse-midwife (Knoll, 1990; Lehrman, 1981). Rural low income pregnant women in the certified nurse-midwife group appear to have desired this education and counseling and reported high levels of satisfaction with the extent to which they were provided information. This makes sense as these women were, on average, younger, less educated, and more likely to be single, and, therefore, less likely to have access to, or the motivation to seek out information on their own accord. This is consistent with the literature in that low socioeconomic women are less likely to advocate for themselves to obtain needed information (Hansell, 1991). It must also be considered that consistent with the literature, the certified nurse-midwives were better at individualizing informational needs of the women (Knoll, 1990; Lehrman, 1981) as the majority of the women were experiencing their second pregnancy, and approached prenatal care with different knowledge levels and educational deficits.

Perhaps the physician providers, who had a significantly higher percentage of private pay patients as compared to the CNM group, assumed that insurance status was linked to socioeconomic status, and subsequently that the women who had private insurance were of higher socioeconomic status. Consistent with previous research, women of higher socioeconomic status are more likely to either attend childbirth education classes, and/or seek information on their own (Hansell, 1991). Therefore, the physician providers may have been less likely to provide information at the prenatal appointment.

Study findings revealed a significant difference between the two groups on gender of the provider. All of the certified nurse-midwife providers were female, while only a very small portion of the physician providers were female. Female providers have been found to score higher on measures of communication (Turnbull, 1992) than male providers. Perhaps the certified nurse-midwife providers communicated better with their patients to determine specific educational needs, and subsequently effectively addressed these needs. Studies need to be undertaken investigating how female providers compare to male providers on the caring relationship.

Overall, both groups of women were satisfied with the caring relationship and the provision of information by their respective prenatal care providers. One rival hypothesis for this finding may be found in the design. The many methodological advantages of prospective studies make them preferable to retrospective studies (Lochman, 1983; Polit & Hungler, 1995). However, one disadvantage of the prospective design that could have influenced the

respondents in this study is what some researchers refer to as the "halo effect" (Oberst, 1984; Seguin et al., 1989), where the women may have felt obligated to respond favorably for one reason or another. Many factors have been identified that contribute to overall positive satisfaction responses. A couple factors that may have influenced this study are the possible hesitancy to express negative opinions surround a joyful anticipated event (e.g. childbirth), and/or possible perception of implicit threat (Oberst, 1984). All of the women in the original study were assured of the confidentiality of results, and were not approached nor completed questionnaires at their site of prenatal care, yet one must question if the women felt that their responses would somehow influence their quality of care as all were in their third trimester, thus causing them to respond favorably.

One other notable and closely related issue is the extent to which previous experiences and underlying attitudes toward the health care system and health care personnel influence judgments of satisfaction with current care (Oberst, 1984). Both provider groups averaged just over two pregnancies. It would be interesting to know how much, if at all, their previous experiences with their prior pregnancies influenced their measures of satisfaction for this pregnancy.

Discussion of Results with the Conceptual Framework

The results of this study support the adapted conceptual model from King (1971, 1981, 1992) of dynamic interacting systems. The pregnant woman (the personal system), and the CNM/physician came together to form the

interpersonal system, and contracted with each other in the provision of prenatal care. The two systems interacted, exchanging the constant interchange of information with each other. During these interactions, the health care provider (CNM/physician), and the pregnant woman perceived each other and the situation, made judgments, and took mental action. In this study, the judgment made by the pregnant women (the personal system) was that they were significantly more satisfied with the provision of information by the certified nurse-midwife provider as compared to the physician provider. The pregnant women were satisfied with both provider groups on the caring relationship displayed, and the judgment on this dimension was that there were no differences between the groups. It should be noted that the conceptual model did not address the hypotheses, but rather the nature of the relationship between the woman and the provider on the two dimensions of provider satisfaction: caring relationship and provision of information.

Implications for Advanced Practice Nursing in Primary Care

Prenatal care as a conclusive causative factor in improving pregnancy outcomes is recently being challenged in the literature (Fiscella, 1995; Huntington & Connell, 1994). However, study authors caution that these findings must be considered in the context of the overall benefits and potential cost-effectiveness that prenatal care affords society, and cites possible methodological shortcomings in being able to prove this obvious link. Early and consistent prenatal care is still considered to be beneficial for early diagnosis and treatment of maternal/fetal complications, and remains to be the standard of

care in this country as set forth by the American College of Obstetricians and Gynecologists (Freeman & Poland, 1992). Satisfaction with prenatal care has been linked with early and consistent prenatal care, and improved compliance and appointment keeping (Greeneich, 1993; Weiss, 1988), and thus may help to positively influence pregnancy outcomes.

This study has demonstrated that rural low income pregnant women are equally satisfied with the caring relationship established with the advanced practice nurse (APN) provider and the physician provider, and more satisfied with the provision of information by the APN. Advanced practice nurses can utilize these findings that all women are in need of sensitivity from their health care providers, and all women are in need of information to make informed decisions about their health.

This study has validated that providers of prenatal care need to provide information to their patients. Study findings suggest that women want information directly from their providers, perhaps to augment and validate the information they are receiving from outside sources. Pregnancy provides a window of opportunity to improve a woman's health before, during, and after the birth of her child, as pregnancy is a time of increased contact with the health care system and often times is associated with heightened awareness about health (Behrman, 1995).

In light of the study findings regarding women desiring more information from their providers, an additional vehicle for the provision of information is via childbirth education classes. Included in the standards of perinatal care issued

by the American College of Obstetricians and Gynecologists (Freeman & Poland, 1992) is the recommendation to refer pregnant women to appropriate educational literature and childbirth education classes. Childbirth education classes provide an excellent opportunity for expectant women to obtain specific information about labor, delivery, and the postpartum periods as well as information on parenting and health promoting behaviors.

Although prenatal providers refer their pregnant clients to these programs, the provider continues to have a major role in addressing the informational and educational concerns of pregnant women at the prenatal appointment as well as validating the accuracy of information received from outside sources. It is vital that providers of prenatal care and childbirth educators work as a team to educate pregnant women and their families, acknowledging their most frequently expressed concerns and educational needs.

Attending childbirth education classes for rural working women may be difficult due to distance and time factors. The advanced practice nurse providing prenatal care to rural low income pregnant women must remain cognizant that these women are often employed and need opportunities for childbirth education in the evenings, on weekends, and ideally within their community. An additional option for these women is on-site childbirth education programs in small groups when presenting for prenatal appointments. The possible disadvantage of not having a significant other present at this time may far outweigh the advantage of not having to return for this education. This may be especially true for women

who have to drive a substantial distance to attend childbirth education classes. The APN needs to work with others within the community to coordinate offerings for these women at times convenient for the women.

The issue of transportation and cost of classes must also be addressed for rural low income women, whether employed or not. Advanced practice nurse providers must encourage and help these women attain assistance for paying for the costs of classes and transportation such as offered through the MSS (Maternal Support Services) program, as often women are unaware of the services they may be eligible for, or feel there is a stigma attached to receiving such assistance. All providers of prenatal care must understand the importance of health education to promote healthy behaviors that can help to improve pregnancy outcomes, and their role both in the provision of information and the promotion of additional prenatal education.

This study has demonstrated that pregnant women value information from their prenatal care providers, and are highly satisfied with the provision of information from advanced practice nurse providers of prenatal care. Advanced practice nurses in collaborative practice can help increase satisfaction with the provision of information with their physician partners. This can be accomplished in a number of ways. The APN can start by clearly identifying expectations of pregnant women for both advanced practice nurse and physician providers of prenatal care, and communicating this to the physician. The APN needs to identify the educational level of the patient and needs for this pregnancy, as well as perceived educational deficiencies with prior pregnancies. Further, the APN

should encourage the pregnant woman to communicate with the physician provider regarding the plan of care for labor and delivery, particularly if the physician will be the delivering provider, by regular appointments with the physician as well as the APN, fostering a team approach.

The finding of overall high levels of satisfaction for both provider groups in this study validates acceptance of the advanced practice nursing role by rural populations. The implication of this finding in the delivery of prenatal care is that APNs' can help increase access to prenatal care in rural underserved areas.

Additional studies such as this one will help to mount evidence of the acceptance of the APN in rural areas. By remaining cognizant of what factors influence rural low income women's satisfaction with prenatal care, and contracting with patients to mutually set and achieve goals, advanced practice nurses can work to continue to positively influence satisfaction with their prenatal care patients.

Recommendations for Further Research

The literature review, as delineated previously, revealed that little research has been conducted examining what factors influence satisfaction among rural, low income pregnant women. Further research is suggested as follows:

(a) Studies examining how patient satisfaction motivates rural, low income pregnant women to initiate and continue prenatal care. This information would be helpful in designing the provider composition structure through which prenatal care is delivered to this population (Knoll, 1990).

(b) Qualitative explorations of provider "caring" and how the caring relationship of the provider influences patient satisfaction with all types of prenatal care providers, and with all types of pregnant populations. The concept of caring as an influential factor in patient satisfaction is emerging, but has been studied very little.

(c) Further comparative studies of patient satisfaction with providers of prenatal care among rural low income pregnant women to validate the findings of this study.

Patient satisfaction with health care services has been demonstrated to lead to new and return business (Greeneich, 1993). It is vital that advanced practice nurses promote research that examines those factors that lead to satisfaction with all populations of pregnant women, but particularly with rural, low income pregnant women who have less access to care, and poorer pregnancy outcomes. Prenatal care providers can then adapt their services to encourage increased participation.

Summary

This study compared two groups of prenatal care providers, certified nurse-midwives and physicians, on two dimensions of satisfaction with the provider: the caring relationship, and the provision of information. The findings of this study support other studies indicating that advanced practice nurses score equal, or better on such measures of patient satisfaction as the amount and depth of information provided, the encouragement of questions, therapeutic listening and support, and patient satisfaction with the caring relationship

established (Giles et al., 1992; Knoll, 1990; Lehrman, 1981; Office of Technology Assessment, 1986; Olivo et al., 1994; Prescott & Driscoll, 1980). This study revealed that advanced practice nurses scored significantly higher than physicians on the provision of information to rural, low income pregnant women, and scored very similarly on the caring relationship established.

The paradigm shift of health care systems towards total quality management is now realizing that quality is no longer an attribute of a product or service, but includes relationships (Meisenheimer, 1991). Further, a balanced relationship reflects trust between all parties involved. This allows each party to define one's own dimension of quality, and make contributions to the quality of care. The client must be an integral participant in this relationship, and both the advanced practice nurse and the physician provider must work to earn that trust.

Those who speculate on the future of health care in this nation predict that there will be a tremendous need for cost-effective generalist providers of primary care in the very near future (Lamm, 1996). They further predict that the mid-level practitioner, such as the advanced practice nurse, will be among the best candidates to fill this need, particularly in rural areas (Lamm, 1996). There will be many forces that shape the future of health care in this nation for women. Advanced practice nurses must seize the opportunity to respond to the needs of our nation's women, particularly rural low income pregnant women. Through ensuring all infants a healthy start in life by enhancing the health of their mothers, we are truly ensuring the future health of our nation, the goal of Healthy People 2000 (USDHHS, 1990).

APPENDICES

APPENDIX A
PATIENT SATISFACTION WITH PRENATAL CARE SURVEY

PATIENT SATISFACTION WITH PRENATAL CARE

COLLEGE OF NURSING

MICHIGAN STATE UNIVERSITY

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.

Subject ID __ __ __ __
1 2 3 4

PATIENT SATISFACTION WITH PRENATAL CARE

Omar and Schiffman
1992

Listed below are several reasons women come for prenatal care. We want to know to what extent each of these statements describes <u>your</u> reasons for coming for prenatal care.

For each statement please circle the number under the response which best describes how <u>you</u> feel about the statement. Remember, there are <u>no</u> right or wrong answers.

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
I COME FOR PRENATAL CARE:						
1. because my family/friends urged me to come.	1	2	3	4	5	6
2. because I do not want to take chances with my baby.	1	2	3	4	5	6
3. to get information that I need to care for myself during my pregnancy.	1	2	3	4	5	6
4. to get my vitamins.	1	2	3	4	5	6

IF THIS IS <u>NOT</u> YOUR FIRST PREGNANCY, ANSWER THE NEXT QUESTION (#5). IF THIS IS YOUR <u>FIRST</u> PREGNANCY, SKIP TO THE NEXT PAGE.

5. because of problems with previous pregnancy(ies).	1	2	3	4	5	6

PLEASE CONTINUE ON NEXT PAGE

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

Some women are quite happy and satisfied with their prenatal care while others are not. Listed below are several situations which may describe the relationship you have with your prenatal care provider. For each statement, please circle the number under the response which best describes how you feel about the statement.

Please rate the "PROVIDER" as the individual you see most often for prenatal exams, that is, the doctor, the nurse midwife, or the nurse practitioner 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 AM SATISFIED WITH:						
25. the explanation my provider gave to me of what was going to happen during my prenatal visits.	1	2	3	4	5	6
26. the explanation my provider gave to me about medical procedures.	1	2	3	4	5	6
27. the explanation my provider gave to me about what I can expect with my pregnancy and prenatal care.	1	2	3	4	5	6
28. the way my provider involves me in decisions about my prenatal care.	1	2	3	4	5	6
29. the way my provider treats me.	1	2	3	4	5	6
30. being able to ask questions without embarrassment.	1	2	3	4	5	6
31. the respect that I am shown by my provider.	1	2	3	4	5	6
32. the quality of care that I receive from my provider.	1	2	3	4	5	6
33. the way I am made to feel that I am not wasting my provider's time.	1	2	3	4	5	6
34. the time my provider spends talking about things of interest to me.	1	2	3	4	5	6
35. the information my provider gave to me about how things are going with my pregnancy.	1	2	3	4	5	6
36. the kinds of things my provider discussed during my prenatal visits.	1	2	3	4	5	6
37. the way my provider expresses concern about my overall personal situation.	1	2	3	4	5	6

PLEASE CONTINUE ON THE NEXT PAGE

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
I AM SATISFIED WITH:						
38. the way my provider explains test results to me.	1	2	3	4	5	6
39. the way my provider has prepared me for labor and delivery.	1	2	3	4	5	6
40. the explanation my provider gave to me about of what I can expect about parenting a newborn.	1	2	3	4	5	6
41. the interest and concern my provider has shown to me.	1	2	3	4	5	6
42. the way my provider treats my situation with privacy.	1	2	3	4	5	6
43. my provider's method of performing my physical exams.	1	2	3	4	5	6

For each statement below, please circle the number under the response which best describes how <u>you</u> feel about the statement. Some statements, however, may not apply to everyone. If the statement does <u>not</u> apply to your particular situation, circle the "9" in the column marked "N/A".

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree	N/A
I AM SATISFIED WITH:							
44. the way my provider takes my complaints seriously.	1	2	3	4	5	6	9
45. the understanding shown by my provider about transportation problems for coming to my prenatal visits.	1	2	3	4	5	6	9
46. the time my provider takes with me even though I do not have problems with this pregnancy.	1	2	3	4	5	6	9
47. the way my provider deals with all my medical problems.	1	2	3	4	5	6	9

PLEASE CONTINUE ON THE NEXT PAGE

Some women are quite happy and satisfied with their prenatal care while others are not. Listed below are several situations which may describe the relationship you have with the office/clinic staff. For each statement please circle the number under the response which best describes how you feel about the statement.

Please note: "STAFF" refers to the nurse, receptionist, aide, nutritionist, social worker, lab technician and other people that you may come in contact in the office or clinic.

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
I AM SATISFIED WITH:						
48. the explanation the staff gave to me of what I can expect with my pregnancy and prenatal care.	1	2	3	4	5	6
49. the way the staff involves me in decisions about my prenatal care.	1	2	3	4	5	6
50. the way the staff treats me.	1	2	3	4	5	6
51. being able to ask questions of the staff without embarrassment.	1	2	3	4	5	6
52. the respect that I am shown from the staff.	1	2	3	4	5	6
53. the quality of care that I receive from the staff.	1	2	3	4	5	6
54. the way I am made to feel that I am not wasting the staff's time.	1	2	3	4	5	6
55. the time the staff spend talking about things of interest to me.	1	2	3	4	5	6
56. the way the staff expresses concern about my overall personal situation.	1	2	3	4	5	6
57. the way the staff explains test results to me.	1	2	3	4	5	6

PLEASE CONTINUE ON NEXT PAGE

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
I AM SATISFIED WITH:						
58. the way the staff have prepared me for labor and delivery.	1	2	3	4	5	6
59. the interest and concern the staff have shown to me.	1	2	3	4	5	6
60. the way the staff treats my situation with privacy.	1	2	3	4	5	6

For each statement below, please circle the number under the response which best describes how <u>you</u> feel about the statement. Some statements, however, may not apply to everyone. If the statement does <u>not</u> apply to your particular situation, circle the "9" in the column marked "N/A".

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree	N/A
61. the way the staff takes my complaints seriously.	1	2	3	4	5	6	9
62. the understanding shown by the staff about transportation problems for coming to my prenatal visits.	1	2	3	4	5	6	9
63. the time the staff takes with me even though I do not have problems with this pregnancy.	1	2	3	4	5	6	9
64. the way the staff deals with all my medical problems.	1	2	3	4	5	6	9

PLEASE CONTINUE ON NEXT PAGE

Listed below are statements that describe the availability and types of prenatal care. We want to know to what extent each of these statements describes your satisfaction with prenatal care services.
For each statement, please circle the number under the response which best describes how you feel about the statements.

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
I AM SATISFIED WITH:						
65. how easy it was to find a prenatal care provider.	1	2	3	4	5	6
66. how easy it was to get prenatal care early in my pregnancy (that is before the fourth month).	1	2	3	4	5	6
67. the location of the office/clinic.	1	2	3	4	5	6
68. my ability to schedule prenatal visits at a time convenient for me.	1	2	3	4	5	6
69. how easy it is to reschedule my prenatal visits.	1	2	3	4	5	6
70. the amount of time I wait to be seen by my provider.	1	2	3	4	5	6
71. the total amount of time I spend at the office/clinic.	1	2	3	4	5	6
72. my options for choosing the provider I wanted for prenatal care.	1	2	3	4	5	6
73. the frequency with which I see the same prenatal provider for my care.	1	2	3	4	5	6
74. not having to repeat my story everytime I come for a visit.	1	2	3	4	5	6
75. having all the recommended tests.	1	2	3	4	5	6
76. the number of prenatal visits I made during the first six to seven months.	1	2	3	4	5	6

PLEASE CONTINUE ON NEXT PAGE

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
I AM SATISFIED WITH:						
77. having to come for more prenatal visits during the last two to three months.	1	2	3	4	5	6
78. the parking facilities of the office/ clinic.	1	2	3	4	5	6
79. the waiting room facilities of the office/ clinic.	1	2	3	4	5	6
80. the examination room of the office/ clinic.	1	2	3	4	5	6
81. being able to call someone at the office/ clinic day or night if I have problems.	1	2	3	4	5	6
82. the activities available to me while I wait to be seen by my provider.	1	2	3	4	5	6

For the following statement, please circle the number under the response which best describes how you feel about the statement. If the statement does not apply to your particular situation, circle the "9" in the column "N/A."

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree	N/A
83. the transportation provided to help me get to prenatal visits.	1	2	3	4	5	6	9

IF THIS IS YOUR FIRST PREGNANCY, SKIP TO THE NEXT PAGE.
IF YOU HAVE CHILD(REN), ANSWER THE NEXT QUESTION, #84.

84. the way my child(ren) are treated when they come with me to my prenatal visits.	1	2	3	4	5	6

PLEASE CONTINUE ON NEXT PAGE

For each statement below, please circle the number under the response which best describes how you feel about the statement. Space is provided if you would like to make comments to tell us more about your experience and prenatal care received.

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
85. Based on my experience and information that I have received during prenatal care, I am confident I will be a good mother.	1	2	3	4	5	6
Comments:						
86. I am satisfied with my overall prenatal care and would come here for another pregnancy.	1	2	3	4	5	6
Comments:						

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

90. There are a variety of individuals who provide information at the office/clinic you attend for your prenatal care. We want to know how helpful these persons are to you. Please read the list of persons below. Decide how helpful that person is to you. For each statement, please circle the number under the response which best describes how you feel about the person. Circle the "9" in the column marked "not applicable" only if you had no contact with that person during your pregnancy.

	Very Helpful	Helpful	Somewhat Helpful	Not at All Helpful	Not Applicable
_____doctor	1	2	3	4	9
_____nurse	1	2	3	4	9
_____nurse midwife	1	2	3	4	9
_____nurse practitioner	1	2	3	4	9
_____nutritionist	1	2	3	4	9
_____public health nurse	1	2	3	4	9
_____social worker	1	2	3	4	9
_____OTHER	1	2	3	4	

(please specify _____)

91. There are a variety of sources of information available to you during your pregnancy. We want to know how helpful these sources of information are to you. Please read each statement. Decide how helpful that source of information is to you. For each statement, please circle the number under the response which best describes how you feel about the source of information. Circle the "9" in the column marked "not applicable" only if you did not use the source of information.

	Very Helpful	Helpful	Somewhat Helpful	Not At All Helpful	Not Applicable
_____pamphlets/books	1	2	3	4	9
_____videotapes	1	2	3	4	9
_____childbirth education classes	1	2	3	4	9
_____family	1	2	3	4	9
_____friends	1	2	3	4	9
_____OTHER	1	2	3	4	

(please specify _____)

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

105. Do you take prenatal (childbirth education) classes?

_____ No _____ Yes →If yes, where? ____ at office/clinic
____ from outside agency, i.e., childbirth classes given in the community
____ in school

106. Do you use tobacco?

_____ No _____ Yes →If yes, how many packs/day? _____

107. Do you use alcohol?

_____ No _____ Yes →If yes, what do you usually drink?
(Check all that apply) _____ Beer
_____ Wine
_____ Spirits (hard liquor)

If yes, how many alcoholic beverages do you drink per week? _____

108. Which of the following do you take regularly during your pregnancy?
(Check all that apply).

_____ Prenatal vitamins
_____ Iron
_____ Indigestion medicine (i.e., Tums, Rolaids, Mylanta)
_____ Anti-nausea medicine
_____ Tranquilizers
_____ Sleeping pills
_____ Laxatives
_____ Aspirin or other pain killers
_____ Cold Medicine
_____ Street/recreational drugs
_____ Other (Please specify) _____
_____ I have not taken any drugs or medication of any kind during this pregnancy.

YOU ARE FINISHED

PLEASE RETURN THE COMPLETED SURVEY

TO THE PERSON WHO GAVE IT TO YOU.

THANK YOU FOR YOUR PARTICIPATION!

MO:ls B:\PSWPC\.INS

APPENDIX B
PROCEDURES FOR DATA COLLECTION
ORIGINAL STUDY BY OMAR, SCHIFFMAN, AND BAUER

APPENDIX B

PROCEDURES FOR DATA COLLECTION

Original Study by Omar, Schiffman, and Bauer

Data collectors were selected 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 local health departments, physician offices, and at childbirth education classes. Women were in their third trimester of pregnancy, but all had completed at least three prenatal visits. 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 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 a cash incentive of $10.00. The completed

surveys were returned to the primary investigators. Data collection commenced in June 1994 and was completed in July 1995.

APPENDIX C
ALPHA RELIABILITIES AND FACTOR LOADINGS FOR THE DIMENSIONS OF THE SATISFACTION WITH THE PROVIDER SCALE OF THE PSPC II INSTRUMENT

APPENDIX C

Table 2

Alpha Reliabilities and Factor Loadings for the Dimensions of the Satisfaction with the Provider Scale of the PSPCII Instrument

Dimension	Item No.	Item	Factor Loading	Alpha
PROVIDER CARING RELATIONSHIP	29	(Way provider treats me)	.89	.91
	33	(Not wasting provider's time)	.84	
	30	(Ask questions without embarrassment)	.82	
	32	(Quality of care)	.81	
	44	(Takes my complaints seriously)	.68	
	42	(Treats my situation privately)	.63	
	43	(Physical exam)	.61	
PROVIDER INFORMATION	26	(Exploration about medical procedures)	.92	.90
	27	(Exploration about pregnancy)	.87	
	40	(Exploration about parenting)	.76	
	39	(Preparation for labor and delivery)	.75	
	25	(Exploration about prenatal visits)	.68	
TOTAL SCALE	12	Items		.93

APPENDIX D
UNIVERSITY COMMITTEE ON RESEARCH INVOLVING HUMAN SUBJECTS

MICHIGAN STATE
UNIVERSITY

January 23, 1996

TO: Karen M. Wessendorf
1008 Monona Dr.
Ludington, MI 49431

RE: IRB#: 96-023
TITLE: PAITENT SATISFACTION WITH PRENATAL CARE IN A RURAL SETTING: A COMPARISON BY TYPE OF PROVIDER
REVISION REQUESTED: N/A
CATEGORY: 1-E
APPROVAL DATE: 01/23/96

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

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

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

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

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

Sincerely,

David E. Wright, Ph.D.
UCRIHS Chair

DEW:bed

cc: Mildred A. Omar

OFFICE OF
RESEARCH AND GRADUATE STUDIES

University Committee on Research Involving Human Subjects (UCRIHS)

Michigan State University
232 Administration Building
East Lansing, Michigan
48824-1046

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

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