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Patient Satisfaction with Prenatal Care Services in a Rural Setting: Time

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PATIENT SATISFACTION WITH PRENATAL CARE SERVICES IN A RURAL SETTING: TIME

By

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ABSTRACT

PATIENT SATISFACTION WITH PRENATAL CARE SERVICES IN A RURAL SETTING: TIME

By

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Adequate prenatal care for rural low income pregnant women is of concern. One factor identified in the literature that has been related to decreased prenatal attendance is dissatisfaction with the amount of time spent at the office/clinic, which may be affected by the type of prenatal care provider. The purpose of this secondary data analysis was to determine if the type of provider [Certified Nurse Midwife (CNM) or Physician] affects rural low income pregnant women's satisfaction with the total time spent at the office/clinic. King's dynamic interacting systems was the conceptual framework utilized in this study. Women receiving care from the CNM spent a longer total time at the office/clinic despite no significant difference in satisfaction with total time spent at the office/clinic by provider type. One significant difference did occur: women who spent less time at the office/clinic (less than or equal to 30 minutes) were more satisfied with the total time spent at the office/clinic than women who had a greater length of time (> 30 minutes). Information from this study can assist the Advanced Practice Nurse to enhance issues of satisfaction with prenatal care services.

This study is lovingly dedicated to my husband, Bryan, and my children, Jacob and Samuel.

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INTRODUCTION

Background of the Problem

Prenatal care is recognized as the cornerstone of preventive health care for the pregnant woman (Kogan, Alexander, Kotelchuck, Nagey, & Jack, 1994). Yet, in spite of the recognized value of prenatal care, some women still receive less prenatal care than what is currently recommended (York, Williams, & Munro, 1993). Various factors influence lack of continuity of prenatal care (Higgins, Murray, & Williams, 1994). One factor cited is women's dissatisfaction with the total time spent at the prenatal visit (Oakley, 1992; York et al., 1993). Time has been identified as a factor influencing women's satisfaction with the prenatal care system (Oakley, 1992). The provider type, certified nurse midwife or physician, may affect the length of time spent at the office, which in turn, may affect the degree of patient satisfaction with prenatal care. The longer the wait to be seen by the provider, as well as the total time spent at the office or clinic the woman has for her prenatal visit, may influence the woman's decision to return for scheduled prenatal visits to the office or clinic (Oakley, 1992). The amount of time spent at the prenatal visit may be a barrier to care for rural

women, especially if they are traveling great distances for prenatal care services. Identifying factors which promote satisfaction with the delivery of prenatal care services could favorably affect enrollment in the utilization of prenatal care.

The concept of patient satisfaction with prenatal care has been linked with prenatal care utilization. Dissatisfaction with the delivery of prenatal care services may occur with time spent waiting to be seen and the total time spent at the office or clinic if the woman is losing work time. The total amount of time a woman is gone from her job may result in a loss of income (Minden, 1994). For low income women, this may be substantial. Child care may add an additional cost with an extended wait in the office or clinic (Tranter, 1989). Due to child care costs, loss of wages, and limited resources rural low income women may deem that the amount of time spent at the prenatal office or clinic is unacceptable and, therefore, choose not to receive consistent prenatal care (Barger, 1990).

The amount of time spent waiting to receive prenatal care is often lengthy in underserved rural areas (Barger, 1990). Rural areas suffer from limited health care resources, including prenatal care providers (Barger, 1990). Many rural areas have few, if any obstetricians, who provide prenatal care (Knoll, 1990). Prenatal care for rural women is often provided by family or general practice physicians or certified nurse midwives (CNMs). Certified nurse

midwives are able to provide comprehensive prenatal care to women, including attending the delivery of the infant (Knoll, 1990). Satisfaction with the amount of time spent waiting to be seen by the provider may be influenced by the type of prenatal care provider, i.e., physician or CNM (York et al., 1993). A patient waiting to be seen by a certified nurse midwife may have an increase in total time spent with the patient. It is important to understand rural low income pregnant women's perception of satisfaction with the prenatal care delivery system, especially the total time spent at the office or clinic by provider type (physician or CNM), because patient satisfaction has been correlated to compliance and continuity of care.

The purpose of this study, using a secondary data analysis, was to: a) describe low income women's perception of the total time spent at the office or clinic and their satisfaction with their total time spent at the office or clinic; b) compare pregnant women's satisfaction with total time spent in the office or clinic by type of provider (certified nurse midwife or physician) with total amount of time spent at the office or clinic; and c) determine if an association exists between total amount of time spent at the office or clinic, type of prenatal care provider, and satisfaction with total amount of time spent at the office or clinic for rural low income pregnant women in Benzie County, Michigan. This may provide reliable information to enhance prenatal care utilization.

Statement of the Problem

There exists an underutilization of prenatal care services in Benzie County for 1994 with 34% of women receiving less than adequate prenatal care (KIDS COUNT in Michigan, 1994; MDHP, 1994). It has not been determined what factors may have prohibited these women from obtaining adequate prenatal care. Even when financial and transportation barriers were removed, some women still did not receive adequate prenatal care. One implied reason may be a woman's dissatisfaction with the delivery of prenatal care services, especially the total amount of time spent at the office or clinic (Lia-Hoagberg, Rode, Skovhalt, Oberg, Berg, Mullett, & Choi, 1990).

Benzie county is located in Northwestern Michigan having a population of 12,200 in 1994, with 152 registered number of live births (KIDS COUNT in Michigan, 1994, MDHP, 1994). Benzie County has no inpatient facility for women to deliver. Women who are receiving prenatal care from general practice physicians in Benzie County must transfer care early in the third trimester to another prenatal care provider in a nearby county. All women who receive care from the nurse-midwifery services also must travel to the nearby county for their entire prenatal care. This may increase the pregnant woman's time spent at the office or clinic and influence the woman's satisfaction. By understanding the woman's satisfaction with the total amount of time spent in the office or clinic, the prenatal care

system can address issues to better meet the needs of the women they serve.

Research Questions

1. Is there a difference between rural low income pregnant women's perception of the total amount of time spent at the office or clinic when seen by certified nurse midwife providers as compared to physician providers?
2. Is there an association between type of provider, the total amount of time spent at the office or clinic, and satisfaction with the total time spent at the office/clinic for prenatal visits?

Importance of the Study

Adequacy of prenatal care is of great importance to the advanced practice nurse (APN). When providing prenatal care services, it is imperative to acknowledge women's satisfaction with prenatal care. If an association exists between total time spent in the office or clinic and level of satisfaction, the prenatal care provider can address this issue within the prenatal care system. Reduction of unnecessary lengthy waiting periods before being seen by the provider and/or reduction of total time spent at the office or clinic may be one way to address the delivery of prenatal care. Addressing the contributing factors that lead to dissatisfaction with the total time spent at prenatal visits may change pregnant women's perceptions. If a woman believes that the provider and prenatal care system value her time, she may be more satisfied and thus receptive to

receiving prenatal care resulting in adequacy of care with an increased opportunity for risk assessment and health promotion. The purpose of this study was to add to the body of knowledge by examining if there was an association with total time spent at the office/clinic, type of provider, and level of satisfaction. The APN working with rural low income pregnant women may use this information to help promote attendance of prenatal care. This could be achieved by discussing with pregnant women provider options and issues regarding time in the delivery of prenatal care services.

Conceptual Definitions of the Variables

This section includes the conceptual definitions of the study variables. The conceptual model using King's 1981 interactive model is described.

Type of Provider

For the purpose of this study, the type of provider was defined as either a physician or a certified nurse-midwife. All providers of prenatal care fulfill the requirements to deliver prenatal care according to the standards set by the American College of Obstetricians and Gynecologists (Merkatz, Thompson, Mullen, & Goldenberg, 1990), as well as the providers own specialties, i.e., American Academy of Family Practitioners or the American College of Nurse Midwives (Freemont & Poland, 1992; Yankov, Peterson, Oakley, & Mayes, 1993). Yet each provider type has certain innate differences (Knoll, 1990).

Physician prenatal care providers. A physician is a person who has successfully completed the prescribed course of studies of medicine in a medical school officially recognized by the country in which it is located. This individual has acquired the requisite qualifications for licensure in the practice of medicine (Merkatz et al., 1990). Physicians follow the medical model when caring for patients. They diagnose and treat the condition. They may not always look at the patient as a holistic individual that is affected by her environment. For the purpose of this study physician prenatal care providers were defined as anyone who is licensed to practice medicine in the state of Michigan who care for and treat women's conditions during pregnancy as well as any complications of the prenatal and postnatal periods. This provider group includes general practitioners, family practitioners, and obstetricians.

Certified nurse-midwife prenatal care providers. For the purpose of this study a certified nurse-midwife was defined as a registered nurse who independently manages the care of mothers and babies throughout the maternity cycle, including the postpartum period (Merkatz et al., 1990). The certified nurse-midwife attains the knowledge and skill required to provide this service via an organized program of study that is recognized by the American College of Nurse Midwives (Merkatz et al., 1990). Their scope of practice is recognized to be that of healthy, uncomplicated pregnancies,

as well as care of non-pregnant women seeking gynecological services.

Certified 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). The philosophy of the certified nurse-midwife is to encompass safety for women and infants, competent care, client and family participation in the health care process, and patient satisfaction (Knoll, 1990). The certified nurse-midwife utilizes the nursing model when caring for patients, viewing them as holistic individuals interacting within their environment. They often spend increased time with patients during office visits for education and counseling services. The goal of the certified nurse-midwife is to promote wellness and prevent illness (Knoll, 1990).

Total Time Spent at the Office or Clinic Visit

Time, according to Taber's Cyclopedic Medical Dictionary (Thomas, 1990), is the interval between beginning and ending. The theory of patient time spent at the office or clinic began as a queuing theory that today is applied to service many different businesses (Minden, 1994). The management of the patient's perception of total amount of time spent at the office/clinic can greatly affect one's satisfaction (Minden, 1994). For the purpose of this study, the degree, or measured duration, in minutes, the rural low-income pregnant woman spent in the office or clinic for

prenatal care, was defined as the total time spent at the office or clinic visit. The beginning was initiated by the first contact with the receptionist and was concluded with the exit from the office or clinic. Total time spent at the office/clinic consists of all of the interactions that take place within the processes of the prenatal visit. This includes interactions with all members of the healthcare team, and is affected by: a) the pregnant woman's own availability in leading her own individual lifestyle, travel time, time away from work, childcare; b) the availability of the prenatal care provider; and c) the availability and responsiveness of the prenatal care system.

Satisfaction with the Prenatal Care System: Total Amount of Time Spent at the Office/Clinic

Satisfaction of the patient is an important criteria for successful care (Minden, 1994). To better understand the concept of patient satisfaction one must know how it is defined. "Human satisfaction is a complex concept that is related to a number of factors including lifestyle, past experiences, future expectations, and values of both the individual and society" (Carr-Hill, 1992, p. 237). Patient satisfaction is described as the patient's perceptions based on a set of expectations that are derived from beliefs about ideal or anticipated care (Hsieh & Kagle, 1991). According to Hoptom, Howie, and Porter (1993), patient satisfaction is the evaluation, by the patient, of the different care received. Patient satisfaction has also been defined as a

practical gauge to measure effectiveness and efficiency of care (Alexander, Sandridge, & Moore, 1993).

Organizational features associated with antenatal care have been singled out as an important aspect of the user perspective in many studies (Oakley, 1992). Patient satisfaction with the system has been described as a disconfirmation paradigm. This paradigm links the patient's attitudes and feelings with satisfaction. Confirmation and disconfirmation are terms used to describe the outcome of a service encounter (Thompson & Yarnold, 1995). According to this paradigm, patient satisfaction is determined by the magnitude and direction of the gap between the patient's expectations and perceived satisfaction of care received (Thompson & Yarnold, 1995). A factor that has been identified in the literature relating to satisfaction with the prenatal care system is lengthy time spent in the office/clinic (Kojo-Austin, Malin, & Hemminki, 1993). Some feelings that affect satisfaction of total time spent at the office or clinic are unoccupied time, anxiety, unexplained waits, unfair waits, and value of the service (McComas, Kosseim, & Macintosh, 1995). For the purpose of this study patient satisfaction with total time spent at the office or clinic was defined as the pregnant woman's positive or negative attitude and feelings toward the total amount of time spent at the office or clinic.

Conceptual Framework

King's dynamic interacting systems was the conceptual framework utilized in this study. The goal of King's systems framework is helping pregnant women maintain their health. King's (1981) framework for nursing is based on several assumptions regarding individuals as perceiving beings. One of King's assumptions about human beings is that they are open systems in transaction with the environment (prenatal care delivery system). Another assumption is that the prenatal care delivery system is an organized boundary system of social roles, behaviors, and practices developed to maintain values and the mechanisms to regulate the practices and rules (King, 1981).

King's conceptual framework is based upon three interacting systems: personal systems, interpersonal systems, and social systems (King, 1981, 1992). Each system has specific goals, needs, and values that affect the interaction process. The focus of this study was on the interaction process of the personal system and the social system. The personal system is comprised of the rural low income pregnant women. The social system consists of the prenatal care delivery system (total amount of time spent at the office/clinic) and the type of provider of prenatal care (certified nurse-midwife/physician).

The permeable boundaries of King's framework exhibit the interaction the pregnant woman has with her environment (King, 1992). The broken lines represent this interaction

with the other systems (Figure 1). The arrows represent the openness of the systems to one another. To achieve goal attainment (adequacy of prenatal care utilization, the elements of satisfaction with total time spent at the office/clinic must be addressed within the personal system (pregnant woman) and the social system (prenatal care delivery system).

The major concept related to the personal system is perception (King, 1992). The social beings in this system are the rural low income pregnant women. The pregnant woman has perceptions that give meaning to her prenatal experience, represent her image of reality, and influence her behavior. The rural low income pregnant woman's past experience with the prenatal care system, and her perceptions of her needs, goals, and values of prenatal care, may influence her behavior. She may bring positive, negative, or both positive and negative perceptions with her into the prenatal care system.

The social system is an organized boundary system of social roles, behaviors, and practices developed to regulate practices and rules (King, 1981, 1992). In this system, human beings have defined roles. In the prenatal care system, the concept of power is the ability to control events, such as the total amount of time spent by women to receive prenatal care. In the social system, the concept of power is the ability to reduce resistance and use, and to mobilize resources to achieve goals, one being consumer

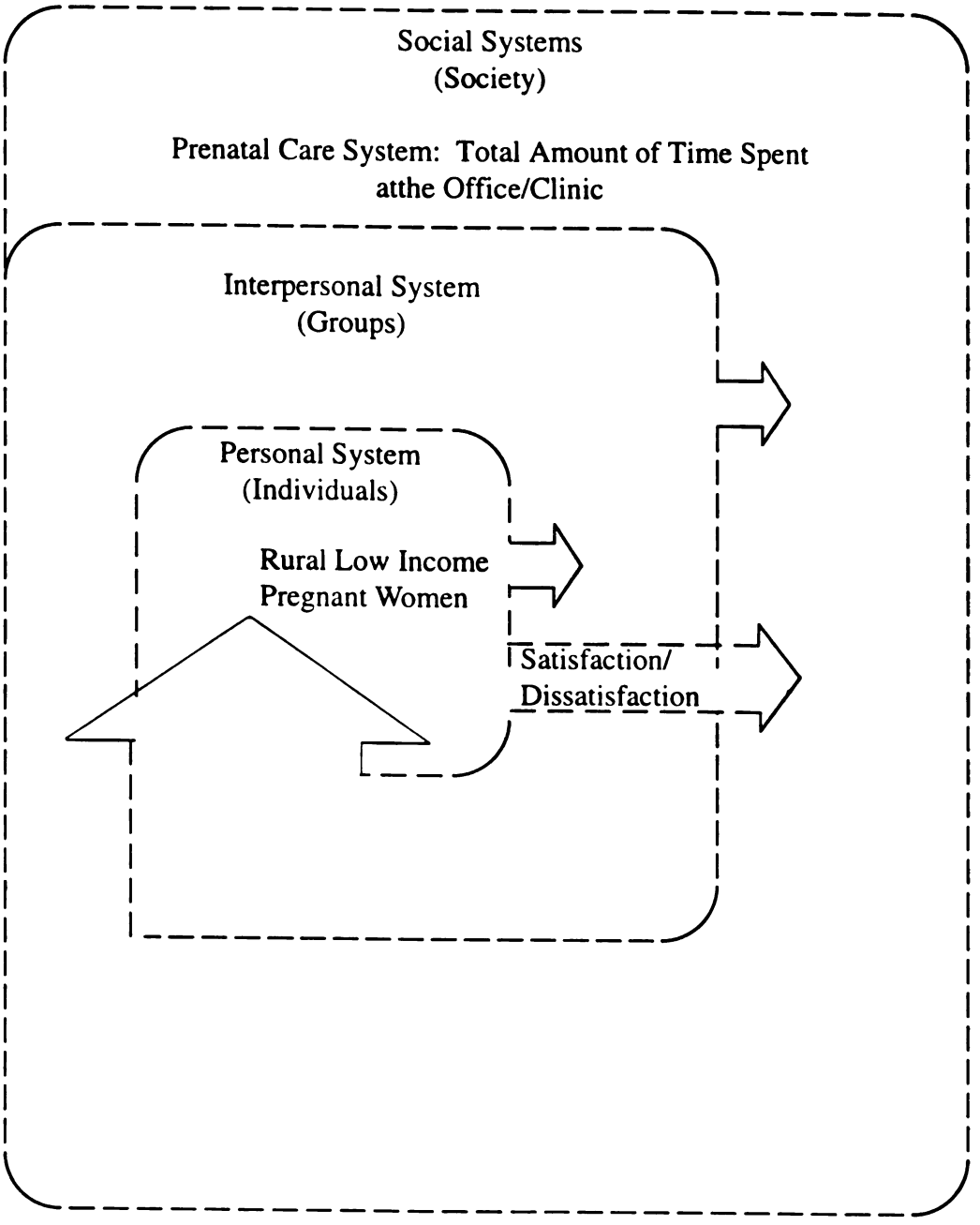

Figure 1. Adapted Conceptual Framework for Satisfaction with the Prenatal Care System: Dynamic Interacting Systems. From I.M. King, A Theory for Nursing: Systems, Concepts, Process. New York: John Wiley & Sons, 1981, p. 11.

satisfaction with services. With the pregnant woman's satisfaction with the total amount of time she spends to receive prenatal care, she may recognize, accept, and keep the recommended prenatal visits. The prenatal care delivery system is a social system with power to control resources and access to prenatal care to pregnant women. The resources within the prenatal care delivery system include the prenatal care provider and access within the prenatal care delivery system include the prenatal care provider and access within the prenatal care delivery system and the availability and responsiveness of the prenatal care system in directing the total amount of time spent at the office or clinic. The members of the prenatal care delivery system need to be aware of the impact they have on the pregnant woman and help her achieve the goal of consumer satisfaction. They may do so by keeping her informed of delays, update her educational needs to fit her situation, and allow her to schedule times that may best fit her schedule (see Figure 1).

Review of the Literature

There is limited literature which examined patient satisfaction with prenatal care in rural settings with low income women in general and total amount of time spent at the office/clinic specifically. There have been, however, some studies which examined satisfaction with total amount of time spent at the office/clinic with the health care system, including the prenatal care delivery system

(Alexander et al., 1993; Minden, 1994). Time emerged as a recurrent variable affecting satisfaction with prenatal care (Buhler, Glick, & Scheps, 1988; Heins, Nance, Webster, McCarthy, & Efird, 1990). These studies are reviewed followed by a critique of the existing literature.

Satisfaction with Time: Health Care System

A study by Minden (1994) identified two elements related to satisfaction with amount of wait time. Data were collected by survey in an office setting with dental patients. Clients were satisfied when waiting time was kept under 13 minutes and when scheduling of routine appointments occurred in less than two weeks. The study findings supported that when access problems were controlled for, such as waiting time and scheduling, the total amount of time spent in the office was reduced and patient satisfaction increased.

The total time spent in a health care visit was a recurrent concern among pediatric patients in a study by McComas et al. (1995). Patient dissatisfaction with waiting time was perceived as: a) long unoccupied waiting time; b) pre-processing waiting time; c) unexplained waiting time; d) indefinite waiting time; and e) unfair waiting time (when newly arrived patients were seen before those already waiting). McComas et al. (1995) also reported that the more valuable the clients perceived the service, the longer they were willing to wait. Even when total time remained short,

a violation of any of these perceptions resulted in dissatisfaction.

Satisfaction with Time: Prenatal Care System

Numerous factors have been stated to directly affect patient satisfaction in the literature, one being amount of time spent at the prenatal office or clinic (Buhler et al., 1988; Heins et al., 1990; Rowley, Hensley, Brinsmead, & Woldarczk, 1995). These studies concluded that an increased amount of time spent in the office or clinic often contributed to a decrease in patient satisfaction.

Two studies (Alexander et al., 1993; Seguin, Therrien, Champagne, & Larouche, 1989) examined the concept of total time spent in the office for prenatal care and its association with patient satisfaction. Both studies identified that a lengthy total time decreased the degree of satisfaction with prenatal care. Neither addressed the significance of satisfaction with total time or pursued its relevance any further. One of the limitations of these studies was that satisfaction with prenatal care was determined postpartally. Alexander et al. (1993) and Seguin et al. (1989) have indicated that patient satisfaction with prenatal care measured retrospectively, e.g., after the delivery, may not accurately reflect true satisfaction with prenatal care, rather the birth outcome may influence the level of satisfaction reported.

Oakley (1992) identified that lengthy total time spent at the office was a negative influence on satisfaction in a

study of women's attitudes toward antenatal care. In this study the researcher attributed a decrease in kept appointments with dissatisfaction with long waits. A study by Mellor and Chambors (1995) of 52 antenatal women, stated that a lengthy total wait time may negatively affect women's satisfaction with prenatal services received. Both of these studies identified a lengthy total time spent at the office as a possible causative factor in pregnant women's decreased satisfaction with prenatal care. Both, however, failed to determine the statistical relevance of the variable of total time with respect to satisfaction with prenatal care.

A study conducted by Omar and Schiffman (1995) examined components of pregnant women's perceptions of prenatal care. This study addressed satisfaction with the prenatal care delivery system. One focus was directed to specific aspects of the office or clinic environment where the women received prenatal care services. The dimensions that the pregnant women identified as important to their satisfaction or dissatisfaction with the prenatal care delivery system were: a) healthcare provider consistency; b) accessibility and scheduling; c) waiting time; and d) other services provided. Of the four dimensions, waiting time was identified as the major source of dissatisfaction. Results revealed that pregnant women spent between thirty minutes to three hours at the prenatal care office or clinic. Women reported more satisfaction with total time if they really liked their

specific provider. They admitted, however, that they were still dissatisfied by having to wait a long period of time.

A study conducted by Dennis, Flynn, and Martin (1995), found that the longer amount of time that the pregnant women had to wait for the doctor, the less likely they were to look forward to their prenatal care visits. Dennis et al. (1995) stated that the increased patient wait time, median amount of 19 minutes, extended the total time spent in the office or clinic and resulted in patient dissatisfaction with prenatal care.

Kojo-Austin et al. (1993) examined pregnant women's views and waiting experiences with prenatal care. Of the 61 women interviewed, the majority of the women in this study (n=56) reported long time spent at the office or clinic was a negative aspect of the prenatal clinic. Results indicated that longer times spent at the office or clinic for the women produced dissatisfaction with the prenatal care system. The authors suggest that the women's dissatisfaction with the prenatal care system leads to decreased compliance and subsequently less prenatal care, but had no data to support this hypothesis.

When relating pregnant women's patient satisfaction with total time and expectations, Thompson and Yarnold (1995) hypothesized that pregnant women were least satisfied when the total time spent at the office or clinic was longer than they had expected. The data from the study (n=1,574 pregnant women) supported the hypothesis and also revealed

that pregnant women were relatively satisfied when total amount of time spent at the office/clinic was perceived as equal to their expectations, and highly satisfied when total time spent was shorter than expected. An overall measure of perceived total amount of time spent at the office/clinic and its asspication with expectations revealed a moderate association of satisfaction with total time spent at the office or clinic. Del Mar and O'Connor (1994) reported similar findings in a retrospective study collected one to two days postpartum by a survey with 288 postpartum women. These authors reported that women valued having a sufficiently short time spent at the office or clinic to receive prenatal care.

In conducting an analysis to reduce the patient wait time for prenatal care services, Tranter (1989) found that prolonged patient waits resulted in fraying tempers and frustrated staff. In efforts to reform the prenatal care clinic various scheduling changes were instituted. These included amalgamating visits such as the history portion with the medical examination and eliminating unnecessary visits such as the history portion with the medical examination and eliminating unnecessary visits in normal healthy pregnancies. The changes were implemented in a four phase process which significantly reduced the total time spent at the prenatal clinic for care. Results revealed a decrease in the number of complaints as well as an increase in the number of scheduled prenatal appointments kept

(Tranter, 1989). Pregnant women perceived their prenatal visits were more purposeful. The overall outcome was that the degree of patient satisfaction with the prenatal care services increased.

Prenatal Care System: Satisfaction with Total Amount of Time Spent at the Office/Clinic by Type of Provider

Having a shortage and maldistribution of prenatal care providers may directly affect the amount of time a woman spends for a prenatal care visit, particularly for women residing in rural areas (Knoll, 1990). In a study comparing certified nurse-midwives (n=1,759) and family/general practice physicians (n=1,179) in the provision of prenatal care services, results indicated there was less overall total amount of time spent at the office/clinic when prenatal care was delivered by physicians as the provider as compared to certified nurse-midwives. Women had the longest overall total amount of time spent at the office/clinic when seen by obstetricians as compared to family and general practice physicians. The mean length of the total time for the CNM was 23.7 minutes, with 6 minutes spent on education and counseling and 2.5 minutes in family centered activities. The study was limited due to the lack of determination of how time was spent with the physician providers. The study concluded that patient satisfaction was increased with the total time spent at the office or clinic when the prenatal provider was a certified nurse midwife.

In the study by Gravely and Littlefield (1992), it was found that increasing the availability of low-risk prenatal care professionals through use of non-physician maternal health providers, with a physician available for collaboration, decreased the amount of time spent waiting to be seen by the prenatal care provider and decreased total time spent at the office/clinic. The results found that women who were seen by certified nurse-midwives as their prenatal care providers had less patient wait time, which in turn increased continuity of care and compliance. Ultimately the decreased patient wait time with the certified nurse-midwife as the provider resulted in an increase in satisfaction of the pregnant woman despite an increase in total time spent at the office.

In a study where women received prenatal care from either a general practitioner or a certified nurse-midwife, results revealed that the majority (n=52) preferred the individualized appointment system that the certified nurse-midwives utilized compared to the lengthy wait of the general practitioners, even when they were seen for the same amount of time by both types of providers (Mellor & Chambers, 1995). Results from this study revealed an increase in satisfaction with prenatal care and the total time when the pregnant woman was seen by a certified nurse-midwife for prenatal care.

Critique of the Literature Review

There remain many issues that can contribute to pregnant women's satisfaction with prenatal care. As evidenced by the review of the literature, the recurrent theme of total time spent in the office/clinic exists and has some influence on patient satisfaction with prenatal care, such that the more lengthy the total time spent at the office/clinic, the less satisfied the pregnant woman was (Kojo-Austin et al., 1993; Omar & Schiffman, 1995; Thompson & Yarnold, 1995; Tranter, 1989). Only one study addressed actual amount of time in minutes (Dennis et al., 1995). In spite of total amount of time spent at the office/clinic being identified as a factor of patient satisfaction with the prenatal care delivery system, few studies utilized the data for further analyses. Most studies simply stated that total time spent at the office or clinic was identified as part of the patient's concern or complaint when questioned regarding patient satisfaction with prenatal care but did not address it any further (Mellor, 1995; Oakley, 1992; Petitti, Hiatt, Chinn, & Crougham-Minihane, 1991).

Other limitations of the studies were the retrospective versus prospective nature of some of the studies (Alexander et al., 1993; Del Mar & O'Connor, 1994; Kojo-Austin et al., 1993; Seguin et al., 1989). Retrospective studies have been shown to skew the data due to the halo effect since women were reluctant to criticize the professional who provided

care for them, especially if the outcome was positive (Alexander et al., 1993).

The lack of an adequate measurement tool limited adequate analyses of satisfaction of prenatal care (Alexander et al., 1993; Seguin et al., 1989). In some studies, instruments that measured prenatal care were either not identified, lacked psychometric analysis, or were included as part of the patient's overall satisfaction with perinatal care (Omar & Schiffman, 1992). Other limitations were the lack of generalizability due to the majority of studies done with middle/upper class women (Kojo-Austin et al., 1993; Oakley, 1992; Seguin et al., 1989), as well as small sample size (Omar & Schiffman, 1995).

There exists a need for further research of pregnant women's satisfaction with the prenatal care services with attention to rural low income pregnant women. The information provided can assist in addressing issues related to total amount of time spent at the office/clinic for this population. The total time spent at the office or clinic, if lengthy, can be inconvenient and decrease pregnant women's satisfaction with prenatal care services. The findings may provide a greater understanding for rural communities, as they strive in their planning to improve delivery of prenatal care services to improve adequacy of prenatal care.

Methods

Research Design

The research design was a descriptive study of rural low income pregnant women's perceptions of total amount of time spent at the office/clinic and satisfaction with the amount of time closest to the total amount of time spent at the office or clinic visit by type of provider through a secondary analysis of data previously collected by Omar, Schiffman, and Bauer (1995) using the Patient Satisfaction with Prenatal Care (PSPC) Instrument (Appendix A). The purpose of this study was to describe the women's satisfaction with the prenatal care system on one dimension, waiting time, which included the total amount of time spent at the office or clinic.

In the original study by Omar et al. (1995), women's perceptions of barriers, expectations about prenatal care, satisfaction with prenatal care, prenatal care utilization, and maternal and infant outcomes were evaluated in a sample of 61 rural low income pregnant women in Benzie County, Michigan. Three major satisfaction themes were addressed: satisfaction with the prenatal provider, satisfaction with the prenatal staff, and satisfaction with the prenatal care system. The researchers recruited the participants from childbirth education classes, three rural health departments, and from private physicians' and CNMs' offices and clinics. Data were collected between June, 1994, and July, 1995. The PSPC instrument was developed by Omar and

Schiffman (1992) to measure patient expectations of and satisfaction with prenatal care and prenatal care services. See Appendix B for description of the data collection procedures for the original study.

Sample

The sample for this study consisted of rural, low income pregnant women, 35 of whom received prenatal care from physician prenatal care providers, and 25 women received prenatal care from certified nurse-midwives. The original sample consisted of 61 low income pregnant women residing in Benzie County, Michigan, and currently enrolled in prenatal care services. Sixty-two women were approached for inclusion in the study, result in a 98% participation rate. For the purpose of this study 60 women for whom complete data was available comprised the final sample for the present study. One woman was excluded from the study due to the fact that she identified that she saw both provider types equally.

Inclusion criteria for the original study were: a) third trimester of pregnancy with at least three prenatal care visits; b) demonstration of literacy with the English language; c) resident of Benzie County, Michigan; and d) designated as low income status by meeting eligibility criteria for Women, Infants, and Children (WIC) program, which is at or below 185% poverty level (Omar et al., 1995).

Setting

The rural county used in this study has been designated as a medically underserved area. The county has one hospital, but obstetrical deliveries are no longer provided; therefore, all women must travel out of the county for prenatal care after 28 weeks gestation and for delivery services. Some women traveled in excess of 100 miles round trip (average of 64 miles) to receive prenatal services.

Operational Definition of the Variables

Type of provider. The type of provider was defined as the provider the pregnant woman identified on item number 87 of the Patient Satisfaction with Prenatal Care (PSPC) Instrument (Appendix A) as the provider seen most often for prenatal care. If the patient was seen by more than one provider, she was instructed to choose the provider that she saw most often. The provider type choices were: 1) doctor; 2) nurse-midwife; 3) nurse practitioner; 4) doctor and nurse-midwife/nurse practitioner about the same number of times; and 5) do not know (Omar & Schiffman, 1994). For the purpose of this study, type of provider was defined as doctor or nurse midwife since the women in this study did not choose any of the other options. Since type of physician provider was not identified in the PSPC, the provider could have been any physician who provided prenatal care, i.e., general or family practitioner, or obstetrician.

Satisfaction with the Prenatal Care System: Total Amount of Time Spent at the Office/Clinic. Patient

satisfaction with total amount of time spent at the office/clinic was defined using one dimension of the satisfaction with prenatal care system scale of the PSPC instrument and consisted of one item on the PSPC instrument, item 71. Item 71 addresses the total amount of time spent at the office/clinic (Omar & Schiffman, 1994). This item ascertains how satisfied the women are with the prenatal care system with respect to total amount of time spent at the office/clinic. The scores indicate a degree of satisfaction that the women have with their total amount of time spent at the office/clinic, with a possible range from 1 (very satisfied) to 6 (very dissatisfied).

Total Amount of Time Spent at the Office/Clinic. Total amount of time spent at the office/clinic was defined using item 103 on the PSPC Instrument which elicits the amount of time closest to the total amount of time the woman usually spends at her clinic or office visit. Choices of total amount of time spent at the office or clinic visit were: a) less than 15 minutes; b)15-30 minutes; c) 31-45 minutes; 46-60 minutes; e) 61 minutes to 2 hours; and f) more than 2 hours (Omar & Schiffman, 1994). Total time spent at the office/clinic was categorized into a dichotomous variable, less than or equal to 30 minutes or over thirty minutes for adequate numbers within each cell for meaningful analysis to be done.

Instrumentation

The PSPC instrument was designed for use with subjects at or below a sixth grade reading level and is a 108 item self-report questionnaire using a six point Likert-type scale (Omar & Schiffman, 1994). The primary co-investigators developed the Patient Satisfaction with Prenatal Care (PSPC) instrument as a measure of patient expectations of the satisfaction with prenatal care. Responses on the PSPC range from 1 (strongly agree) to 6 (strongly disagree). The PSPC contains five scales: motivation, expectations, satisfaction with the provider, satisfaction with the staff, and satisfaction with the prenatal care system. The satisfaction with the prenatal care system scale factored into four dimensions: access, time, facilities, and organization. The subscale, time, was utilized for this study and contains two items: satisfaction with amount of waiting time to be seen by the provider, and satisfaction with the total amount of time spent at the office/clinic. Only one question relating specifically to the total amount of time spent at the office/clinic was used from the satisfaction with prenatal care system scale for this study.

The PSPC Instrument has demonstrated acceptable internal consistency of the scales (Appendix D). The alpha reliability for the satisfaction with the prenatal care system ranges from .78 to .90, with the time subscale having the highest reliability at .90.

Data Analysis

Data analysis was done using the SPSS/PC+ computer program. Demographics included on the PSPC instrument to describe the sample were: age, race, marital status, insurance type, work status, and the total number of times the woman was pregnant. The gender of the provider was also ascertained. Descriptive statistics, such as frequencies and measures of central tendencies, were used to describe the sample, the total amount of time spent at the prenatal office or clinic, the provider type, and satisfaction with the total amount of time spent at the office/clinic. Data were computed for satisfaction with the prenatal care system scale; time for both groups of providers.

Research Question 1. Is there a difference between rural low income pregnant women's perception of the total amount of time spent at the office or clinic when seen by certified nurse-midwife providers as compared to physician providers? A 2 x 2 cross tabulation with chi square test for homogeneity was used with two categories of providers and two categories of time to determine if a proportional difference existed.

Research Question 2. Is there an association between type of provider, total time spent in the office/clinic, and satisfaction with total time spent at the office/clinic for prenatal visits? To answer research question 2, a factorial analysis of variance was used to analyze the association between type of provider, total time spent at the

office/clinic, and satisfaction with the total time spent at the office/clinic. The dependent variable was the satisfaction score for item 71 on the PSPC instrument. The first factor was the two categories of providers, and the second factor was the two total time spent at the office/clinic categories. A level of significance established at 0.05 was utilized for data analysis.

Research Assumptions

There were two assumptions in this study. First, it was assumed that the women understood the questionnaire and answered the questions honestly. Second, it was assumed that all data were accurately entered.

Research Limitations

Several limitations are evident in this study. Having a small sample size and lack of random sampling limit generalizability. Using only one item on the PSPC to measure satisfaction with total time spent in the office/clinic may not have been the ideal measure. Participating subjects may have been influenced by how they felt at the time they completed the questionnaire.

Protection of Human Subjects

The original study (Omar et al., 1995) was approved by Michigan State University's University Committee on Research Involving Human Subjects (UCRIHS) (Appendix C). The data are maintained on a disk by the principal co-investigators. No subjects identifiers were utilized (Omar et al., 1995).

The subjects were entered into the data set with numerical identification to prevent any link with any subject's name. No potentially dangerous or adverse effects to the subjects is known nor has been identified. Approval to conduct secondary analysis for this study was obtained from Michigan State University's UCRIHS prior to initiation of data analysis (Appendix C).

Results

Description of Sample

This study sample consisted of 60 pregnant women, with a mean age of 24 years (SD=5.24), of which 42% (n=25) were seen by certified nurse-midwife providers (CNMs) and 58% (n=35) by physician providers for prenatal care services (see Table 1). The total sample had 75% (n=45) married women, the majority of whom were white/non-Hispanic (84%) and 80% had a high school education or higher (n=48). Sixty-three percent (n=38) reported they had Medicaid, yet 50% (n=30) reported working outside the home. Two significant differences occurred between the two groups of women. One is an expected finding, such that all CNM providers were female, and 80% of the physician providers were male. The second significant finding was that almost half (49%) of the women who had physician providers reported having private insurance as compared to only 16% of the women in the CNM group, (1, n=60)=6.80. P=.009.

Table 1.

Frequencies of Sample Demographic Variables by Provider Type (n=60)

Demographic Variable	CNM n(%)	Physician n(%)	Total n(%)
Race			
White	21(84)	32(91)	53(89)
Hispanic	2(8)	1(3)	3(5)
Native American	1(4)	1(3)	2(3)
Other	1(4)	1(3)	2(3)
Education Level			
Less than high school	0(0)	2(6)	2(3)
Some high school	7(28)	3(8)	10(17)
High school grad	12(48)	13(37)	25(42)
Some college/tech	5(20)	14(40)	19(32)
College graduate	0(0)	2(6)	2(3)
Post graduate	1(4)	1(3)	2(3)
Marital Status			
Single	4(16)	6(17)	10(16)
Married	18(72)	27(77)	45(75)
Separated	1(4)	1(3)	2(3)
Divorced	2(8)	0(0)	2(3)
Other	0(0)	1(3)	1(2)
Work Outside Home			
Yes	10(40)	20(57)	30(50)
No	15(60)	15(43)	30(50)
Work Time			
Full-time	5(20)	11(31)	16(27)
Part-time	5(20)	8(23)	13(22)
Medicaid			
Yes	16(64)	22(63)	38(63)
No	9(36)	13(37)	22(37)
MICH-care			
Yes	7(28)	3(9)	10(17)
No	18(72)	32(91)	50(83)
Selfpay			
Yes	0(0)	2(6)	2(3)
No	25(100)	3(94)	58(97)

Table 1 (cont.)

Demographic Variable	CNM n(%)	Physician n(%)	Total n(%)
Private Insurance			
Yes	4(16)	17(49)	21(35)
No	21(84)	18(51)	39(65)
Provider Gender			
Female	25(100)	3(9)	28(47)
Male	0(0)	32(91)	32(53)

Analysis of Research Questions

Research Question 1. Is there a difference between rural low income pregnant women's perception of the total amount of time spent at the office or clinic when seen by certified nurse midwife providers as compared to physician providers? A significantly higher proportion of women in the CNM group reported a total time spent in the office/clinic greater than 30 minutes, (1, n=60)=10.16, p=.009 (Table 2).

Research Question 2. Is there an association between type of provider, amount of time spent at the office/clinic, and satisfaction with time spent at the office/clinic for prenatal visits? This question used a 2 x 2 factorial analysis of variance of satisfaction of total amount of time spent at the office/clinic by the variables total amount of time spent at the office/clinic and type of provider. Results revealed there was no significant interaction

Table 2.

Crosstabulation of Total Time Spent at the Office/Clinic and Provider Type (N=60)

Total Time	Provider Type CNM n	%	Physician n	%
Total Time ≤ 30 minutes	6	(24)	23	(66)
Total Time > 30 minutes	19	(76)	12	(34)

(Tables 3 and 4); however, the main effect of total amount of time spent at the office/clinic was significant for satisfaction with total time spent at the office/clinic. Women who spent less time (≤ 30 minutes) were more satisfied than women who spent more time at the office/clinic. M=1.48, SD=.55; M=2.35, SD=1.01, respectively. Irrespective of type of provider, both of these meas indicate that these women were generally satisfied. The women most satisfied with total time spent at the office/clinic were those I the CNM group with total time spent at the office/clinic ≤ 30 minutes; but when the total time spent at the office/clinic was greater than 30 minutes, there was no difference in satisfaction with time spent at the office/clinic for prenatal visits by provider type (Table 4).

Discussion

Sample

In this secondary data analysis, a total of 60 rural low income pregnant women's responses were analyzed on the

Table 3.

Analysis of Variance of Patient Satisfaction with Total Time Spent at the Office/Clinic by Total Amount of Time Spent at the Office/Clinic and Type of Provider (n=60)

	Source of Variation Df	F	MS
Total Amount of Time 2 way interaction	1	.804	.580
Main Effects			
Time	1	6.649	4.798*
Provider	1	.572	.413

*p<.05

Table 4.

Mean Scores for Interaction Effects of Total Time Spent in the Office/Clinic and Type of Provider (n=60)

Appointment Time	n	M	SD
Total time ≤ 30 minutes			
Physician	23	1.91	.67
CNM	6	1.50	.55
Total time > 30 minutes			
Physician	12	2.33	.98
CNM	19	2.37	1.01

variables, patient satisfaction with prenatal care system: time, specifically satisfaction with total time spent at the office/clinic, total amount of time spent at the office/clinic and type of prenatal care provider. Twenty-five of the women in this sample received prenatal care from certified nurse midwife providers and three were seen by

physician providers for prenatal care. Overall, the women who participating in the study were a fairly homogenous group. The majority of the women were white/non-Hispanic, married women who had attained a high school education or higher. This is representative of the rural population in Michigan (MDHP, 1994; Omar et al., 1995).

Not surprisingly, all of the CNM providers were female, and most of the physician providers were male. The women in the physician group represented a significantly higher percentage of private insurance than those women in the CNM group. Having some type of private insurance often affords women more options in choice of prenatal provider and hence, women may choose a physician provider (Knoll, 1990). Other times CNMs have met obstacles when trying to expand into new areas, including resistance from physicians, which may lead to lack of their prenatal care services to women (Knoll, 1990). Other literature, however, has shown that there has been a shift to increased use of the CNMs in the more affluent population due to the philosophy and type of care provided. Therefore, perhaps the women of Benzie County may not be aware of the type of prenatal care provided by CNMs. Women receiving care from the CNM provider group where they were mandated to provide prenatal care only for women on Medicaid. This is consistent with the literature as well where CNMs were more likely to accept women enrolled in Medicaid than their physician counterpart (Knoll, 1990). Another possibility may be that women who had private

insurance chose physician providers because some of them provided prenatal care within the county until 28 weeks of gestation and this may have afforded the women less travel time.

Total Time Spent at the Office/Clinic

This study has revealed a statistically significant difference between total time spent in the office/clinic and provider type. The findings showed that women spent a longer time with the CNMs during prenatal visits. A major component of nurse-midwifery care has been identified as education and counseling during the prenatal visit (Knoll, 1990). This may account for the increase in total time that the women spent at the office/clinic. Further, it was identified that women in the physician group had a shorter total time spent in the office. This may be attributed to their diagnosis and style of practice (Knoll, 1990).

Satisfaction with Total Amount of Time Spent at the Office/Clinic

Despite the identified difference of total time spent at the office/clinic by provider type, the women of this study were generally satisfied with total time spent at the office/clinic based on provider type. Research question 2 refers to an association between satisfaction with total time spent at the office/clinic and the provider type. An association was not found, however, a pattern was significant for the amount of time spent at the office/clinic and satisfaction such that women who spent

less time (less than 30 minutes at the office/clinic) were more satisfied, and also that the women seen by CNMs and who spent less than or equal to 30 minutes had the highest level of satisfaction. This is consistent with the literature such that a decrease in patient satisfaction had been associated with an increased length of time spent at the office/clinic (Alexander et al., 1993; Seguin et al., 1989). This variation may have occurred due to the small number of women receiving care by CNMs and spending less than or equal to 30 minutes in the office/clinic and different group size. However, when one observed the interaction between the study variables, the degree of variance for total time spent at the office/clinic over 30 minutes was twice as large as the degree of variance for total time spent at the office/clinic. The relationship with the provider may act as a buffer, however, others were dissatisfied with total amount of time spent at the office/clinic regardless of whom their provider was, suggesting that the prenatal care system needs to value women's time. The literature suggests that women reported greater satisfaction even with a lengthy total time spent at the office/clinic, if they believed that the provider valued their time (Knoll, 1990).

However, of the studies that reported an association between total time spent at the office/clinic for prenatal care and patient satisfaction, none reported what the significant specific total length of time spent at the office/clinic was. Only one study actually included a

median amount of patient wait time of 19 minutes (Dennis et al., 1995), which extended the total amount of time spent at the office/clinic and resulted in patient dissatisfaction with prenatal care. This study reported total time spent at the office/clinic which included both waiting time and time spent with the provider.

Since there was no significant difference found for satisfaction with the total time spent at the office/clinic based on provider type, one can imply that the pregnant women were satisfied with the content or services received during the visit/appointment. The literature supports women's satisfaction with CNMs in the service of care which is family centered, unhurried, and allows women to actively participate in their care (Knoll, 1990).

Discussion of Results within the Conceptual Framework

The study's findings provided mixed support for the adapted conceptual framework from King's dynamic interacting systems (1981, 1992). The rural low income pregnant woman (personal system) and the prenatal care delivery system, comprised of the total amount of time spent at the office/clinic (social system) came together within the interaction of the social system. Due to the findings of this study revealing no significant difference with satisfaction of total time spent at the office/clinic by provider type, provider type would not be included in the social system of the revised model (Figure 2). Time was spent during the interaction (prenatal visit) with the

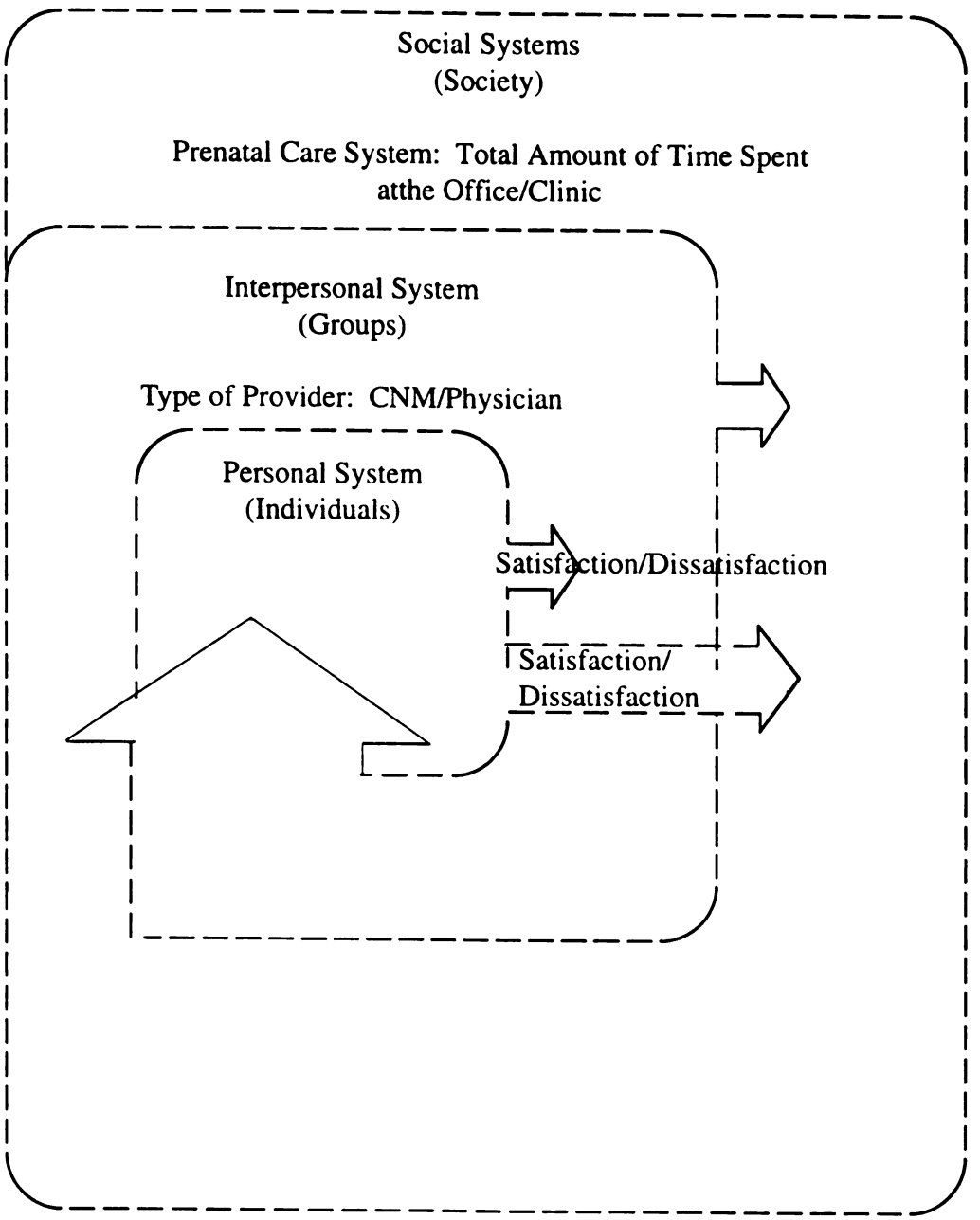

Figure 2: A Revised Adapted Conceptual Framework for Satisfaction with the Prenatal Care System: Dynamic Interacting Systems. From I.M. King, A Theory for Nursing: Systems, Concepts, Process. New York: John Wiley & Sons, 1981, p. 11.

provider and in the office/clinic. What was unable to be determined was the amount of time spent with just the provider; however, in spite of this limitation the model still provided some direction for the study with total time spent at the office/clinic. Each person, including the pregnant woman, brought her own perceptions into the interaction either positively or negatively affecting the satisfaction with total time spent at the office/clinic. The interpersonal system, while not a part of this study, may affect satisfaction with total time spent at the office/clinic through the interaction with the provider and the pregnant woman. Since interaction is a reciprocal process, the receptiveness to the provider may also need to be considered and the model revised to include satisfaction with the interpersonal system also (Figure 2). Other aspects of the interaction between the women and the prenatal care delivery system were not studied, e.g., time spent with the provider, travel time, and time from work, which are some of the other factors to consider.

Other factors to consider in the open interaction system of King (1981) are the women's interactions with other members of the health care team, whether positive or negative. This could also affect satisfaction with total amount of time spent at the office/clinic and how the women may be using the time spent waiting in the office/clinic. King's model helps to explain the complexity of the issues surrounding total amount of time spent at the office/clinic

and is appropriate to continue to explore additional aspects of interaction within the model and to revise the model accordingly.

Implications for Advanced Practice Nursing in Primary Care

This study found that overall rural low income pregnant women were satisfied with their care regardless of type of prenatal care provider. Satisfaction was inversely related to length of total time, such that satisfaction decreased when total time spent at the office/clinic was over 30 minutes as compared to total time spent at the office/clinic was less than or equal to 30 minutes. The APN, therefore, needs to be sensitive to total time spent at the office/clinic issues within the prenatal care delivery system that may affect patient's satisfaction with prenatal care.

One major role for the APN is that of client advocate regarding time issues within the prenatal care delivery system. Identification of time issues within the prenatal care system need to be addressed, such as content of visit, length of waiting time, ease of access ad scheduling appointment times convenient for the women. One approach in advocating for the pregnant woman may be to conduct an assessment of total time spent at the office/clinic through a time study which includes an exit interview of women's satisfaction, evaluate the results and then plan, implement, and evaluate the office/clinic flow, total time spent at the office/clinic and women's satisfaction with the restructured

model of delivery of prenatal care. Included in this revised model, regardless of the prenatal care provider type, activities need to be planned for women while they are waiting to be seen. Flyers can be developed and distributed which identify the plan of prenatal care within the office/clinic, how much time women should plan on spending at the office/clinic, an account of how their time will be spent at the office/clinic, and a description of planned activities while women are waiting.

The APN may discuss with rural pregnant women their specific issues regarding time spent at the office/clinic for prenatal care as well as their satisfaction and how these may best be addressed during prenatal visits, such as education during the previsit waiting period by other members of the office staff/team, and convenient scheduling of prenatal visits which reduces total time spent at the office/clinic. The APN will need to work directly with prenatal clients, as well as collaboratively with staff and administration to affect satisfactory changes within the prenatal care system. Valuing women's time is one factor towards enhancing satisfaction with prenatal care.

Recommendations for Further Research

This study failed to demonstrate an association between provider type, total amount of time spent at the office/clinic, and satisfaction with total amount of time spent at the office/clinic. Previous studies have linked amount of time spent at the office with the degree of

satisfaction with prenatal care. The failure of the present study to find an association may be, in part, due to the instrumentation of using a single item to measure satisfaction, as well as the small sample size. Replication of the original study with a larger sample size and additional satisfaction items, which measure satisfaction with the total time spent at the office/clinic may be warranted. Assessment of pregnant women's expectations regarding total time spent at the office/clinic may also be warranted.

As forementioned, previous studies identified few variables affecting patient satisfaction with prenatal care services, especially among the rural low income pregnant population. Additional research needs are suggested as follows: a) studies evaluating variables within the prenatal care system, including satisfaction with time spent with the provider, total time spent with the provider, total time spent waiting to be seen by the provider, and satisfaction with total time spent waiting to see the provider, that affect patient satisfaction. This may provide insight into areas for improvement within prenatal care delivery; b) exploration of why women are satisfied with the time spent in the office/clinic with the CNM, despite the increased length of time. This may provide insight into areas which enhance satisfaction with care even if it takes longer; and c) further comparison studies between provider type, time, and satisfaction to expand on findings of this study.

This study identified the need to further delve into the perceptions that may lead rural women to seek or refrain from obtaining prenatal care services. The variables that affect patient satisfaction may often change utilization of prenatal care services. The literature has identified the need to investigate these attributing variables (Minden, 1994). For this, if for no other reason, prenatal care providers and policy makers must actively pursue the answers to optimal prenatal services for rural women.

Summary

This study compared two groups of prenatal care providers, certified nurse-midwives and physicians, with one dimension of satisfaction of prenatal care system: total amount of time spent at the office/clinic. The study supports other research that reveals women are equally satisfied with the total time spent at the office despite provider type. The study also revealed that patients receiving care from the certified nurse-midwives spent a longer total time at the office/clinic than those receiving prenatal care from physician providers.

Competitive care environments as well as the increased awareness for health promotion and preventive healthcare require providers and policy makers to evaluate prenatal care services. Cost effectiveness has given rise to an increased need for alternative prenatal care providers, which have been successfully filled with advanced practice nurses, especially with rural areas. For this reason

advanced practice nurses must identify areas for change and actively integrate new knowledge into the prenatal practice setting which may enhance prenatal care satisfaction and utilization by rural low income women. Sensitivity to time issues in the prenatal care setting is one area where change can be implemented.

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APPENDICES

APPENDIX A

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 assistance from 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.

For the statements below, please check the response which best describes the provider you see **most often**, that is, who measures you 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 GO ON TO THE NEXT PAGE

Now we would like to know a little more about **you.** Please remember that all response 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.

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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
    ____Michcare
    ____None (Self Pay)

PLEASE GO ON TO THE NEXT PAGE

98. Counting this pregnancy, how many time 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 four 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?_____

PLEASE GO ON TO THE NEXT PAGE

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 ____31minutes 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 prenatal care.

____1-5 times
____6-10 times
____11 or more times

YOU ARE FINISHED

PLEASE RETURN THE COMPLETED SURVEY

TO THE PERSON WHO GAVE IT TO YOU.

THANK YOU FOR YOUR PARTICIPATION!

APPENDIX B

APPENDIX B

PROCEDURES FOR DATA COLLECTION

Original Study by Omar and Schiffman

Data collectors were selected and prepared by the principle co-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

MICHIGAN STATE
UNIVERSITY

July 11, 1997

TO: Mildred A. Omar
A-230 Life Sciences

RE: IRB#: 97-394
TITLE: PATIENT SATISFACTION WITH THE PRENATAL CARE SYSTEM: TIME
REVISION REQUESTED: N/A
CATEGORY: 1-E
APPROVAL DATE: 07/03/97

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

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

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

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

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

Sincerely,

David E. Wright, Ph.D.
UCRIHS Chair

DEW:bed

cc: Dee Marie Six

OFFICE OF
RESEARCH
AND
GRADUATE
STUDIES

University Committee on Research Involving Human Subjects (UCRIHS)
Michigan State University
246 Administration Building
East Lansing, Michigan
48824-1046

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

APPENDIX D

Alpha Reliabilities and Factor Loadings for the Dimensions of the Satisfaction with the Prenatal Care Delivery System Scale of the PSPCII Instrument

Dimension	Items	Factor Loading	Alpha
Time	70 (Amounts of waiting time to be seen by provider)	.98	.90
	* 71 (Total amount of time at office/clinic)	.73	
Access	69 (Ease of rescheduling)	.93	.78
	68(Convenient scheduling)	.66	
Facilities	79 (Waiting room)	.86	.78
	80 (Exam room)	.76	
	78 (Parking)	.61	
Organization	73 (Frequency see same provider)	.84	.78
	72 (Choice of provider)	.70	
	74 (Not have to repeat my story)	.64	
Total Scale	10 Items		.85

Note. * indicates item used in this study.