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RELATIONSHIPS BETWEEN ADEQUACY OF PRENATAL CARE AND EXPECTATIONS OF AND SATISFACTION WITH PRENATAL CARE IN PREGNANT ADOLESCENTS

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By

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ABSTRACT

RELATIONSHIPS BETWEEN ADEQUACY OF PRENATAL CARE AND EXPECTATIONS OF AND SATISFACTION WITH PRENATAL CARE IN PREGNANT ADOLESCENTS

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Pregnant adolescents are associated with deficient prenatal care, which is a major factor in poor obstetrical outcomes. Pregnant adolescents who receive adequate prenatal care have improved pregnancy outcomes. This descriptive study examined the variables and relationships between pregnant adolescents' expectations of and satisfaction with prenatal care and their adequacy of prenatal care using descriptive statistics, chi-square analyses, and Pearson product-moment correlation coefficient.

The sample consisted of 20 primigravida adolescents enrolled in one of three prenatal clinic sites. A survey and chart review were utilized to obtain data. The findings suggested: (a) The pregnant adolescents had expectations of care, particularly not to have overall poor prenatal care; (b) the pregnant adolescents were satisfied with their care, particularly in areas of personal interaction with the staff, providers, and clinic services; (c) certain dimensions of expectations and satisfaction were related; and (d) adequacy of prenatal care may be related to the pregnant adolescent's prenatal care satisfaction.

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Introduction

Pregnant adolescents are a group of people that need special attention. This group has a higher risk of pregnancy complications, such as premature labor, pre-eclampsia, eclampsia, and anemia than do pregnant adults (Davis, 1989; Slager-Earnest, Hoffman, & Anderson, 1987). A pregnant teenager, cognitively struggling with her own developing identity to additionally incorporate a sense of motherhood into her sense of self, is also more likely to suffer from emotional and psychological difficulties, to eat poorly, smoke, drink alcohol, take illegal drugs, and engage in unsafe sexual practices which can expose her to hazardous, sexually-transmitted diseases such as the Human Immunodeficiency Virus (Elkind, 1984; Smith, 1990). These behaviors increase the risk of her infant being born with serious health problems. Multiple studies have shown the influence of adolescent pregnancy on perinatal mortality and morbidity (Piechnik & Corbett, 1985; Smoke & Grace, 1988; Wells, McDiarmid, & Bayatpour, 1990).

Adolescent pregnancy is associated with low infant birth weights and premature births, which are main causes of infant death or disability (Scholl, Miller, Salmon, Cofsky, & Shearer, 1987; York & Brooten, 1992). The March of Dimes Birth Defects Foundation (1992) estimated that nine percent of teenage girls have low birth weight babies, compared to seven percent of all mothers nationally. These babies were reported to be forty times more likely to die in their first

year of life than normal weight babies. Adolescent pregnancy is additionally associated with deficient prenatal care, which has been demonstrated to be a major factor of poor obstetrical outcomes (Savona-Ventura & Grech, 1990; Scholl et al., 1987). Pregnant teenagers who receive adequate prenatal care have much lower rates of low birth weight infants as well as improved pregnancy outcomes than pregnant teens who do not (McClanahan, 1992; Sable, Stockbauer, Schramm, & Land, 1990; Scholl et al., 1987). Unfortunately, the pregnant adolescent tends to delay the initiation of prenatal care and then utilizes this care sporadically (Wells et al., 1990). The adolescent's struggling sense of self with its vulnerability, extreme self-consciousness, and maturing independence, all influence her reluctance to seek or make use of prenatal care (Cartoof, Klerman, & Zazueta, 1991; Elkind, 1984).

This alarming information demonstrates the demanding need for health care providers to find ways to encourage the pregnant teen to get adequate prenatal care. Pregnant teenagers have unique psychosocial and physical needs and concerns. These all influence their expectations and perceptions of health care, which influence their utilization of health care services (Kinsman & Slap, 1992). In order to stimulate an adolescent's prenatal care participation, a clinical nurse specialist in primary care has to be aware of the adolescent's special needs, concerns, and expectations. If these are not met, the adolescent may not be satisfied with the care she is getting, and it may be difficult to maintain her in a prenatal program. If she is not satisfied with her care, she may not obtain adequate prenatal care (Cartoof et al., 1991) and thus may have a poor obstetrical outcome.

Statement of the Problem

The purpose of this study was to prospectively investigate and examine relationships between the expectations of, satisfaction with, and adequacy of prenatal care of high-school-age pregnant adolescents enrolled in a prenatal care program. The research questions were:

(1) What are the pregnant adolescent's expectations for prenatal care?

(2) How satisfied is the pregnant adolescent with her prenatal care?

(3) What is the relationship between a pregnant adolescent's expectations of prenatal care and her satisfaction with prenatal care?

(4) What is the relationship between a pregnant adolescent's expectations of and satisfaction with her prenatal care and her adequacy of prenatal care?

This information is vital for clinical nurse specialists and other health care providers who provide prenatal care. It will help them obtain further knowledge in understanding the perceptions of pregnant adolescents for the purpose of developing an effective prenatal care management framework, which hopefully will reduce barriers to, and increase the pregnant adolescents' participation in, prenatal care.

Conceptual Definition of Variables

Prenatal Care Expectations

There is scant literature which directly defines patient expectations with prenatal care. Oberst (1984) generally defined expectations of care as a set of expectancies about the care outcomes, the provider's behaviors, and the system's performance which the client has formulated from his or her past experiences, knowledge, personal characteristics, perceived care needs, and interpretation of the

situation. These expectancies are the standard by which the client judges his or her care as being satisfactory or not satisfactory.

A study of patient expectations of a radiology department (Smith, Altmaier, Ross, Johnson, & Berberoglu, 1989) described expectations of care in terms of a client's perceptions of his or her anticipated treatment by the radiology staff and radiologist and on how the client anticipated the facility environment to meet his or her perceived needs and desires. These expectancies were also directly related to a client's satisfaction with his or her care.

Omar and Schiffman (1992) specifically defined prenatal care expectations as the perceptions a pregnant woman had about her prenatal care and services she anticipated to receive throughout her pregnancy. The perceptions involve different dimensions of expectations about the prenatal clinic/office staff and provider care and about the prenatal clinic/office services, which included having one provider, having other services available, receiving information, having personalized care, and having accessible quality care. These expectations are considered an important component of a pregnant client's satisfaction with her prenatal care.

In this proposal, prenatal care expectations were conceptually defined, using Omar and Schiffman's (1992) definition, as the pregnant adolescent's perceptions of the prenatal care and services she anticipated receiving throughout her pregnancy. These expectations involve dimensions of expectations about prenatal provider care and clinic staff and about prenatal clinic services, which include having one provider, having other services, receiving information, having

specialized (personalized) attention, and having accessible quality care.

Prenatal Care Satisfaction

Most of the relevant literature described prenatal care satisfaction indirectly. It was alluded to by reporting activities or conditions which prevented or encouraged less attendance in a prenatal care program, such as inadequate transportation, long waiting times for appointments, fears, lack of social support, health beliefs, and multiple life stressors (Poland, Ager, Olson, & Sokol, 1990; Sable et al., 1990).

Other studies indirectly described satisfaction with prenatal care as a feeling. A study by Wells and associates (1990) implied that prenatal care satisfaction was a feeling of congruence between the client and her provider. The Cartoof et al. study (1991) suggested that prenatal care satisfaction was how a client felt about the comfort of the clinic, the attractiveness and convenience of the clinic setting, the psychosocial support, waiting times, on-site education, and the provider meeting the pregnant woman's individual and cultural needs.

Omar and Schiffman (1992) defined prenatal care satisfaction as a positive or negative attitude/feeling a pregnant woman had about the prenatal care received. The more positive her attitude/feeling, the more prenatal care satisfaction she had. The more negative her attitude/feeling, the less prenatal care satisfaction she had. This attitude/feeling included different dimensions of satisfaction with the prenatal clinic/office providers, clinic/office staff, and clinic/office services, which included the caring relationship, information provided, time, facilities, scheduling ease, and consistency of one provider.

For the purpose of this proposal, prenatal care satisfaction was defined, using Omar and Schiffman's (1992) definition, in terms of a positive or negative attitude/feeling a pregnant adolescent had about her prenatal care. The more positive her attitude/feeling, the more prenatal care satisfaction she had. The more negative her attitude/ feeling, the less prenatal care satisfaction she had. This attitude/ feeling involved different dimensions of satisfaction with the prenatal clinic staff, the prenatal clinic providers, and the prenatal clinic services which included the caring relationship, information provided, time, scheduling ease, facilities, and consistency of one provider.

Adequacy of Prenatal Care

Adequacy of prenatal care is used in the literature to mean a certain amount and/or a particular content of prenatal care. The Public Health Service Expert Panel on the Content of Prenatal Care (U.S. Department of Human Health Services (USDHHS), 1990) reported the three basic components of prenatal care as being early and ongoing risk assessment, health promotion, and pertinent medical and psychosocial intervention with follow-up. The timing and particular composition of this care in relation to the specific needs of the pregnant client determined its adequacy. Petitti, Hiatt, Chin, and Croughan-Minihane (1991) characterized the adequacy of prenatal care in terms of the quality of the content of the care given at a prenatal visit or encounter. The more the prenatal care included the determined necessary content, the more adequate the care.

Kessner and associates defined adequacy of prenatal care in terms of the timing and frequency of prenatal care visits adjusted to a client's gestational age at delivery (Kessner, Sinder, Kalk, &

Schlesinger, 1973). They determined a woman's prenatal care to be either adequate, inadequate, or intermediate from the timing and frequency of the visits. Prenatal care was adequate when it was initiated in the first trimester and continued at least according to the recommended schedule with the prenatal care provider. The care was inadequate when it was initiated in the second or third trimester with less than half the expected visits. Intermediate care was all the other visit categories in between.

Alexander and Cornely (1987) defined adequacy of prenatal care also in terms of the timing and frequency of prenatal care visits from the client's initiation of prenatal care through the client's weeks of gestation at delivery. This timing and frequency of visits determined a woman's prenatal care to be either intensive, adequate, intermediate, inadequate, or no care. The additional two categories of intensive and no care were included to more closely describe the prenatal care utilization pattern. Prenatal care was intensive when it was initiated in the first, second, or third trimester with a greater number of visits than normally required, usually indicative of an increased need for care. No prenatal care was when the client delivered without having received any services during the pregnancy.

In this study, adequacy of prenatal care was conceptually defined in terms like that of Alexander and Cornely (1987) as a quantitative level of sufficiency of prenatal care utilization, defined from the timing of initation of the adolescent's prenatal care, the frequency of her prenatal visits, and the relationship of the initiation and

frequency of care to her gestational age at delivery. These levels were:

(a) Intensive care: The initiation of care and frequency of visits in relationship to gestational age were more than the determined amount established for adequate care, regardless of the time of entry into care;

(b) Adequate care: The initiation of prenatal care in the first trimester with the frequency of visits meeting the determined amount in relation to gestational age at delivery;

(c) Intermediate care: The initiation of prenatal care in the first or second trimester where the frequency of visits were less than half what was determined adequate, but more than what was determined inadequate; and,

(d) Inadequate care: The initiation of prenatal care in the second or third trimester where the frequency of visits were less than one-third what was determined adequate.

This quantitative conceptual definition of prenatal care adequacy does not address the content of the prenatal care. The basic recommended content of prenatal care consists of the ongoing assessment, evaluation, health promotion, and care of the pregnant female and her fetus throughout gestation until the onset of active labor (Star, Shannon, Sammons, Lommel, & Gutierrez, 1990; USDHHS, 1990). This essential content cannot be supplied, however, unless the client has sufficient contact with a prenatal care provider. The more closely the client meets the recommended visits by the provider, the more opportunity for the necessary content to be supplied.

Theoretical Model

The theoretical model used in this study was adapted from King's (1981) conceptual framework which is derived from a systems framework approach. A fundamental assumption of King's framework is that the focus of nursing is on the health and care of human beings and groups as open systems which interact with each other and their environment, exchanging matter, energy, and information. King applies this systems framework to those health concerns related to nursing, and arranges the framework into three open dynamic interacting systems: The personal system, the interpersonal system, and the social system. These three systems consist of individuals or groups of individuals which all influence, interchange, and interact with each other and their surrounding world. Each of these systems have goals, needs, and values, influencing this interactive process. In order for this process to result in the goal of effective health care, such as adequate prenatal care, the different systems must interact effectively (King, 1981).

In Figure 1, the three open interacting systems are demonstrated in a schematic diagram. These systems are unique, yet are integral to each other. The broken rectangular lines surrounding each system indicates openness, in which each system is continually and dynamically interacting with the other systems. The arrows show the integralness of the systems with one another. No system is separate onto itself. Each system proceeds into the other. The oval, indicating the goal of adequate prenatal care, extends through all three interacting systems. The circle demonstrates the focus on the relationships between personal expectations and satisfaction with the interpersonal and social systems, and their relationship with adequacy of prenatal care. The oval extends

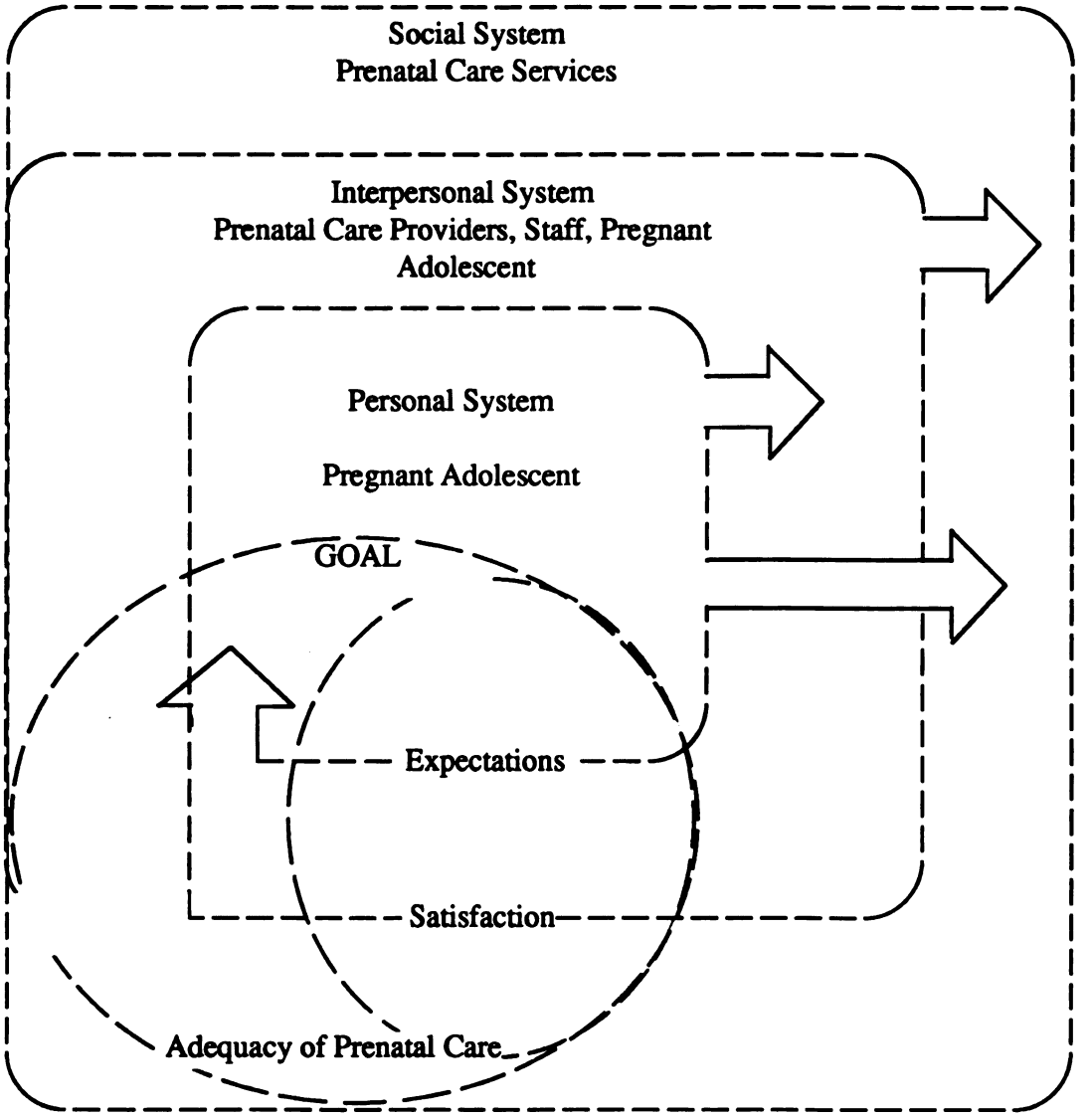


Figure 1. Adapted from King's conceptual framework

from the circle to indicate the possibility of other components involved in adequate prenatal care. The broken lines of the oval and circle indicate their dynamic interaction with the systems and each other. The goal of adequate prenatal care can only be obtained through the effective interaction of the systems.

The personal system focuses on individual human beings. These individuals, as complex open living systems, react to other persons, events, and objects in terms of their perceptions, expectations, and needs. They react as total beings with past experiences, present concerns, and future goals. As reacting beings with feelings and thoughts, their interactions with their environment are highly influenced by these perceptions and expectations of a situation. When human beings enter a new or strange environment, these factors all affect their actions and reactions to the environment. Their behavior to the situation is thus an outcome of what they are perceiving and expecting (King, 1981). When a pregnant adolescent enters an environment to receive prenatal care, she perceives the providers, staff, and services from her unique viewpoint. Her expectations may color how she feels about the prenatal care, and her behavior in this situation may be influenced by how she feels. Her expectations of the prenatal clinic, its environment and services, and its providers and support staff may affect how she feels about her care (see Figure 1).

The interpersonal system focuses on human beings who function in interacting groups as dyads, triads, and small or large groups. These groups continually communicate and interact in a dynamic manner with both verbal and nonverbal behaviors to identify desired goals and the means to achieve them. This group communication is a complex process.

Each person's expectations and perceptions influence his or her behavior in and from the group interaction. The quality of the interaction determines whether or not the exchange results in satisfaction. When two or more people come together in any situation, the outcome of the exchange is dependent upon the relationship established. This relationship is influenced by the expectations each individual brings to the situation. In order for this relationship to be beneficially purposeful, communication needs to be effective, perceptions need to be accurate, and attitudes of caring and respect need to be present (King, 1981).

Pregnant teens receiving prenatal care interact with providers and support staff for information, explanations, medical/social/ psychological care, and other needs or concerns, such as being able to be involved about decisions about one's care and being able to ask questions without embarrassment. The result of this interchange can determine the degree of satisfaction with the relationship the pregnant teen feels she has with her provider(s) and/or support staff. This satisfaction can be with different aspects of the interaction, such as satisfaction with the care or the satisfaction with the information received. If she is satisfied, she may be more likely to direct her behaviors toward goals of health-promoting activities, such as adequate prenatal care (see Figure 1).

The social system is an organized boundary system involving social roles, behaviors, and practices which are developed to maintain its values and regulations. This organizational system is composed of: (a) human values, behaviors, needs, goals, and expectations; (b) technology with material and human resources for achieving goals; and

(c) interacting social units made up of individuals and groups who share common goals. Examples of social systems include families, religious groups, and health care services, such as a prenatal care clinic (King, 1981).

Prenatal care ministration is a social system with services directed toward promoting and ensuring the health of the pregnant woman and her fetus (Star et al., 1990; USDHHS, 1990). These services include clinic location, accessibility, availability, emergency access, client facilities, waiting time, provider expertise and consistency, childbirth classes, and others. When the pregnant client enters this social system environment, her unique perceptions, expectations, and needs influence how she feels about and reacts to the interaction with its services (King,1981). If she is satisfied with the delivered system of care, her behavior will be goal directed. Policy makers and prenatal care management's knowledge of this may be a deciding factor in how effective the prenatal care services are in promoting the desired goal of adequate prenatal care.

A pregnant teenager receiving prenatal care from a health care system will have her own special set of perceptions, expectations, and needs. These perceptions, expectations, and needs may influence her degree of satisfaction with the services. Satisfaction can be with different aspects of the prenatal care clinic services, i.e., satisfaction with the facilities, with scheduling ease, and with the time spent at the clinic. A prenatal delivery system of care that designs its services with this in consideration will more likely produce effective interactions resulting in client satisfaction and increased utilization of prenatal care services. The teen will be satisfied with

her care and thus more likely to obtain adequate prenatal care (see Figure 1).

Figure 1 demonstrates these important relationships between the systems and the pregnant adolescent with expectations, satisfaction, and adequate prenatal care. The pregnant teenager has her own unique expectations when she interacts with the prenatal providers and staff, and with the prenatal care delivery services. These expectations color her perception of the interactions, possibly influencing her satisfaction with her care. If she is satisfied, she may be more likely to utilize the prenatal care. Thus, the goal of adequate prenatal care can more readily be realized.

It is essential for a clinical nurse specialist prenatal care provider to have perceptual accuracy and knowledge of the pregnant adolescent's expectations and what she is or is not satisfied with in her care. Effective interactions which result in satisfaction can only take place if the professional health care provider, such as a clinical nurse specialist, assumes this responsibility (King, 1981). All prenatal care providers and support staff in the prenatal care delivery system need to understand that a pregnant teen's expectations influence her interactions and relationships and that her satisfaction with the interactions and relationships may influence her prenatal care utilization behavior. A pregnant adolescent who is not receiving what she perceives as satisfactory care from any aspect of the prenatal care delivery system may not return for any prenatal care at all. Since the ultimate goal of a prenatal care delivery system and its providers/staff is to promote and ensure the health of the pregnant woman and her fetus (USDHHS, 1990; Star et al., 1990), optimal effective service must be

provided. The best way for this to occur is for the client to get adequate prenatal care.

Review of Literature

The literature documented many studies on prenatal care for teens. Most of these studies researched the impact of adolescent pregnancy on maternal and fetal outcomes (Brown, Fan, & Gonsoulin, 1991; Helton, 1990; Korenbrot, Showstack, Loomis, & Grindis, 1989; Leppert, Namerow, & Baker, 1986; Piechnik & Corbett, 1985; Scholl, Hediger, Khoo, Healy, & Rawson, 1991; Winter & Simmons, 1990). Many others dealt with how a teen's adequacy of prenatal care affected obstetrical outcomes (Isberner & Wright, 1987; Savona-Ventura & Grech, 1990; Scholl et al., 1987; Stevens-Simon, Fullar, & McAnarney, 1992; and others). Very few studies on adolescent pregnancy dealt with a teen's expectations of prenatal care, satisfaction with prenatal care, or adequacy of prenatal care in relationship to her expectations and satisfaction.

Expectations of Prenatal Care

No studies were found that specifically addressed pregnant adolescents' expectations of prenatal care. One study was found that addressed pregnant women's expectations of prenatal care. Another study discussing expectations of radiology services helped to shed light on the importance of understanding client expectations in health care.

The study by Reis, Robinson, Anderson, and Thomas (1992) indirectly addressed expectations of prenatal care. It suggested that pregnant women and their male partners had prior expectations of a pregnancy and its related care, such as what signs signified pregnancy complications; when it was appropriate to begin prenatal care and how many visits were needed; prenatal care involved education on diet, labor

and delivery, and premature labor; and clinic hours would not be convenient. These expectations were felt to mirror the community and family beliefs. Additionally, male partners were shown to be the most important sources of information for one-third of the 231 pregnant women in pregnancy-related behaviors. What male partners expected in terms of what prenatal care involved, what danger signs needed to be brought to a provider's attention, and what they perceived to be barriers to prenatal care were suggested to potentially impact the women's prenatal care utilization. In order for a prenatal program to be more effective in encouraging prenatal care utilization by the community's pregnant women, prenatal care programs were encouraged to be knowledgeable of these expectations and to be aware of this significant link.

Smith et al. (1989) documented client expectations of radiology services. These were obtained through open-ended interviewing of 107 radiology patients about the care they expected from the staff, facility, and radiologist. Knowledge of these expectations was considered an important tool in assisting the radiology department to better meet their clients' needs. They asserted that this knowledge could result in improved radiology services to their clients.

These two studies both determined it was important for a health care provider to be aware of the expectations of their clients. This knowledge was repeatedly suggested to be a necessary constituent to improving health care services and service utilization.

Satisfaction with Prenatal Care

Little research was found specifically applying to a pregnant adolescent's satisfaction with prenatal care. However, studies on pregnant women's satisfaction with prenatal care and on clients'

satisfaction with health care in general helped to give insight on the importance of adolescent satisfaction with prenatal care.

Studies on satisfaction with prenatal care by adolescents was indirectly addressed. Hardy, Ding, & Repke (1987) retrospectively examined differences in outcomes of 1,780 pregnant adolescents who were either enrolled in the Johns Hopkins Adolescent Pregnancy Program or who received their prenatal care in other Hopkins-related programs. Reasons considered to be factors in the improved outcomes in the Adolescent Pregnancy Program implied that pregnant adolescents were more satisfied with their care when they felt comfortable in their environment, were valued as individuals, had their needs met, and felt cared about.

A descriptive, cross-sectional study by May (1992) included an examination of help-seeking characteristics of 31 pregnant teenagers. Pregnant teens sought help for finances, emotional needs, medical care, information, and transportation. Results implied that teens who had these needs met were satisfied with their prenatal care. However, the small sample size and the use of a convenience sample diminished the generizability of these results to all pregnant adolescents, making it difficult to realize the importance of a pregnant teen's satisfaction in prenatal care.

One study on satisfaction with prenatal care (Sullivan & Beeman, 1982) found widespread satisfaction with maternity care, particularly among middle- to upper-socioeconomic group adult pregnant women, but suggested this result may not have been obtained if the study had included more teenagers or low socioeconomic groups. The satisfaction with care was implied to be due to the interpersonal relationships between the prenatal care providers and patients, and in allowing

patients more control of their care, thus better meeting their individual needs.

Graveley and Littlefield's study (1992), using low-income women, showed a relationship between the pregnant patient's satisfaction with her prenatal care and certain characteristics/dimensions of three prenatal clinic sites. Pregnant clients cited a single, consistent prenatal care provider and ease of access to, and availability of, prenatal care as important components of their satisfaction with care received. Even though this study had important information about satisfaction with prenatal care, it did not give the reader enough information about the different dimensions of the patient satisfaction tool used. This made it difficult to understand what specifically satisfied the pregnant clients.

A descriptive study by Oxford, Schinfeld, Elkins, and Ryan (1985) found a pregnant female's prenatal care satisfaction was related to the clinic conditions (e.g., waiting time) and her perception of the clinic personnel's attitudes toward her. However, the survey was given to the pregnant participants at their first prenatal visit in either the first or third trimester. Hence, their responses about having to wait too long or the clinic personnel's attitude toward the client were contingent upon that one initial visit.

Wartman, Morlock, Malitz, and Palm (1983) examined the relationship between patient satisfaction with his or her physician and subsequent compliance of a prescribed drug regime. They found that patients who were more satisfied with their visit did not necessarily demonstrate improved drug compliance. They suggested this was due to the patients' needs being met more by the nature and quality of the

physician-patient interaction than by effective communication of the medication regime. The sample used in this study tended to be educated, upper-middle class, and from 30 to 49 years old. This group may have had the ability to understand drug regimes more easily and expected more from a provider than the young or elderly, uneducated, or poor. Thus, the study's generalizability is limited.

In all these studies, meeting the patient's needs was seen as an important contributor to a client's satisfaction with care. Most studies determined that positive client interactions with different components of the prenatal care services and personnel resulted in the client feeling satisfied with the care received. Adolescents additionally needed to feel valued, cared about, and comfortable in their environment.

Expectations and Satisfaction with Prenatal Care

No studies reviewed addressed the relationship of expectations of and satisfaction with prenatal care in pregnant adolescents. A few studies and articles dealt with this relationship in regards to health care, and one study addressed this relationship in prenatal care, but not specifically with adolescents. This literature, though not specifically using pregnant adolescents, still gave insight into the importance of the relationship.

Omar and Schiffman (1994) reported a relationship between pregnant women's expectations of prenatal care and satisfaction. Different dimensions of expectations were found to be statistically related to various dimensions of satisfaction. Expectations about having one provider were related to satisfaction with the provider/staff. Expectations about accessible quality care were related to satisfaction

with the prenatal care system in terms of time, access, facilities, and organization of the prenatal care system. Pregnant women receiving care from private physicians had higher levels of expectations from their provider and were less satisfied with the provider. This suggested a relationship where the more expectations the pregnant woman had the less satisfied she was with the provision of prenatal care services.

Greeneich (1993) reported an association between expectations of care and satisfaction. Patient expectations were cited as the key determinant to satisfaction with the nursing care received. Confirmation of a patient's expectations was described as crucial to the patient's satisfaction with this care.

Oberst (1984) reported that a client's expectations of health care were the standard by which he or she judged the care received to be satisfactory or unsatisfactory. The client's expectations of care were correlated with how satisfied he or she was with the provider care behaviors, the adequacy of information received, and the client's perceived seriousness of illness.

Ross, Sinacore, Stiers, and Budiman-Mak (1990) reviewed several studies on how arthritic patient care expectations related satisfaction with medical care. Chronic arthritic patients having more experience with the degenerative disease had lower expectations and more satisfaction with their medical care than patients with newly-diagnosed arthritis. This was attributed to the chronic arthritic patient recognizing the limits of medical and technical therapies and thus placing more importance upon the interpersonal/psychosocial aspects of care. From these studies, it was determined that a client's expectations of care were strongly linked to his or her satisfaction

with care received, and that further explorations of this link were needed for better understanding of patient satisfaction and future planning of care.

A study by Guzman, Sliepcevich, Lacey, Vitello, Matten, Woehlke, and Wright (1988) and the article by Inguanzo (1992) focused on hospital patient care expectations in relation to the patient's ultimate satisfaction with care in order to enhance the client's satisfaction with the institution. If patients began with low or high expectations and those were met, they would be satisfied with their care. If patients began with high expectations which were not met, they would be dissatisfied with their care. If patients entered care with low or high expectations and those expectations were exceeded, the patient would be satisfied with the care and have an enhanced perception of the hospital.

Even though research on the association between client expectations and satisfaction with care is limited, the potential potent relationship between a pregnant adolescent's expectations of prenatal care and satisfaction with prenatal care is revealed.

Expectations and Adequacy of Prenatal Care

Studies dealing directly with a pregnant adolescent's expectations of prenatal care and her adequacy of prenatal care were not found. Two studies relating barriers to prenatal care with adequacy of prenatal care gave information which could be applicable to expectations and adequacy of prenatal care. Kinsman and Slap (1992) implied that pregnant adolescents' expectations of their pregnancy and prenatal care affected their utilization of prenatal care. Pregnant teens who had inadequate prenatal care utilization had different expectations than those teens who had better utilization of prenatal care. The particular

expectations were not addressed but could only be extrapolated from the perceived barriers to prenatal care utilization. For example, pregnant teens received less adequate prenatal care if they expected to have a negative experience with the health care providers, to have no needs in the first trimester requiring early prenatal care intervention, to have insurance difficulties, or to have difficulty sorting out the available services. Even though the generalizability of this study may be limited by its small sample size and the particular high-risk adolescent population, the implications were purported to be clinically meaningful for prenatal care programs targeting pregnant adolescents.

The study by Poland, Ager, and Olson, (1987) indirectly hinted at certain expectations that influenced a pregnant woman's prenatal care utilization through the barriers found. Pregnant women who expected prenatal care to be boring, to be treated poorly by the prenatal care providers, or prenatal care to offer anything of needed value received inadequate or no prenatal care.

Burks (1992) concluded that pregnant women of low socioeconomic status perceived prenatal care to be more of a treatment for acute medical problems during pregnancy rather than for preventing problems during pregnancy. This suggested that the pregnant woman's expectations of what prenatal care was for affected her adequacy of prenatal care; that is, how the pregnant woman utilized the prenatal care services.

These studies suggest a relationship between a pregnant client's expectations of care and her utilization of that care. No specific data were found in the literature to support the relationship.

Satisfaction and Adequacy of Prenatal Care

Pregnant adolescent satisfaction and adequacy of prenatal care was addressed in a few studies. Wells et al. (1990) found that teens who experience better patient-provider agreement had more satisfaction with their care and an increased appointment adherence. Sixty-three, mostly minority, pregnant teenagers completed five different questionnaires, including a questionnaire on prenatal care patient satisfaction. The prenatal care providers also answered one of the questionnaires on perinatal health beliefs. The information was compared with the teen's appointment keeping. Through stepwise multiple regression analysis, pregnant teen's appointment keeping was found not to be related to her psychosocial risk, but to whether the pregnant teen was satisfied with her health care provider. It was suggested that a prenatal clinic which improved pregnant teens' satisfaction with their interpersonal provider interactions would improve their adequacy of care. This study was limited by its small sample and lack of randomization, which makes it difficult to generalize the results to other pregnant teen populations.

Cartoof et al. (1991) indirectly supported the association between satisfaction with prenatal care and adequacy of care in pregnant adolescents. They reported that pregnant teens had better attendance for their prenatal visits at clinics at which environment and staff were more pleasing to them. A quantitative evaluation of the adequacy of prenatal care of 466 multi-ethnic adolescents was compared to the attractiveness/invitingness of the 4 prenatal clinic sites they had attended for their prenatal care. The more attractive, comfortable, and accessible the clinic site was, coupled with professional staff sensitive to the teen's individual needs, the better attendance that

site had from the pregnant adolescents. Limitations of this study included the subjective nature in the researcher's determination of a site's attractiveness and the large discrepancy in sample size of the different clinic sites (only 8% of the sample used the site determined most attractive). This brings up concerns for determining significant relationships between site attractiveness and adequacy of care and in generalizing the results to other pregnant teen populations.

Two studies involving pregnant women (Poland et al., 1990; Stirrat, Paterson, & Golding, 1990) found a prenatal patient's attitude about her prenatal care providers was an incentive or disincentive to keeping prenatal appointments. Women who had positive attitudes toward the health professionals had better clinic attendance. Poland et al. (1990) reported that women of low socioeconomic status who obtained quality prenatal care had more positive experiences with and thus better attitudes toward the health care professionals. They found these women's positive or negative attitudes toward the prenatal care providers and supportive staff were major determinants of their quality of prenatal care. Prenatal care quality involved two components: (a) the amount of prenatal care, and (b) the source of the prenatal care service. Nevertheless, the relationships obtained in this study may not be as significant as proposed. Categorical data were given numerical values to allow their correlational analysis with interval data.

A patient's satisfaction or dissatisfaction with his or her health care, according to Linder-Petz and Struening (1985), was found to be an important indicator of a patient's appointment adherence and care compliance. A convenience sample of 155 ambulatory patients was given a 22 item survey addressing their satisfaction with the doctor's conduct,

clinic access, and the visit in general. The doctor's conduct and convenience of the clinic visit were highly correlated with patient satisfaction. This study is limited, however, by the lack of control on sample demographics and sample size, making it difficult to generalize results to other ambulatory clients.

Satisfaction with prenatal care has been repeatedly suggested to have a relationship with a pregnant client's utilization of this care. Pregnant teens especially were indicated to require an atmosphere and staff/provider contact which were pleasing to them and which met their needs in order to obtain better utilization of prenatal clinic services.

Expectations of and Satisfaction with Prenatal Care and Adequacy of Care

No literature was found directly addressing relationships between expectations of, satisfaction with, and adequacy of prenatal care. The Poland et al. study (1987) did indirectly recognize the role of expectations with satisfaction and a pregnant woman's prenatal care utilization, defined in terms of adequacy of care. Women in their study who perceived prenatal care as being only for pregnant women with acute problems, not expecting the prenatal care to meet their particular needs, and who had negative attitudes towards physicians or nurses or health care services, obtained little or no prenatal care.

Summary of the Literature

A pregnant adolescent's expectations of prenatal care, her satisfaction with prenatal care, and their relationship to adequate prenatal care were poorly covered in the literature. However, it did strongly suggest that a patient's expectations and satisfaction with his or her care were associated, and some of the literature supported the

relationship between prenatal care satisfaction and the adequacy of a pregnant client's prenatal care.

These proclaimed relationships regarding expectations and satisfaction, and between satisfaction and prenatal care adequacy, make it surprising that so few studies investigate what expectations a women has for her prenatal care, what makes her satisfied with this care, and what relationships exist between a pregnant women's expectations of and satisfaction with her prenatal care and her adequacy of prenatal care. Literature on pregnant adolescents is even more blatant in its neglect of teens' expectations of and satisfaction with prenatal care and their relationship to adequacy of prenatal care.

In the few studies that did deal indirectly with a pregnant teen's expectations of and satisfaction with prenatal care, the researchers frequently assumed they knew what an adolescent expected, wanted, and needed in her care, and designed the research or special program with their idea of what would produce satisfaction. Ironically, the mentioned studies discuss the incongruence in perceptions of what the provider thought and what the adolescent thought her needs were as being a strong determinate of the pregnant teen's poor utilization of prenatal care (Wells et al., 1990). It seems that finding out what influences an adolescent's satisfaction with her care and what makes her satisfied with her care would be primary concerns to bring about better prenatal care utilization. Research in this unexplored area, as in this study, is needed.

Methods

Research Design

This study was a prospective descriptive correlational design. A survey was administered to pregnant teen clients at a prenatal care visit to assess their expectations of and satisfaction with prenatal care. When the participants had reached a minimum of 36 weeks gestation or had delivered, their prenatal care record was reviewed to determine the adequacy of prenatal care utilization. Relationships among the variables of prenatal care expectations, satisfaction, and adequacy were described.

Sample

The target population was a convenience sample of primigravida adolescents from the ages of 15 to 19, who were at least 32 weeks pregnant, were able to read and write English, were enrolled in one of the three prenatal care clinics of the Branch-Hillsdale-St. Joseph District Health Department, and who had a minimum of four prenatal visits at that clinic site. A total of 20 pregnant primigravid teens were recruited into the study from October 1993 through Februrary 1994. To increase the likelihood of achieving a representative sample, the recruiters approached all eligible adolescents to incorporate both satisfied and dissatisfied adolescents into the study.

The three prenatal clinics where the pregnant adolescents were enrolled into the study were alike in clinic design, services provided, pattern of types of care provided, and usage of the same clinical protocols. The staffs were trained to perform their duties in like fashions so they could work efficiently in any of the three clinic

settings. The main provider at two of the sites was the same. The same dietitian and social worker provided services at all three clinics.

Operational Definitions of the Variables

The principal variables of interest to this study were prenatal care expectations, prenatal care satisfaction, and adequacy of prenatal care. Other necessary concepts relating to adequacy of prenatal care were prenatal care visit, the trimester prenatal care began, and pregnancy gestation.

Prenatal care expectations: Prenatal care expectations (PNCE) were defined as the total mean score of the expectation subscale on the Patient Satisfaction with Prenatal Care (PSPC) instrument (Omar & Schiffman, 1992) which assessed what the pregnant adolescent expected from her prenatal care. In addition, the different dimensions of prenatal care expectations were operationally defined. PNCE for one provider was defined as the mean score of items 11 and 12 on the PSPC. PNCE for other services was defined as the mean score of items 19 through 21 on the PSPC. PNCE for information was defined as the mean score of items 9 and 10 on the PSPC. PNCE for specialized attention was defined as the mean score of items 13, 14, and 18 on the PSPC. PNCE for poor overall care was defined as the mean score of items 6, 8, and 16 on the PSPC. The lower the mean score, the more the pregnant adolescent expected. The higher the mean score, the less the pregnant adolescent expected.

Prenatal care satisfaction: Prenatal care satisfaction (PNCS) was defined as the total mean score of items 25 through 86 from the three satisfaction subscales of satisfaction with provider, satisfaction with staff, and satisfaction with prenatal care services on the Patient

Satisfaction with Prenatal Care (PSPC) instrument (Omar & Schiffman, 1992). In addition, different dimensions from each of these three subscales were operationally defined. PNCS with provider caring was defined as the mean score of items 29, 30, 32, 33, 42, and 43 on the PSPC. PNCS with provider information was defined as the mean score of items 25, 26, 27, 39, and 40 on the PSPC. PNCS with the staff care was defined as the mean score of items 50, 51, 52, 53, 54, and 60 on the PSPC. PNCS with staff information was defined as the mean score of items 48, 49, and 58 on the PSPC. PNCS with time spent at the prenatal clinic was defined as the mean score of items 70 and 71 on the PSPC. PNCS with scheduling ease was defined as the mean score of items 68 and 69 on the PSPC. PNCS with the facilities was defined as the mean score of items 78, 79, and 80 on the PSPC. PNCS with the provider consistency was defined as the mean score of items 72, 73, and 74 on the PSPC. The lower the mean score, the more the pregnant adolescent was satisfied. The higher the mean score, the less the pregnant adolescent was satisfied.

Adequacy of prenatal care: Adequacy of prenatal care was operationally defined as the score on the adapted GINDEX index (see Appendix C). The number of prenatal care visits, the trimester prenatal care began, and a minimum of 36 weeks pregnancy gestation or gestational age at delivery if less than 36 weeks was used to determine the level of adequacy of care. Even though 37 weeks is considered full term, the index shows no distinction between 37 and 36 weeks as far as a level of adequacy of care. If a subject was not in a clear adequacy of care classification by 36 weeks, her adequacy was evaluated after she did

clearly fit into a specific category, or until she delivered, whichever came first.

These categories, or care levels, specifically outlined in Appendix C, included:

(1) Intensive care, where the prenatal care began either in the first, second, or third trimester, the gestation was at least 36 weeks or the gestational age at delivery, and the number of total visits were from 16 to 49 beginning from the first trimester, 13 to 49 from the second trimester, or 11 to 49 from the third trimester, depending upon the specific number of visits for the particular gestational age or gestational age at delivery.

(2) Adequate care, where the prenatal care began in the first trimester, the teen's gestation was at least 36 weeks or the gestational age at delivery, and the total number of prenatal care visits were from 7 to 15 beginning in the first trimester, depending upon the specific number of visits for the particular gestational age or gestational age at delivery.

(3) Intermediate care, where the teen's gestation was at least 36 weeks or the gestational age at delivery, and the prenatal care began in the first trimester with the total number of visits from 4 to 8, or the second trimester with the total number of visits from 4 to 13, depending upon the specific number of visits for the particular gestational age or gestational age at delivery.

(4) Inadequate care, where the teen's gestation was at least 36 weeks or the gestational age at delivery, and the prenatal care began in the first trimester with a total of 4 visits, the second trimester with a total of 4 visits, or in the third trimester with a total

of 4 to 12 visits, depending upon the specific number of visits for the particular gestational age or gestational age at delivery.

Prenatal care visit: A prenatal care visit was operationally defined as the recorded attendance in the prenatal chart of a pregnant adolescent at a prenatal care clinic site for the purpose of pregnancy related care.

Trimester prenatal care began: The trimester prenatal care began was operationally defined as the week of pregnancy gestation of the pregnant adolescent's first day of recorded prenatal care: (a) 1-13 weeks = 1st trimester; (b) 14-27 weeks = 2nd trimester; and (c) 28 weeks to week of delivery = 3rd trimester.

Pregnancy gestational age: The pregnancy gestational age was defined as the estimated period of pregnancy duration from the pregnant adolescent's first day of last normal menses to the date at issue as recorded in her prenatal chart. This pregnancy age was calculated using an estimated date of confinement (EDC) calculator wheel using whole completed weeks. If the first day of the last normal menses was absent, the ultrasound dating from the adolescent's record of the estimated date of confinement was used as 40 weeks. A pregnancy is considered full term from 37 to 42 weeks (Star et al., 1990). Forty weeks was thus used as the average full-term estimated date. The gestational age was then calculated from 40 weeks using the EDC calculator wheel in whole completed weeks.

Instrumentation

Patient Satisfaction with Prenatal Care Instrument (PSPC): This is a 108-item, 5-subscale instrument designed to evaluate a patient's expectations and satisfaction with her prenatal care and services

received (Omar & Schiffman, 1992). The first subscale has 5 items which relate to the motivation to seek prenatal care. The second subscale has 19 items which relate to a client's expectations with care. This subscale has five dimensions dealing with providers, staff, and prenatal care services. The third subscale has 23 items which relate to the client's satisfaction with the primary prenatal care provider. This subscale has two dimensions which embrace the provider's care and education of the client. The forth subscale has 17 items which relate to the client's satisfaction with the prenatal clinic/office staff. This subcale has two dimensions which cover the staff's care and education of the client. The fifth subscale has 20 items which relate to the client's satisfaction with the prenatal care services. This subscale has four dimensions covering the provider consistency, facilities, waiting time, and ease of access.

Each of these five subscales uses a 6-point Likert scale with responses ranging from strongly agree (1) to strongly disagree (6). The lower the score, the higher the motivation or the higher the expectations or the higher the satisfaction. The higher the score, the lower the motivation or the lower the expectations or the lower the satisfaction.

The additional 22 items include 20 questions about who is the client's provider and characteristics of the clients themselves, and two questions on how helpful the client perceives the professional staff and an information source to be.

In this study, the second subcale and its dimensions concerning expectations, and the third, fourth, and fifth subscales as a combined overall satisfaction scale and their dimensions concerning satisfaction

were utilized to answer the research questions. Additionally, items about the clients' characteristics were used to obtain demographical information about the sample population.

The PSPC was developed from responses of three focus groups of pregnant women and from pertinent literature. Pilot testing with pregnant women in the late third trimester was used to determine the reliability and validity of the PSPC. The instrument has a reported reliability of .54 for the motivation subscale, .72 for the expectation subscale, .92 for the satisfaction with provider subscale, .93 for the satisfaction with staff subscale, and .84 for the satisfaction with services subscale. The items in the dimensions were a result of psychometric analysis.

The content validity of the instrument was established by a panel of experts with professional expertise in maternity nursing. Construct validity was determined by the pilot testing and is still being refined by ongoing studies.

Client prenatal record: The date and trimester of the client's first prenatal visit, the gestational age at delivery or 36 weeks, and the number of prenatal care visits were determined from the client's prenatal record. This information was compared with the adapted prenatal care utilization index (GINDEX). The client was placed into a prenatal utilization category, designating her level of adequacy of care as intensive, adequate, intermediate, or inadequate.

Procedures

Survey Administration: The investigator selected and trained data collectors from each prenatal care site of the District Health Department using a manual adapted from Omar and Schiffman (1992). The

use of this manual assured consistency in survey administration in all four prenatal program sites (see Appendix B).

The data collection procedure was:

(1) Potential subjects were identified and determined eligible by the data collector using established criteria.

(2) The data collector solicited participation in the study using established criteria.

(3) The data collector gave eligible subjects a cover letter, a consent form for participation in the study and permission for chart review by the researcher, a survey instrument, and an envelope for the completed questionnaire.

(4) After obtaining consent, subjects filled out the instrument while waiting for or immediately after their scheduled appointment.

(5) The data collector was available to answer questions about or provide directions for completion of the instrument.

(6) The data collector gave an incentive to the subjects after they turned in their completed instrument to the collector.

(7) The data collector returned all materials to the principal investigator at her weekly visit, using a confidential coding system .

Chart Review: Each week the principal investigator visited the prenatal care sites. Using the confidential coding system, the investigator procured the eligible participants' charts. The charts were reviewed in a private room at the site the same day to collect the data from the charts regarding when prenatal care began and the number of prenatal care visits at 36 weeks or at delivery. The charts were then immediately returned to their designated place.

Protection of Human Subjects

Consent was obtained from the pregnant adolescent. Pregnant teens are able to give their own consent for prenatal care and related activities (Public Health Code, Act No. 153, 1984). Confidentiality was maintained at all times in the administration of the Patient Satisfaction with Prenatal Care instrument and in the gathering and analysis of data by the use of a coding system for identification of the prenatal care site and subject. The coding schema was kept separately in locked files by the principal investigator.

Written approval from the Branch-Hillsdale-St. Joseph District Health Department administration was obtained and placed on file with the College of Nursing prior to the initiation of the study (see Appendix D). A copy of the research results in aggregate form will be given to the agency. Approval of this study was obtained from the Michigan State University Committee for the Review of Human Subjects prior to the initiation of the investigation (see Appendix E).

Data Analysis

Descriptive statistical analysis including frequencies, percentages, means, median, ranges, and standard deviations, as appropriate, were used to examine the demographic characteristics of the subjects and the variables under study. The research questions under discussion were investigated using several statistical analyses. Research Questions 1 and 2 were analyzed utilizing descriptive statistics. Research Question 3, relationship of expectations with satisfaction with prenatal care, was analyzed using Pearson's Product Moment Correlation Coefficient to test for any significance at an alpha of .05. Research Question 4, relationships among adequacy of prenatal

care and expectations/satisfaction with prenatal care, was investigated using chi-square. Two 2x2 chi-square tables were used instead of a 4x4 chi-square table due to the small sample size and skewed results found. One chi-square table had two table columns of low level of expectations and high levels of expectations. The other chi-square table had two table columns of high levels of satisfaction and low levels of satisfaction. The two table rows in both tables were adequate care and inadequate care. The chi-square statistic was computed to test for significance of relationships at an alpha of .05.

Research Assumptions

It is assumed that prenatal care, prenatal services, and the environment at the three clinic locations were alike and that the content of the prenatal care provided at each site meets the standards set by the Public Health Service Expert Panel on the Content of Prenatal Care (USDHHS, 1990). It is assumed that the data collectors offered the opportunity for participation in the study to all eligible clients equally. It is assumed that the GINDEX index correctly identifies levels of adequacy of prenatal care utilization. It is also assumed that all the adolescents who answered the survey understood the questions and answered them as honestly as possible.

Limitations

The lack of random sampling and the nonexperimental design prevent causality being inferred from the study findings and limits generalizability. The inclusion criteria for this study's sample did not address the expectations and satisfaction of multigravid adolescents. Considerable variability may exist with respect to variable characteristics and relationships between this group of

pregnant adolescents and the study sample. Inclusion criteria also provided for a minimum of four prenatal visits and for the pregnant adolescent to be at least 32 weeks gestation. Considerable variability in patient expectations of and satisfaction with prenatal care could have occurred from those adolescents who had received prenatal care for a longer or shorter period of time at the time of survey administration or who had delivered before 32 weeks gestation. Adequacy of prenatal care, as described quantitatively, does not necessarily equate with levels of quality of prenatal care. Only pregnant teenagers at a clinic were surveyed. The expectations and satisfaction of pregnant adolescents who were homebound or who did not attend their clinic appointments were not able to be obtained. Information from pregnant adolescents who may have been very dissatisfied with their care was therefore unavailable.

Results

Description of Sample

The sample consisted of 20 pregnant adolescents enrolled in three sites of the Branch-Hillsdale-St. Joseph District Health Department Prenatal Clinics. Site 1 and Site 2 each surveyed 8 pregnant adolescents. Site 3 surveyed 4 pregnant adolescents. Table 1 shows the frequencies of the sample's demographic variables. At least four-fifths of the sample were Caucasian, were 17 years of age or older, were unmarried, were either attending or had some high school, were in a state-funded medical insurance program (Medicaid, Michcare), and began their prenatal care in the first or second trimester of pregnancy.

Table 1

Frequencies of Sample Demographic Variables

Demographic variable		n	%
Age in Years	15-16	3	15
	17-18	7	35
	19	10	50
Race	White (non-hispanic)	17	85
	Black	3	15
Education Level	Less than High School	2	10
	Some High School	11	55
	High School Grad	7	35
Marital Status	Not Married	16	80
	Married	4	20
Source Med Ins	Medicaid	15	75
	Michcare	4	20
	Unknown	1	5
Trimester Began PNC	1st	11	55
	2nd	8	40
	3rd	1	5

Answers to Research Questions

1. *What are the pregnant adolescent's expectations for prenatal care?*

Descriptive statistics were used to examine and synthesize the data on the pregnant adolescent's expectations of prenatal care. Mean scores were obtained from the overall expectation subscale and from each of its dimensions. Table 2 shows the overall mean with standard deviation for expectations of prenatal care and the means with standard deviations for the different dimensions of expectations. These results as a whole show that a pregnant adolescent does have some expectations of her prenatal care. The minimum overall mean value for expectations of prenatal care was 1.68 and the maximum overall mean value was 3.63.

Table 2

Means and Standard Deviations of the Pregnant Adolescent's Expectations of Prenatal Care.

Dimension	n	Mean	SD
Overall expectations	20	2.71	.53
Expect one provider	20	3.05	1.23
Expect other services	20	2.57	1.02
Expect information	20	3.15	1.33
Expect specialized attention	20	2.85	.99
Expect poor overall care[a]	20	2.57	.83

[a]indicates that this item was reversed scored.

The closer the mean was to 1, the more expectations the pregnant adolescents had. The closer the mean was to 6, the fewer expectations the pregnant adolescents had. Therefore, few pregnant adolescents had low expectations. The different dimensions provide a closer view of what areas the pregnant adolescent had expections. The lower the mean in a dimension, the more the pregnant adolescent expected from that area.

The areas the pregnant teens had the most expectations from were in obtaining other services (e.g., dietician, social worker, public health nurse), in receiving specialized attention (e.g., personalized care, mental and physical concerns/feelings attended to), and in not having poor overall care (e.g., problems getting prenatal care, prenatal visits taking along time, poor care).

2. *How satisfied is the pregnant adolescent with her prenatal care?*

Descriptive statistics were used to examine and synthesize the data on the pregnant adolescent's satisfaction with her prenatal care. A total mean score was obtained from the three satisfaction subscales and a mean score was obtained from each of the dimensions. Table 3 shows the means and standard deviations of the pregnant teens' overall satisfaction with prenatal care (total mean score) and with the different dimensions of satisfaction with prenatal care.

These results show that the pregnant adolescents were mainly satisfied with their overall prenatal care with a mean of 1.74. The minimum overall satisfaction mean score was 1.0, and the maximum overall satisfaction mean score was 2.87. The closer the mean was to 1, the more satisfied the pregnant adolescents were with the prenatal care. The closer the mean was to 6, the less satisfied the pregnant

Table 3

Means and Standard Deviations of the Pregnant Adolescent's Satisfaction with Prenatal Care.

Variable/Dimension	n	Mean	SD
Overall Satisfaction	20	1.74	.50
Satisfaction with provider:			
Satisfaction with Provider Caring	20	1.53	.50
Satisfaction with Provider Information	20	2.03	.95
Satisfaction with staff:			
Satisfaction with Staff Caring	20	1.48	.55
Satisfaction with Staff Information	20	1.90	.70
Satisfaction with system:			
Satisfaction with Waiting Time	20	2.30	1.25
Satisfaction with Scheduling Ease	20	1.48	.57
Satisfaction with Facilities	20	1.90	.67
Satisfaction with Provider Consistency	20	1.98	.88

adolescents were with the care. All mean values were close to 1. There were no mean values (means greater than 3) demonstrating dissatisfaction with the prenatal care. This indicates that the teens were all satisfied with their overall prenatal care and with all dimensions of their prenatal care. The different dimensions show the areas in prenatal care with which the teens were the most satisfied. The lower the mean in a dimension, the more satisfied the pregnant adolescent was in that area. The areas the pregant teens were more satisfied with were the areas of being satisfied with the provider's caring (i.e., the way the provider treats the teen, the quality of care the teen receives from the provider), being satisfied with the staff's caring (i.e., being treated with respect), and satisfaction with prenatal clinic visit scheduling ease (i.e., convenience of times, ease of rescheduling visits). The dimensions additionally show the areas where the teens were less satisfied. These were the areas of satisfaction with provider information (i.e., explanations about medical procedures, what to expect about pregnancy and motherhood) and satisfaction with time spent (i.e., the amount of time waiting to see the provider, the total amount of time spent at the clinic visit).

3. *What is the relationship between a pregnant adolescent's expectations of prenatal care and her satisfaction with prenatal care?*

A Pearson's correlation was used to investigate the extent of the relationship between pregnant adolescents' expectations of prenatal care and pregnant adolescents' satisfaction with prenatal care. The findings indicated that no statistical relationship was present between the

pregnant adolescents' overall expectations of prenatal care and the overall satisfaction with prenatal care (r=.38, p>.05).

Table 4 shows the different dimensions of expectations of prenatal care correlated with the different dimensions of satisfaction with prenatal care. This more in-depth examination of the variables does show a few statistically significant relationships. These relationships all involve the 5th dimension of the expectations variable: To expect not to have poor overall care. The pregnant teen's expectations not to have poor overall care was highly correlated positively to satisfaction with the provider's caring, the provider's teaching/information, the staff's caring, the staff's information giving, scheduling ease, and facilities. The more the pregnant adolescents expected with regard to not receiving poor care, the more they were satisfied with the care received involving interactions between the teen and staff, provider, and clinic facilities. No other dimension of expectations demonstrated any relationship with the pregnant adolescents' satisfaction with prenatal care.

4. *What is the relationship between a pregnant adolescent's expectations of and satisfaction with her prenatal care and her adequacy of prenatal care?*

The pregnant adolescent's adequacy of care was determined by the GINDEX index. Table 5 shows the descriptive associations between the teens' prenatal care initiation, the number of visits they attended by 36 weeks gestation or at delivery (none of the pregnant teens delivered prior to 36 weeks), and the subsequent GINDEX index care category.

Table 4

Correlations Between the Dimensions of Satisfaction with Prenatal Care and Expectations of Prenatal Care (n=20)

Dimensions of Satisfaction (satisfied with)	Dimensions of Expectations (to expect)				
	One Provider	Other Services	Information	Specialized Attention	Overall Poor Care
Provider Caring	-.24	.22	-.01	.33	.55*
Provider Information	-.16	-.06	.04	.19	.64**
Staff Caring	-.32	.19	-.04	.28	.60**
Staff Information	-.18	-.25	.05	.18	.75**
Waiting Time	-.28	-.09	-.07	-.16	.38
Scheduling Ease	-.22	.04	.02	.25	.64**
Facilities	-.37	-.02	.15	.27	.64**
Provider Consistency	.03	.01	-.05	-.04	.42

*$p < .05$; **$p < .01$.

Two of the pregnant adolescents who began their prenatal care in the first trimester were categorized as obtaining only intermediate care. One teen started care at 8 weeks gestation and had only 7 total prenatal visits. Another began care at 9 weeks gestation with only 7 total prenatal visits. Each was from a different prenatal clinic site. Their ages were 17 and 19; both were single and on medicaid. One was African-American. This pregnant adolescent had reported less than high-school education. The other reported some high-school education. These two pregnant teens began their care in the desired first trimester, but did not continue with the recommended amount of prenatal visits throughout their pregnancy for adequate care. All the teens who began their care in the second trimester maintained their intermediate care status as they continued with the recommended amount of visits. Only one pregnant teen received inadequate care due to her late initiation of prenatal care. Another pregnant teen who began care in the first trimester received intensive care due to her higher frequency of prenatal visits.

As previously stated, no pregnant adolescents had satisfaction means greater than or equal to 3. Also, no pregnant adolescents had expectation means greater than or equal to 4. Due to these skewed results, the variables Expectations of Prenatal Care and Satisfaction with Prenatal Care were each collapsed into two categories. The two categories for the variable Expectations became: (a) high level of expectations (means less than or equal to 3.0) and (b) low level of expectations (means greater than or equal to 3.01). The two categories for the variable Satisfaction became: (a) high level of satisfaction (means less than or equal to 2) and (b) low level of satisfaction (means

Table 5

Descriptive Associations Between the Week Gestation Prenatal Care Began, the Number of Prenatal Visits, and the GINDEX Index Care Category

Variables	Intensive Care n = 1	Adequate Care n = 8	Intermediate Care n = 10	Inadequate Care n = 1
Weeks gestation prenatal care began:				
x	8	9.75	15.5	29
SD	--	1.75	4.88	--
Minimum	8	7	8	29
Maximum	8	12	25	29
Number of prenatal visits:				
x	17	12.13	8.70	4
SD	--	2.10	2.21	--
Minimum	17	9	5	4
Maximum	17	15	13	4

greater than or equal to 2.01). In addition, since the sample size was small and only one pregnant teen was in the category of intensive care and one in the category of inadequate care, the four care categories were collapsed into two: (a) adequate prenatal care (meeting at least the GINDEX index minimum requirement for adequate prenatal care) and (b) inadequate prenatal care (not meeting at least the GINDEX index minimum requirement for adequate prenatal care). The intensive care pregnant adolescent was placed in the adequate care category.

A chi-square was used to analyze the relationships between the two levels of expectations and the two levels of adequacy of care, and between the two levels of satisfaction and the two levels of adequacy of care. The results as shown in Table 6 confirmed no significant relationships between the pregnant teen's expectations of care and her adequacy of care. Statistically, these variables were independent, meaning the frequencies obtained had little variance from the from the frequencies expected by chance. Three-fourths of the teens had high levels of expectations while one-fourth had low levels of expectations. Close to nine-tenths of the pregnant teens who obtained adequate prenatal care had higher expectations and more than three-fifths of the pregnant teens who obtained inadequate care had higher expectations. This demonstrates that the majority of the pregnant adolescents had high levels of expectations regardless of which care category they were.

The results in Table 7 also indicated no significant relationships between the pregnant adolescent's satisfaction with her prenatal care and her adequacy of prenatal care. Statistically, as in Table 6, these variables are independent of each other, as the frequencies vary little frequencies expected by chance. Four-fifths of the pregnant adolescents

Table 6

Cross-Tabulations and Chi-Square Analysis of Overall Expectations and Adequacy of Prenatal Care

Expectation	Adequacy of Prenatal Care			
	Adequate Care		Inadequate Care	
	%	n	%	n
High Levels of Expectations	88.9	8	63.3	7
Low Levels of Expectations	11.1	1	36.4	4

Note. $X^2=(1, N=20) = 1.68, p>.05$

Table 7

Cross-Tabulations and Chi-Square Analysis of Overall Satisfaction and Adequacy of Prenatal Care

Satisfaction	Adequacy of Prenatal Care			
	Adequate Care		Inadequate Care	
	%	n	%	n
Higher Satisfaction	88.9	8	72.7	8
Lower Satisfaction	11.1	1	27.3	3

Note. $X^2=(1, N = 20) = .81, p>.05$

had high levels of satisfaction, while the rest had low levels of satisfaction. Again, close to nine-tenths of the pregnant adolescents who received adequate prenatal care had high levels of satisfaction, and almost three-fourths of the pregnant adolescents who had inadequate prenatal care also had high levels of satisfaction. This revealed that the majority of the pregnant adolescents had high levels of satisfaction regardless of which care category they were.

Discussion

Interpretation of Results

Expectations of Prenatal Care

In this descriptive study, 20 pregnant adolescents who met the criteria had their responses regarding their expectations of and satisfaction with prenatal care compared with their prenatal care utilization. The majority of the sample was 17 years of age or older, single, Caucasian, had at least some high school, and had state-funded medical insurance. This small sample did have some demographic variance, though the demographic variables were not individually analyzed for associations with the other variables in the study. However, the sample's responses showed surprising consistencies. All of the pregnant adolescents had certain expectations of their prenatal care. Not one pregnant adolescent had no expectations for any area questioned. Even though none of these young women had been pregnant before, they still had an idea of what kind of prenatal care they should receive. They particularly expected not to have poor overall quality of prenatal care, and to have the involvement of other providers (i.e., dietician, social worker, public health nurse) in their care.

The findings that the pregnant adolescents entered the prenatal clinic with certain expectations is consistent with the literature. Clients who enter a health care service have preconceived expectations of that service, even if it is the first encounter with it (Reis et al.,1992; Smith et al., 1989). By the time a person becomes an adolescent, he or she has had many opportunities to hear or learn about different aspects of a health care system, either through personal experience, through peers and family members, and/or through the media (Greeneich, 1993). An adolescent who becomes pregnant additionally hears and learns about the health care system as it now relates to her pregnancy. This acquired knowledge is conceptually formulated into expectations of care. Possibly the pregnant adolescents in this study expected not to have poor overall care and to have other providers involved in their care because this was the anticipated care they had acquired from their peers, family members, the media, and from personal experiences with a previous or current health care system (i.e., the nurse/adolescent interaction at the time of pregnancy testing at a clinic site explaining what to expect in prenatal care).

Satisfaction with Prenatal Care

The pregnant adolescents in this sample were all satisfied with the prenatal care received. None of the pregnant teens expressed any dissatisfaction with any area of prenatal care. The areas with which they were particularly satisfied were those of the staff's care of them, the main provider's care of them, and their ease in scheduling visits.

The findings that the areas of increased satisfaction with prenatal care involved the clients feeling cared about are shown in the literature to be the areas that pregnant adolescents are most sensitive

to as far as their satisfaction with the care received (Hardy et al., 1987; Wells et al., 1990). It is possible that the Branch-Hillsdale-St. Joseph Prenatal Clinics' staff, providers, and administration were aware of these special sensitive areas for pregnant teens and had geared their care/treatment accordingly.

The areas with which the pregnant adolescents were least satisfied, though still satisfied, were those of provider information and waiting time. The prenatal clinics involved in the study did not have a special pregnancy program for pregnant adolescents. They saw all ages of pregnant females. The pregnant adolescents in this study cited video tapes and childbirth classes as only being somewhat helpful to not at all helpful. This could reflect that the teaching strategies and some educational materials were not particularly adapted for the adolescent, resulting in less satisfaction. Also, understandably, waiting for prolonged periods of time to be seen at a clinic can be very frustrating. The average length of time the pregnant adolescents waited in the clinic was between 31 and 60 minutes. Even though this may not seem a long period of time, it may have been perceived as long for the adolescent. Cartoof et al. (1991) sited minimal waiting time as being an important concern of pregnant teens. Possibly the prenatal clinics involved in the study felt this amount of waiting time was acceptable, not being aware of the pregnant adolescent's concern of a minimal waiting period.

The Relationship Between Expectations of and Satisfaction with Prenatal Care

Although the results of the study showed no relationship between the the pregnant adolescent's overall expectations of prenatal care and her overall satisfaction with prenatal care, the findings did demonstrate an unexpected relationship involving the expected overall quality of prenatal care with certain dimensions of satisfaction with care. The more the pregnant adolescent expected not to have poor overall quality of prenatal care, the more satisfied she was with the main provider's and staff's information to and caring of her, the prenatal care clinic's facilities, and the ease to schedule appointments. It is interesting to note that these areas all involve personal interactions between the client and the staff, the provider, and the prenatal care system. As stated earlier, these pregnant adolescents already had certain expectations of prenatal care, and the prenatal clinic staff, providers, and administration may have been "in tune" to their special need areas. It is possible that the pregnant adolescents had their expectations confirmed of not having poor overall care, which required interactions with the staff/provider/system, resulting in satisfaction with the areas that particulrly dealt with these relationships.

In view of the literature, a few explanations for the unexpected findings involving the relationship between expectations and satisfaction are possible. Much of the literature suggests that the more people expect from their care, the less satisfied they are with the care received unless those expectations are met or exceeded (Greeneich, 1993; Oberst, 1984; Ross et al., 1990) The results of this study only

showed a relationship between a certain area of expectations and satisfaction where the more that was expected, the more the pregnant adolescent was satisfied . This literature, however, involving the complex relationship between expectations and satisfaction used adults--men and women in their samples. Adolescents were studied in this research in respect to expectations and satisfaction. The thought process of an adolescent is different than that of the adult. Adolescents may be unable to distinguish their own thought process from the thought processes of others, and they may think that they are more important than anyone else. This can result in the teens thinking that others are just as concerned about the teens' thoughts, actions, and unique importance as the teens are (Elkind, 1984; Harris & Liebert, 1987). In addition, this potent subculture of pregnant, low-income teenagers most probably had poor overall self-esteem integrated with changing self-concepts (Cobb, 1992). In order for these teens to be consistent in their beliefs of themselves as uniquely important while not futher lowering their self-esteem and confusing their self-concept, they must expect that the "others" of the prenatal clinic would not give them poor care, and they must be satisfied with their care that involved personal interaction with them to avoid cognitive dissonance and maintain their integrity (Weiten, 1983). Thus, the more the pregnant teens expected not to have poor care, the more satisfied they must be with the personal caring received.

Another possibility for the unexpected results with expectations and satisfation in this study is discussed in an article by Inguanzo (1992). If high expectations are met, one will be very satisfied with the care. Greeneich (1993) further contributes to this idea. Patients

are satisfied with their care if their expectations are confirmed, particularly in the areas of complimentary patient-provider relationships involving equity of treatment, competence, communication, and information--areas of personal interaction. The teens with high expectations not to have poor overall care had a picture in their minds of the kind of care they were going to receive. Since these expectations involved personal interaction with the staff, providers, and the system, it is possible that the expectations were met by the prenatal care staff and services. This resulted in more satisfaction with care in the areas which particularly dealt with patient-provider relationships.

A third possible explanation for these results again focuses on the adolescent characteristics. A teenager enters a situation with certain expectations of what will happen. If those expectations are negative, whatever happens will be viewed with those "negative lenses," and the teen will feel negatively about what occurs. If those expectations are positive, whatever happens will be viewed with "positive lenses," and the teen will feel positive about what occurs (Gold & Osgood, 1992; Kinsman & Slap, 1992). The more negative the pregnant adolescent expected her overall care to be, the more negative she would feel about her overall care. The more positive the pregnant adolescent expected her overall care to be, the more positive she would feel about her overall care. Again, since the overall care dealt with personal interactions with the staff/provider/service, this would be the area in which the pregnant adolescent would feel the most satisfaction.

A fourth explanation for this relationship may be related to the time the pregnant adolescents answered the survey questions. Since all

the respondents reported satisfaction with their care, it is possible that the expectation not to have poor overall care was a product of what they had already experienced. It may have been difficult for the pregnant adolescent to separate her thoughts of what she had expected prior to beginning prenatal care with her feelings of satisfaction at the time of taking the survey.

The Relationships Between Expectations of and Satisfaction with Prenatal Care and Adequacy of Care

The study results did not confirm any relationship between a pregnant adolescent's level of expectations of prenatal care or level of satisfaction with prenatal care with her adequacy of prenatal care. However, all of the pregnant teens, except two, sufficiently continued with their scheduled prenatal visits, thus maintaining their prenatal care adequacy, no matter what trimester they began. Since all the sample had expectations of prenatal care and were satisfied with their prenatal care and the majority of the pregnant teens had higher levels of expectations and higher levels of satisfaction regardless of their care adequacy, it could be reasoned clinically that the pregnant teens' expectations of and/or satisfaction with their care played a role in the maintenance of their prenatal care adequacy.

The literature suggested that if a pregnant adolescent was dissatisfied with her prenatal care, she would have a decrease in her appointment adherence, and if she was satisfied with her care, she would be consistent in keeping her scheduled appointments. It also suggested that if the pregnant adolescent had negative expectations about her prenatal care, she would have less adequate prenatal care (Cartoof et al., 1991; Wells et al., 1990). Considering this, it is probable that

the majority (90%) of the pregnant adolescents in this study continued with their scheduled prenatal visits because they expected good overall quality of prenatal care and were satisfied with their care.

Discussion of Results with the Conceptual Model

The study results support the construct that a pregnant adolescent, as a personal system, enters a prenatal clinic with expectations. Some support was found for the relationship between expectations in the personal system and feelings about interactions (satisfaction) with the interpersonal and social systems as shown in the adapted model from King. The significant correlations all involved the pregnant adolescent's expectations of overall care and her personal interactions with the prenatal clinic provider, staff, or system. Even though the relationship found was unexpected (the more the pregnant adolescent expected not to have poor care, the more satisfied she was with the caring she received), it demonstrates the existence and influence of an interaction between the personal system, the interpersonal system, and the social system involving expectations and satisfaction. The pregnant adolescent's (personal system) expectations to not have poor overall care influence her satisfaction with the staff's and provider's (interpersonal system) teaching and caring and with the prenatal clinic's (social system) services regarding its facilities and ease in rescheduling visits.

The results of the study did not statistically support the relationship between the goal of adequacy of care and effective interactions between the pregnant adolescent and the other dynamic systems as seen in the adapted conceptual model. The findings failed to

show any statistically significant relationships between overall expectations, overall satisfaction, and subsequent adequacy of care.

However, a closer look at the study findings in conjunction with the conceptual model suggests an alternate view. The pregnant adolescents all were satisfied with the prenatal care received. Most of the teens who began care in the first trimester got adequate prenatal care. Only two did not continue with the appropriate amount of scheduled visits. Also, all of the teens who began care in the second trimester received intermediate prenatal care. None of them had inadequate care. This indicates that the teens continued appropriately with their scheduled prenatal visits. When the teens began their prenatal care, their interactions with the other systems resulted in satisfaction and in their continuing prenatal care. Since the pregnant adolescent was satisfied with her care, her interactions with the other sytems once she began her care continued to be satisfactory, resulting in appropriate keeping of scheduled prenatal appointments. Thus, the goal of adequate prenatal care was realized for the pregnant teens who began their care in the first trimester and was as closely realized as possible for those teens who began care later in their pregnancy. This suggested support for the proposed relationships within the adapted model.

King's adapted conceptual model was found to be very useful in understanding the variables and their relationships in the study. It captured the concepts used in the study well and helped to bring to light why adolescents had certain expectations, how satisfaction is important with interactions, why those certain expectations may have been related to particular areas of satisfaction with prenatal care, and

what impact this relationship may have had on her adequacy of care. This model encourages further study of relationships involved in the pregnant adolescent's interactions with the different systems within prenatal care services for the purpose of discovering more applicable ways to encourage pregnant adolescents to obtain and sustain prenatal care.

Discussion of Data Analysis

Methodological Assumptions and Limitations

Initially, the study was designed for a larger sample of pregnant adolescents. A few reasons produced the resultant small sample size: (a) Many of the pregnant teenagers in the District Health Deparment Prenatal Clinics had been pregnant previously, excluding them from participation in this study; (b) time limits of study; and (c) the volunteer data collectors may not have been as diligent as hoped in encouraging eligible adolescents to participate in the study.

The small sample size in combination with the limited variability of the responses restricted the types of possible meaningful statistical analyses. For example, it was not possible to analyze the independence of relationships between expectations, satisfaction, and the four categories of prenatal care adequacy together. Instead, each variable had to be examined separately, with only two simplified adequacy of care categories. This may have compromised the potential findings. There may have been more significant findings had the sample size been larger and the responses more varied. In addition, the small sample size and the small variability of the sample demographics limit the generalizability of this study findings to other pregnant adolescent populations.

As previously stated, there were no dissatisfied respondents. It is conceivable that the teenagers compromised their answers out of concern that their answers could influence their subsequent treatment, even though the teens were assured this was not so. It is also possible that the teens who agreed to participate in the study were adolescents who desired to help because they were satisfied with their care. Since no adolescents were dissatisfied in the study, it is unknown if any of the pregnant teens in the prenatal clinic were dissatisfied with the care.

It is unknown the reasons why the two adolescents who began their care in the first trimester did not maintain their adequacy of care level. Again, the small sample size made it impossible to identify patterns which may have impacted the prenatal care utilization (e.g., clinic site, age, provider, transportation, etc.).

Additionally, the inclusion criteria of the sample at 32 weeks gestation and offering the survey only to those pregnant adolescents who were at the clinic site limited the study only to those pregnant adolescents in the latter portion of the third trimester of pregnancy and to those who were at their prenatal visit. Responses may have been very different for pregnant adolescents who had delivered prior to 32 weeks or who were not coming for their prenatal visits. This may also have compromised the findings as far as significant relationships between the variables and generalizability of results to other pregnant adolescent populations.

Implications for Advanced Nursing Practice in Primary Care

As suggested in this study and in the literature (Greeneich, 1993; Guzman et al., 1988; Inguanzo, 1992; Oberst, 1984; Reis et al., 1992; Ross et al.,1990; & Smith et al., 1989), patients enter a health care system with certain expectations and these expectations can have a relationship to their satisfaction in certain areas of care. Patient satisfaction, an indicator of health care quality (Greeneich, 1993; Wartman et al., 1983) and an important link to subsequent health care utilization (Linder-Petz & Struening, 1985; MacKeigan & Larson, 1989; Wells et al., 1990)), was held by all the pregnant teens in the study. It can be implied from the study results that the pregnant teens' satisfaction was related to their continued utilization of the prenatal care clinic services once they entered the prenatal care system.

Considering this reseach results with the adapted conceptual model, The Family Clinical Nurse Specialist (FCNS) in primary care has a powerful role to play in assisting pregnant adolescents to get adequate prenatal care. This can be achieved through two major areas. The first is in earlier inititation of prenatal care, and the second is in maintaining usage of that care once it has begun. Since this study focused on the second area, the implications for the FCNS in primary care was directed towards maintaining adolescent prenatal care utilization once it has begun.

The FCNPS in primary care is in a unique position to impact an adolescent very early in the health care system. Based on the study findings, the pregnant adolescent already has certain expectations when she enters the prenatal care system, and she particularly expects not to have poor overall quality of care. A FCNS should take advantage of this

knowledge and devise opportunities to educate children, teenagers, and adults in the community about what prenatal care is and what it actually involves so that a pregnant adolescent's expectations will be realistic when she begins prenatal care. This can be accomplished through the use of the community meetings, community seminars, schools, clubs such as 4-H or Girl Scouts or Boy Scouts, peer educators, churches, mass media (both radio and television talk shows or advertizing), professional contacts, and personal contacts with young patients and their families as part of anticipatory guidance and family planning or when a family member is found to be pregnant.

The FCNP could also work with the state legislators to incorporate an awareness beginning in preschool of what kind of care can be expected from the health care system when one is pregnant into the Michigan Health Model. For example, a section could be on "What happens when Mommy goes to the Nurse Practitioner before she has her new baby." With an emphasis on health promotion, education with the Michigan Health Model could help change the focus of prenatal care from "sick care" to "wellness care." Pregnant adolescents may then view prenatal care as a tactic to prevent problems rather than a bandaid for ailments. The FCNS also could design a program that could be used in a variety of settings and with a variety of ages to teach about prenatal care. This program could be taken into the schools for any grade level so the "boys and girls would have an idea of what happens to a Mom when she gets prenatal care." A pregnant adolescent can only have realistic expectations of a prenatal care system if she is appropriately informed. If she gets inaccurate information from her parents, peers, or boyfriend, she can be

set up for disappointment and possibly dissatisfaction with the care received.

The FCNP needs to inform the prenatal clinic staff and administration that the pregnant adolescent entering the prenatal care clinic already expects many things--especially not to have problems getting prenatal care, not to have the visits take a long time, and not to have poor care--and how these expectations may particularly relate to the pregnant adolescent's satisfaction with the staff's and providers' caring, the staff's and providers' information, the scheduling ease, and the facilities. This could be accomplished through formal and informal inservices and team meetings, which should also include the special social and cognitive development of an adolescent to aid the attendants to generate pertinent ideas, cite areas in the system that are deficient, and formulate effective change modalities.

Additionally, the prenatal care staff/providers/administration need to be educated about the possible relationship of the pregnant adolescent's satisfaction with her care and her adequacy of prenatal care and the uniqueness of adolescent cognitive processes on these variables. Since adequate prenatal care is the goal for the pregnant adolescent in the primary care setting, it is important for the FCNS and other providers/support staff/administration as the prenatal care team to encourage the teen's appointment utilization. In this study, the areas in which the pregnant adolescents were particularly satisfied were the areas of staff/provider care and ease with scheduling. The areas with which they were least satisfied were the areas of provider information and waiting time. With this knowledge, the prenatal care team can maintain and improve these areas. The providers can be

encouraged to gear their teaching and educational materials to their adolescent population, and the support staff/providers can be encouraged to produce and implement ideas which would reduce the time the pregnant adolescent has to wait to be seen. For example, video tapes involving pregnant teens talking about pregnancy problems or childbirth directed to an audience of pregnant teens and their significant others can be used. Another method might be to use a peer educator, a teen who has previosly experienced pregnancy, can co-lead a group of pregnant adolescents and their partners in childbirth classes or a group class on how to have a low-hassle pregnancy. These classes or groups could be running concurrently with the prenatal clinic times so the pregnant teen is not just waiting around to be seen.

The concept that if the pregnant adolescent is satisfied with her care, she may be more likely to continue with her care also invites the FCNS to conduct an ongoing assessment of the pregnant adolescent's perceptions of her care, particularly what she expects to get from her care, if she is satisfied with her care, and what she is or is not satisfied with about her care. This could be achieved by the FCNS developing a brief questionnaire, such as an easy, fun checklist about what they liked or did not like, that the pregnant teens could quickly fill out and drop in a box as they leave. The FCNS should also be sensitive and responsive to the client's changing attitudes, needs, and concerns. The FCNS, with the rest of the prenatal care team, could review the questionnaires at the end of each day to help identify problem areas and formulate strategies to resolve them. Also, a brief and informal exit interview by one of the team members or even a peer advocate could give valuable information on how the pregnant adolescent

is feeling about her care. Again, problem areas should be resolved as quickly as possible. The FCNS needs to structure the care of the pregnant adolescent with these considerations in mind, again possibly needing to effect overall change at the primary care site.

It is important for the FCNS to keep familiarized with and involved in pertinent research about his or her adolescent population on this subject of adequate prenatal care. He/she needs to be aware of what else the research shows affecting adequate prenatal care, such as social support, previous attitudes about health care providers, the type of prenatal care delivery system, confusion about services, and knowledge about economic resources for prenatal care (Cartoof et al., 1991; Cartwright et al., 1993; Kinsman & Slap, 1992). Possibly further research could be done at the prenatal care clinic site which addresses further inquiry into variables that can affect adequate prenatal care and into modalities that would enhance improved prenatal care utilization.

The FCNS should also be evaluating whether the pregnant adolescents are continually coming for care or if they are frequently missing scheduled visits. This evaluation could be accomplished through a formal quarterly chart review by the prenatal care clinic team for the purpose of identifying problem areas and strategies to resolve them and by an informal schedule review throughout the day for appointments not kept. A client who misses her appointment should have immediate followup contact to find out the reason and assistance in surmounting any related, identified problems. Preferably, this should be done by phone or, if she has no phone, by letter or contact at her place of work or school. A peer advocate working collaboratively with the prenatal

clinic service team could be used effectively in this role. If the adolescent prenatal care utilization rates are dropping or not continuous, it could be a clue that there is something at the clinc that is causing dissatisfaction.

Understanding and solving the problems associated with adequate prenatal care of pregnant adolescents is a complex endeavor and cannot be done in isolation. It is a necessity for the FCNS to network with other prenatal care providers/staff/administration, other educators, the community, and the legislators to make the powerful impact needed to effect change.

Recommendations for Further Research

As stated previously, little existing research deals with pregnant adolescents in terms of their expectations of prenatal care, their satisfactions with prenatal care, and how these two variables impact their adequacy of prenatal care. This study does suggest a relationship, thus warranting further research. Some suggestions for this further research include the following:

(a) Repeat this study using a large random sample of pregnant adolescents and broader inclusion criteria to incorporate more potential response variance.

(b) Use additional statistical analyses such as ANOVA with this larger study to better identify the effects of the independent variable(s) on the dependent variable(s) and analyses to reveal any differences in prenatal clinic service sites.

(c) Repeat this study on a larger scale, but have the expectations subscale filled out at the initiation of prenatal care.

(d) Execute a longitudinal study following educational programs on what prenatal care involves to observe any changes in a pregnant adolescents expectations of prenatal care and possible effects that may have on prenatal care satisfaction.

(e) Investigate how pregnant adolescents perceive and respond/react to the prenatal health care milieu in regards to expectations and satisfaction in contrast to that of the pregnant adult.

(f) Explore how different delivery systems focused on the adolescent can affect these relationships.

The early initiation of prenatal care is also important for adequate prenatal care to be obtained. Further research involved with the detection of variables that could influence early initiation of prenatal care in pregnant adolescents and modalities to accomplish this early prenatal care utilization should be executed.

Adequate prenatal care has been shown to be an involved concept which is related to many other variables. The relationships of expectations and satisfaction with adequate prenatal care are only a piece of the puzzle in pregnant adolescents' utilization of prenatal care. More research is also needed which locates other possible pieces of that puzzle.

Summary

This study has addressed and examined a pregnant adolescent's expectations of prenatal care, her satisfaction with prenatal care, the relationship between her expectations and satisfaction with prenatal care, and the relationship between the pregnant adolescent's adequacy of prenatal care and her expectations of and satisfaction with prenatal care. Findings, though limited by small sample size and sample

inclusion criteria, still contributed useful information for a Family Clinical Nurse Specialist in primary care. Strategies to achieve better prenatal care utilization of pregnant adolescents were discussed. Further research which focuses on the pregnant adolescent, using random sampling of larger and more diverse sample populations with broader inclusion criteria, could yield more significant results that would be generalizable to other pregnant adolescent populations.

APPENDICES

APPENDIX A

PATIENT SATISFACTION WITH PRENATAL CARE SURVEY

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 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 you feel about the statement. Some statements, however, may not apply to everyone. If the statement does not 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 <u>your</u> satisfaction with prenatal care services.
For each statement, please circle the number under the response which best describes how <u>you</u> 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 <u>total</u> amount of <u>time</u> 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. <u>not</u> 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 <u>you</u> feel about the statement. If the statement does <u>not</u> 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 <u>FIRST</u> 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
_____ Michcare
_____ 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 <u>any</u> 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 <u>one</u> 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 <u>first</u> 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 <u>closest</u> to the <u>total</u> 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:sh B:\PSWPC3.INS

APPENDIX B

SURVEY ADMINISTRATION MANUAL

APPENDIX B

SURVEY ADMINISTRATION MANUAL

A. Preliminaries

1. Identify data collectors.
2. Explain purpose of study to data collectors
   a. Give proposal to read
   b. Explain importance of their role in this process
   c. Explain importance of how they approach clients (i.e., with enthusiasm, respect, etc.). The manner they explain the study and seek participation is just as critical to the process as collecting completed surveys, giving incentives, returning the data, and record keeping.
3. Identify and resolve any problems, concerns, or questions they may have in carrying out the procedure.
4. Explain how to contact Elizabeth Miller for clarification if needed.
5. Have Patient Satisfaction with Prenatal Care surveys, pencils, and consent forms/cover letters available in an accessible place for distribution to potential participants.
6. Have a safe storage area designated for completed surveys until they are picked up by Elizabeth Miller.
7. Give incentives each week to the data collectors for survey participants of that week. Have a designated safe storage area for leftover incentives so they can be used for the next prenatal clinic.
8. Provide the same type of EDC wheel to data collectors to be used to calculate gestation for admission criteria.

B. Brief Description of the Study

This study seeks to further our knowledge about what a pregnant adolescent expects from her prenatal care, how satisfied she is with her prenatal care, and if how satisfied she is with her care is related to her prenatal care utilization. If we, as prenatal care providers, are more aware of how to meet the needs of our teen clients, the teens may be more motivated to attend their scheduled visits and to actively follow health recommendations while they are pregnant. Thus, the long-term objective of this study is to improve maternal and fetal outcomes.

C. Responsibilities of Data Collectors

1. Identify potential subjects.
2. Verify eligibility for participation.
3. Solicit participation in the study.
4. Distribute the survey.
5. Answer questions about the study and completion of the survey.
6. Present the incentives after survey completion.
7. Document disbursement.
8. Notify principal investigator of any difficulties or problems in the process.
9. Return all materials to the principal investigator.

D. Procedure

1. Identify potential subjects.
    a. Review appointment schedule list for that day. Identify adolescents that are at least 32 weeks pregnant, that have never been pregnant before, that are between 15 and 19 years of age, that can read and write English, and have attended the prenatal clinic at least for four visits.
    b. Use the provided EDC wheel to calculate the weeks pregnant. Determine the date from the client's EDC specified in her chart.
    c. When the teen comes to the clinic and registers, the data collector can approach her.
2. Data collector verifies eligibility with the client.

3. Data collector solicits participation of all pregnant adolescents who meet the criteria.
4. The data collector identifies self to the client and introduces the study:

   I am _____. I am collecting data for a research study which involves pregnant teenagers. We would like for you to participate. Your responses will help us understand better what you think is important when you come for your prenatal care. What is being asked of you is to read the cover letter which describes the study. If you want to participate in the study, you need to complete the survey--answer all the questions. You can fill in the survey while you are waiting to be seen. All responses to this survey will be kept confidential. No one at this clinic will see your answers. If you choose to fill out the survey, you will receive (incentive) when you turn in your completed survey.

   If you do not choose to fill out the survey, that is OK. Your participation in this study in no way affects the care that you receive here at our clinic. Just return the survey to me.

   If you are going to participate in the study, read each question and circle the best answer for you. Please answer all the questions. It takes about 20 minutes to finish. Please use the pencil to answer the questions. There are no right or wrong answers. If you have any questions about the letter, the directions, or the questions, please ask me at any time. Please be sure to answer all the questions and return the survey to me when you are done. I will give you (incentive) at that time.
5. Give the cover letter/consent form, survey, and pencil to the participant. Remain available so the participants may ask questions or get clarification if necessary.
6. When clients hand in the completed survey, quickly flip through the booklet to be sure the questions have been answered (circled).
7. Thank each participant. Give the incentive.
8. Be sure each survey is coded with the appropriate color dot indicating which clinic site the survey came from.
9. Put completed survey in envelope to be returned to the investigator. Place survey in the designated safe place.

10. Keep a count of completed surveys.
11. The surveys will be picked up weekly by the investigator.
12. Put away unused surveys, pencils, documentation, and incentives.
13. Call Elizabeth Miller at home (283-3033) or work (437-7395) if any problems, concerns, or questions arise. I will meet with you once a week to see how the process is going and to pick up materials. Thank you!

APPENDIX C

ADAPTED GINDEX INDEX

APPENDIX C

ADAPTED GINDEX INDEX

Criteria for Adequacy of Prenatal Care

Trimester Care Began	Weeks of Gestation at Delivery	Intensive Care (# of visits)	Adequate Care (# of visits)	Intermediate Care (# of visits)	Inadequate Care (# of visits)
First	13-less	7-49	1-6		
	14-17	9-49	2-8	1	
	18-21	11-49	3-10	1-2	
	22-25	13-49	4-12	2-3	1
	26-29	14-49	5-13	2-4	1
	30-31	15-49	6-14	3-5	1-2
	32-33	16-49	7-15	4-6	1-3
	34-35	16-49	8-15	5-7	1-4
	36-42+	16-49	9-15	5-8	1-4
Second	14-17	9-49		1-8	
	18-21	10-49		1-9	
	22-25	11-49		2-10	
	26-29	12-49		2-11	1
	30-31	12-49		3-11	1-2
	32-33	13-49		5-12	1-4
	36-42+	14-49		5-13	1-4
Third	28-31	10-49			1-9
	32-35	11-49			1-10
	36-42+	13-49			1-12

Adapted from Alexander and Cornely (1987)

APPENDIX D

CONSENT FORMS

APPENDIX D

Informed Consent

I, _____, voluntarily agree to be a participant in this special project about pregnant teenagers with Elizabeth Miller, MSU Graduate Nursing Student, in conjunction with Michigan State University College of Nursing. I understand I will be participating in a study about pregnant teenagers in prenatal care, and I will be completing a questionnaire about myself and my feelings about my prenatal care.

The main purpose of this study is to gain a better understanding about how pregnant teenagers feel about their prenatal care and if how they feel affects how much prenatal care they want to receive. I understand that when I agree to participate, I:

1. Agree to complete the questionnaire. The time required will take no more than 30 minutes.

2. Agree to release information from my prenatal record for the purposes of the project only. I know that all my responses are confidential and will not be made a part of my prenatal record.. No one at this clinic will see my answers and my name will not be used in any reports made of the findings. I know that my name, answers, and prenatal record information will be treated with strict confidence. I may request result findings within this strict confidence.

3. Understand that no beneficial results can be guaranteed as a result of participating in this project. I know that I can withdraw from participation at any time, and that whether I participate or not in this study will in no way affect my care I receive at the Health Department Prenatal Clinic.

4. Understand I can call Elizabeth Miller at _____, or see her here at the clinic on _____ if I have any questions or concerns after participating in the study.

I certify that I have read the above consent and I understand its contents. My signature below means that I have freely agreed to participate in this project.

Signed_____ Date_____

Witness_____ Date_____

BRANCH - HILLSDALE - ST. JOSEPH
DISTRICT HEALTH DEPARTMENT

J. MAXWELL COOK, M.D.
Medical Director

DUKE E. ANDERSON, M.P.H.
Health Officer

ADDRESS REPLY TO:

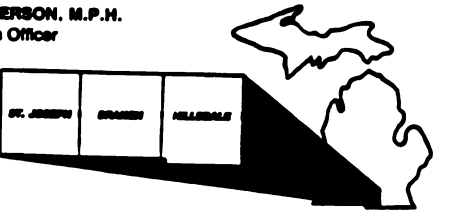
☐ HUMAN SERVICES BUILDING
909 MARSHALL ROAD
COLDWATER, MICHIGAN 49036
PHONE (517) 279-9561

☐ 185 W. FAYETTE ST.
HILLSDALE, MICHIGAN 49242
PHONE (517) 437-7395

☐ P.O. BOX 69, 441 E. MAIN
CENTREVILLE, MICHIGAN 49032
PHONE (616) 467-8636

☐ 1123 W. BROADWAY
SUITE 6
THREE RIVERS, MICHIGAN 49093
PHONE (616) 273-2181

☐ 600 S. LAKEVIEW
GROSHISER MEDICAL & PROFESSIONAL BUILDING
STURGIS, MICHIGAN 49091
PHONE (616) 659-4013



"United for Health"

March 23, 1993

To Whom It May Concern:

Beth Miller, RNC has the permission of the Branch-Hillsdale-St.Joseph District Health Dept. to participate in a research study, in cooperation with MSU. It is our understanding that participation in the study is strictly voluntary. The study will consist of a client survey and subsequent record audit. The focus of the study is on adolescent satisfaction with prenatal care.

Sincerely,

Robin Mynhier
Director of Clinic Services

APPENDIX E

UCRIHS

APPENDIX E

MICHIGAN STATE
UNIVERSITY

September 29, 1993

TO: Elizabeth Miller
9600 Gaye Dr. R#1
Reading, Michigan 49274

RE: IRB #: 93-454
TITLE: RELATIONSHIPS BETWEEN ADEQUACY OF PRENATAL CARE AND EXPECTATIONS OF AND SATISFACTION WITH PRENATAL CARE IN PREGNANT ADOLESCENTS
REVISION REQUESTED: N/A
CATEGORY: 1-C,E
APPROVAL DATE: September 27, 1993

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 including any revision 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 enclosed form 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 enclosed 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. the year, please outline the proposed revisions in a letter to the Committee.

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) 336-1171.

Sincerely,

David E. Wright, Ph.D.
UCRIHS Chair

DEW:pjm

cc: Dr. Millie Omar

OFFICE OF
RESEARCH AND GRADUATE STUDIES
University Committee on Research Involving Human Subjects (UCRIHS)
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