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**MEASUREMENT OF EGO STRENGTH AND HEALTH DECISION-
MAKING CAPABILITY COMPONENT OF SELF-CARE AGENCY AND
ASSESSMENT OF THIS COMPONENTS INFLUENCE ON ATTENDANCE
AT PRENATAL CLINIC BY PREGNANT ADOLESCENTS AGES 14-18**

by

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A SCHOLARLY PROJECT

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

**MASTERS OF SCIENCE IN NURSING
College of Nursing**

1991

Abstract

MEASUREMENT OF EGO STRENGTH AND HEALTH DECISION- MAKING CAPABILITY COMPONENT OF SELF-CARE AGENCY AND ASSESSMENT OF THIS COMPONENTS INFLUENCE ON ATTENDANCE AT PRENATAL CLINIC BY PREGNANT ADOLESCENTS AGES 14-18

Adolescent pregnancy causes negative effects for the adolescent, her child and society. Complications of pregnancy are more likely to occur among women who receive no prenatal care or delay care until the third trimester. The purpose of this project was to further develop the work of Mary Jean Denyes (1980) by designing a tool to measure the ego strength and health decision-making component of self-care agency and assessing how this component influences attendance at prenatal clinic.

Ego strength and health decision-making capability component of self-care agency was measured using Denyes (1980) questionnaire. Responses were evaluated using a seven point Likert scale. Attendance was measured by actual appointments kept by the adolescents. Correlational statistics would be used to determine if a relationship exists between ego strength and health decision-making capability component and attendance at prenatal clinic.

ACKNOWLEDGMENTS

I am grateful for the guidance and encouragement I received from my committee members: Barbara Given, Ph.D., Chairperson, Patricia Peek, M.S., and Jacqueline Wright, M.S..

I am thankful for the love and patience that I received from the men in my life, Bob and Brett, while I worked on this project. I love you both.

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CHAPTER I

THE PROBLEM

Introduction

Adolescent pregnancy is a concern of the American people. Statistics regarding adolescent pregnancy are being brought to public attention through the mass media. One Berrien County Michigan newspaper has had at least one article or reference to adolescent pregnancy a month for a period of six months (Herald Palladium,1989). There is a great deal of social significance to the statistics surrounding adolescent pregnancy.

In 1978, the United States ranked eighth out of 31 industrialized nations for adolescent pregnancy (Guttmacher,1981). O'Connell (1984) states that 85 percent of adolescent pregnancies were unplanned. Of all adolescent pregnancies, 40 percent end in abortion (Guttmacher,1990). In Michigan alone, in 1985, there were 14,830 pregnancies to women aged 15-17 years of age. Of those 14,830 pregnancies 5825 of those women gave birth (Planned Parenthood,1989).

Adolescent pregnancy causes negative effects for the adolescent, her child and society. Adolescent pregnancy causes a economic burden on society.

Adolescents who have children and move away from their families are less likely to continue their education, thus leaving the adolescent parent lacking the criteria to enter the the labor force (Corbett,1987). Society is now in a era that has emphasis on technology, and the need for manual labor is low. The adolescent parent who does not have the necessary education has little hope of living anything but an economically deprived life (Corbett,1987).

The adolescent who is pregnant has a physiological burden to bear. The infant who is born to an adolescent has greater risk of long term health and developmental problems (National Research Council,1987). The pregnant adolescent is described as a high risk obstetric patient because she is predisposed to (1) higher maternal and infant mortality rates; (2) anemia; (3) pre-eclampsia; (4) low-birth rate infants; (5) sizing and dating problems; 6) multiple socioeconomic complications (Corbett,1987).

It is generally accepted that complications of pregnancy are more likely to occur among women who receive no prenatal care or delay care until the third trimester (Singh,1985). Women who are aged 18

and younger are less likely to receive prenatal care in the first trimester as compared to women older than 18 years (Singh,1985).

The adolescent is immature physically as well as psychosocially. Erikson (1968) states that adolescence is the period represented by identity versus role confusion. This is the fifth stage in Erikson's eight stages of psychosocial development.

Developmental stage must be addressed when rendering care to the adolescent. Nurses in advanced practice can increase the data base when caring for adolescents. With more data and information, an individualized approach for rendering prenatal care to adolescents based on their developmental stage can be implemented by the nurse. With increased information on the pregnant adolescents physical and psychosocial development, the members of the health care team, such as the Family Clinical Nurse Specialist (FCNS), Dietician, Physician, Social Worker and other nursing staff, can assess each adolescent individually and implement the appropriate care. With the appropriate care, it can be hoped that the adolescent will have a healthy infant and fewer maternal complications than adolescents have had previously.

There are multiple factors why adolescents are less likely than adults to receive prenatal care. The factors that may hinder receiving care are developmental, social, personal and environmental (Mercer,1979). To render more effective care and increase adolescent attendance at prenatal clinic each adolescent must be viewed from a standpoint of their physiological growth and psychosocial development.

Psychosocial development influences the ability of the adolescent to participate in self-care. Self-care includes the deliberate actions directed to self or the environment to regulate one's functioning in the interest of one's life, integrated functioning, and well-being (Orem,1985). Self-care is both an on going activity and a competence to be developed (Pender,1987). According to Orem (1985) self-care agency is the complex capability for action that is activated in the performance of the actions or operations of self-care. Health care is provided not by health care professionals but by individuals and families to themselves (Denyes,1980).

Self-care comprises 75% of all health care within the United States, and at least 25% of office visits seen by health care workers could be attended

to by the individuals and families without health care intervention (Pender, 1987). The goal of the advanced practice nurse working with adolescents is to contribute to their development as self-care agents by helping them identify and build upon the self-care strengths they possess, and to compensate or overcome limitations in self-care agency (Denyes, 1980).

The ability of an adolescent to engage in self-care and self-care agency will influence her attendance at prenatal clinic. In addition, the adolescents' attendance at prenatal clinic will influence the ability of the adolescent to engage in self-care and self-care agency. The adolescent will have the opportunity at the prenatal clinic to increase the knowledge and skills that are required for self-care during pregnancy.

Denyes (1980) has suggested that the adolescent may have the capability to engage in self-care. Denyes (1980) studied self-care agency and identified six factors or components of self-care agency in adolescents. The components reflect (1) ego strength and health decision-making capability; (2) valuing of health; (3) health knowledge; (4) physical energy levels; (5) feelings; (6) attention to health.

Denyes (1980) has developed a valid, reliable tool to use in assessing self-care agency in adolescents. The tool is discussed by Gast (1989) as an instrument that was originally designed to measure self-care agency in adolescents.

Gast (1989) states that subsequent research has provided further support for Denyes self-care agency instrument. Construct validity has been demonstrated by correlating self-care agency and the following (1) self-esteem; (2) depression; (3) physical symptoms health-solving ability; (4) health behavior; (5) health status; and (6) health problems. The availability of a tool that measures self-care agency of the adolescent makes it possible to effectively plan for the health care of adolescents. With specific data regarding strengths and limitations of self-care agency, nurses can design interventions that directly assist adolescents to (1) to enhance, exercise and/or further develop strengths in self-care agency and (2) to overcome, compensate for, or prevent accentuation of limitation in self-care. In addition, use of Denyes' instrument could enable and encourage nurses to view adolescents as primary agents of their own self-care.

It is necessary for the nurse in advanced

practice, to assess the pregnant adolescent's ability to engage in self-care agency. By identifying the strengths and limitations of the pregnant adolescents self-care agency, the nurse can design interventions that will enhance self-care agency. These interventions may result in adequate attendance at the prenatal clinic and the adolescent may engage in self-care which would lead to decreased maternal and neonatal morbidity and mortality.

Purpose of the Study

The goal of this project is to further develop the work of Mary Jean Denyes (1980) by designing a tool to measure the ego strength and health decision-making capability component of self-care agency and assessing how this component influences attendance at a prenatal clinic.

The reliability and validity estimates for Denyes (1980) instrument were based on responses of one selected group of adolescents. The goal of this scholarly project is to expand Denyes (1980) work and test the ego strength and health decision-making capability component of self-care agency with a selected group of pregnant adolescents. The

assessment tool will be used to identify adolescents' self-care agency and to determine how this influences attendance at a prenatal clinic.

Relevance to Practice

In a southwestern county of rural Michigan, pregnant adolescent clients are seen in a multidisciplinary prenatal clinic setting. Nurses who function in advanced practice roles such as a FCNS are employed in the multidisciplinary setting and help establish goals. The goals are designed to encourage the caregivers to provide quality care to pregnant adolescents and to promote physical, as well as psychosocial health of the pregnant adolescent. At this time, self-care agency of adolescent females is formally not assessed.

It is the FCNS who provides the coordinated and consistent care throughout the prenatal course. By utilizing Denyes (1980) assessment tool, the nurse can assess if the pregnant adolescent has the ego strength and health-decision capability component of self-care agency and how the component may influence attendance at the prenatal clinic. When a pregnant adolescent fails to attend an adequate number of

prenatal visits, the adolescent increases the risks of an already high risk pregnancy.

It should be the goal of the FCNS to gain insight into the pregnant adolescent's self-care agency and the relationship of self-care agency and attendance at prenatal clinic. Once the self-care agency of the adolescent is determined than modifications in the delivery of prenatal care can be made to encourage attendance.

By attending an adequate number of prenatal visits the adolescent should improve her chances of decreased maternal and infant morbidity and mortality. In addition, by intervening and helping the adolescent increase her self-care agency, the adolescent will be more able to increase her own health behaviors thus resulting in a higher level of wellness for the adolescent and her fetus.

Definition of Concepts

Adolescence

There are many definitions of adolescence in the literature. It is generally accepted that adolescence is the period between childhood and adulthood. For the purposes of this study

adolescence is defined as the process of evolving from childhood to adulthood (Mercer,1979). Process implies progression, continuing development, and change (Mercer,1979). For the purposes of this scholarly project the adolescent will be defined as female, age fourteen to eighteen. Erikson (1963 p.261) states that with the advent of puberty, childhood ends and youth begins. Erikson (1963) describes eight sequential stages or crisis of psychosocial development. The adolescent is involved in fifth stage, identity versus role confusion.

Pregnant Adolescent

A pregnant adolescent is a female who becomes pregnant in her teen years. Her pregnancy carries a greater risk than the women who bears children in her twenties. For the purposes of this scholarly project the pregnant adolescent will be defined as single, primigravid, female, 14 to 18 years of age, 24-28 weeks pregnant, on public assistance and living in a state designated rural community.

Self-Care Agency

Orem (1985 p.105) describes self-care agency as the complex acquired ability to meet one's continuing requirements for care that regulates life process, maintains or promotes the integrity of human structure and functioning and human development, and promotes well-being. Self-care agency of an individual varies in its development from childhood to old age (Orem,1985). For purposes of this project the adolescent will engage in self-care actions that are essential to her prenatal care, such as eating a nutritious diet, having adequate rest, and avoidance of alcohol and drugs. The adolescent is the agent of her own care.

Prenatal Care

For the purposes of this project prenatal care refers to the medical and nursing supervision and care given to a pregnant woman during the period beginning with conception to delivery of an infant. The standards that will be followed are the American College of Obstetrics and Gynecology (ACOG), (1982). The ACOG (1982) describe as optimum visitation

throughout pregnancy as one visit every four weeks starting at approximately six weeks gestation until the gestational age of twenty-eight weeks. The visits will be every two weeks from twenty-eight weeks through thirty-six weeks gestation and one time per week until delivery of an infant. The minimum number of visits is five fewer than the ACOG recommends. In addition, care is considered to be below standard if the adolescent made one or none visits for prenatal care in the third trimester (ACOG,1982). (See Figure 1).

Attendance

Attendance at prenatal clinic is one component of prenatal care. An adolescent needs to attend an adequate number of prenatal visits to help improve her chances of having a viable, healthy infant (Bucker, 1985). For the purposes of this of this scholarly project, attendance will refer to the number of prenatal visits the adolescent actually attends. It is expected that the adolescent will meet the minimal requirements as set forth by the ACOG standards (1982).

FIGURE 1

ACOG RECOMMENDATIONS OF PRENATAL VISITS

RETURN APOINTMENT FOR PRENATAL CARE	GESTATIONAL WEEKS OF PREGNANCY		
	6 - 28 WEEKS	28 - 32 WEEKS	36 WKS - BIRTH
EVERY 1 MONTH	X		
EVERY 2 WEEKS		X	
WEEKLY			X

Assumptions Related to the Study

1. It is assumed that Orem's theory of self care is applicable to pregnant adolescents.
2. It is assumed that the psychosocial component of self care that is likely to influence prenatal attendance of pregnant adolescents can be be labeled and measured.
3. It is assumed that the ego strength and health-decision making capability component of self-care agency can be assessed.
4. It is assumed that pregnant adolescents have the capability of participating in self-care.
5. It is assumed that pregnant adolescents will truthfully and to the best of their ability answer the questions on the questionnaire.
6. It is assumed that adolescent pregnancy presents an increase risk to the adolescent and the fetus.

Limitations of the Study

1. The researcher will examine only low income, single, primigravid adolescents, aged 14 to 18, 24-28 weeks pregnant on public assistance and therefore may not be representative of all

adolescents.

2. The specific dimensions of the ego strength and health decision-making capacity component of self care agency as they relate to attendance at prenatal clinic will be the focus of this scholarly project. These dimensions are not all inclusive. There may be other factors that affect the adolescents attendance that are not examined.
3. The assessment tool used in this study will be administered to pregnant adolescents and will yield a one time measurement. There may be factors other than those assessed by the tool that contribute to the results obtained.
4. This author will examine only adolescents that live within a state designated rural community and this will limit the generalization of the findings.

Overview of the Project

This scholarly project is organized into chapters. In Chapter I an introduction and background and the problem as well as the purpose of the study, conceptual definitions of the terms, and

limitations and assumptions of the study is covered.

In Chapter II, a conceptual framework for this scholarly project utilizes developmental theory and Orem's self-care theory.

In Chapter III a review and critique of literature is presented. Research that has been completed is also presented.

An overview of methodology and procedures for data gathering, specific population for sampling and a explanation of the instrument used, data collected and scoring. A proposed statistical analysis will also be presented in Chapter IV.

In Chapter V, a summary is presented as well as implications for further study and implications for nursing practice.

CHAPTER II
CONCEPTUAL FRAMEWORK

Introduction

In chapter II of this scholarly project, the conceptual framework of self-care agency and attendance at a prenatal clinic will be presented. The major concepts that are pertinent to this project are adolescence, pregnant adolescent, self-care agency, prenatal care, and attendance. Each of the concepts will be defined and developed from the literature presented.

A conceptual model based on Orem's model of self-care as adapted by Denyes (1980) will be presented. The interrelationships of the major concepts will also be presented.

Adolescence

There are many accepted definitions of adolescence in the literature. In general terms adolescence is the period between childhood and adulthood. Mercer (1979) defines adolescence as a process of evolution from childhood to adulthood. With the use of the word "process", Mercer (1979)

connotes progression, continuing development, and change. Mercer (1979) has six tasks of adolescence which could vary from culture to culture and with each adolescents goals for her life. The six tasks are:

1. Acceptance and achievement of comfort with body image
2. Determination and internalization of sexual identity and role
3. Development of personal value system
4. Preparation for productive citizenship
5. Achievement of independence from parents
6. Development of an adult identity.

In the process of developing into an adult, the adolescent must complete the tasks of accepting an adult body, accepting sexuality, developing a value system, preparing for productive citizenship, achieving independence from parents, as well as achieving an adult identity. The tasks of adolescence may be helped or hindered by individuals in the adolescents life, social supports, inherent physical structures, and the family environment.

Erikson's (1968) study of youth is well recognized. Erikson's view of human development proceeds according to the epigenetic principle of

growth which states that "anything that grows has a plan, and that out of this ground plan, the parts arise, each part having its time of special ascendancy, until all parts have arisen to a functioning whole" (1968 p.92). There are eight sequential stages or crises of psychosocial development that are described in Erikson's work. Each stage has a core conflict for which resolution is attained. At each stage there is a core conflict. The stage that comes to the forefront during adolescence is the conflict of ego identity versus role confusion. Erikson's eight stages with core conflicts are:

<u>STAGE</u>	<u>CORE CONFLICT</u>
1. Infancy	Trust vs mistrust
2. Early childhood	Autonomy vs shame and doubt
3. Late childhood	Initiative vs guilt
4. School age	Industry vs inferiority
5. Adolescence	Identity vs role confusion
6. Young adulthood	Intimacy vs isolation
7. Adulthood	Generativity vs stagnation
8. Maturity	Integrity vs despair

Each of Erikson's stages build upon the previous stage and what has been learned by the individual to master the core conflict. It is necessary for the adolescent to resolve the core conflict of identity vs role confusion to develop a sense of personal sameness and historical continuity or in otherwords, a sense of identity. If the adolescent is unable to resolve the core conflict, the adolescent will experience role confusion, characterized by the inability to establish a stable adult identity.

The adolescent years are years of narcissism (Corbett,1987). The adolescent world revolves around self. For most adolescents they have been given limited responsibilities for others as well as for themselves. The adolescent has been developing her own comfort with her body image, sexual identity, personal value system, productive citizenship, independence from parents and an adult identity (Mercer,1979). It is the adolescent years that are rich with turmoil that eventually lead the adolescent to adulthood. If these years are interrupted with pregnancy, there may also be an interruption in the psychosocial growth of the adolescent.

There are physiological changes in adolescence as well as pychosocial changes. Puberty is the

process of sexual maturation. During puberty the hypothalamus produces gonadotropin release factor (GRF) that stimulates follicle stimulating hormone (FSH) and lutenizing hormone (LH) in night-time surges. The sex hormones are then produced at an accelerated rate. The increase in the gonadotropins stimulates the ovaries which results in follicular development. With the follicular development there is an increase in estrogens. It is the increase in estrogens that encourage development of the secondary sexual characteristics. Estrogen stimulates breast development, maturation of the uterus, vagina, and external genitalia. There is also accelerated growth during the adolescent period. This growth includes skeletal, muscle, and viscera (Corbett,1987).

The psychosocial and physiological changes that occur in adolescence are concurrent. Puberty has been assumed to be a major influence on the behavior of adolescents, due to an increase in sex drive (Freud, 1960) and to the surge in gonadal hormones thought to underlie increases in the sex drive. Additionally, puberty has been thought to play an important aspect in most aspects of the adolescent's life, from cognition, to psychopathology (Corbett,1987). It is important to remember that the physical and

psychosocial progression of growth in the adolescent is interdependent, and therefore, each may be assessed individually, as well in combination.

Pregnant Adolescent

Every pregnant woman young and old changes both physically and developmentally during the prenatal course. Pregnancy is a life event that is considered normal (Reeder, 1987). The pregnant adolescent is still very much an adolescent who must continue her own growth and development as well as experiencing the changes that occur with pregnancy (Corbett,1987). Health care providers must be cognizant of the physical and psychosocial aspects of adolescence, as well as how these are superimposed on the physical and psychosocial aspects of pregnancy. An understanding of the relationship between normal physiological changes of adolescents and the changes that occur during pregnancy may lead to appropriate health care management during pregnancy (Corbett,1987).

The adolescent who is pregnant carries a greater risk for a poor outcome for herself as well as the well-being of her fetus (Singh,1985). Singh (1985)

suggests that prenatal care plays an important role in pregnancy outcome and this is true especially among low-income, minority, and adolescent women.

Pregnancy can cause considerable psychosocial demands on the adolescent who is already dealing with the many normal changes involved in the progression from childhood to adulthood. The pregnant adolescent has taken on a female identity when she becomes pregnant. The pregnancy may be in conflict with her personal value system. If the pregnancy is in conflict her value system the pregnancy may threaten her identity (Mercer, 1979). As the pregnancy progresses the adolescents' body size and shape will be changing. Body image also reflects sexual identity (Mercer, 1979). The pregnant adolescent may not feel comfortable with her rapidly changing body shape. If the pregnant adolescent is uncomfortable with her changing body shape, she may have difficulty defining her identity (Mercer,1979).

Pregnancy is a time for preparation for parenthood; it is a time when women become introspective, and focus on themselves and their personal concerns (Leppert,1984). An affectionate bond with the unborn child begins to develop during pregnancy. There are many fantasies about the baby

and how the woman will be as a parent. Pregnancy is a time when women begin to face questions of identity (Leppert,1984). Who am I? What will I become? It is a time when a pregnant woman reassess her situation in life and focus on changes. For an adolescent it may include changes that impact all of the adolescent tasks, such as comfort with body image, preparing for a vocation, or dealing with sexuality.

Adolescent pregnancy is seldom planned. Unplanned events such as pregnancy may result in conflict with the adolescents other personal goals (Mercer, 1979). The pregnant adolescent may not be able to participate in sports or feel that she can continue school. The adolescent may have difficulty defining self. This may interfere with the journey from childhood to adulthood. The adolescent mother also faces the psychological tasks of pregnancy such as (1) acceptance of the pregnancy to insure safe passage for self and child; (2) finding acceptance for the child by persons that are meaningful to the adolescent; (3) visualizing self as a parent and (4) giving of self to the unborn (Mercer,1979). The adolescent mother is faced with the psychological tasks of adolescence, the psychological tasks of

pregnancy, and conflicts with personal goals. This may all yield conflict with identity and role confusion.

The adolescent who chooses to carry the pregnancy has a responsibility to herself and to the fetus. The most important of these obligations is prenatal care.

The power of the adolescent to engage in the estimative and productive operations essential for self-care which is necessary to produce a healthy infant and limit maternal complications is known as self-care agency.

Self-care Agency

Self-care is the production of actions directed to self or to the environment in order to regulate one's functioning, the interests of one's life, integrated functioning and well-being (Orem,1985). Therapeutic self-care demand is the measures of care required at moments in time in order to meet existent requisites for regulatory action to maintain life and to maintain or promote health and development and general well-being (Orem,1985). Self-care agency is defined by Orem (1985) as the complex capability for

action that is activated in the performance of the actions or operations of self-care. Self-care deficit is a relationship between self-care agency and therapeutic self-care demand in which self-care agency is not adequate to meet the known therapeutic demand (Orem,1985).

Self-care agency is the complex acquired ability to meet one's continuing requirements for care that regulates life processes, maintains and promotes integrity of human structure and functioning and human development, and promotes well-being (Orem,1985).

Self-care agency of an individual varies with:

1. state of health
2. factors that influence educability
3. life experiences as they enable learning
4. exposure to cultural influences
5. use of resources in daily living (Orem,1985).

An individual's self-care agency is affected by an individual's development and operability (Orem,1985). Development and operability are identified in terms of the kinds of self-care operations individuals can consistently perform (Orem,1985). The adequacy of self-care agency is measured against the component parts of the therapeutic self-care demand or demand

on the individuals to engage in self-care (Orem,1985). Self-care agency or the ability to engage in self-care, develops in the course of day-to-day living through the spontaneous process of learning (Orem,1985). The individuals development is aided by intellectual curiosity, by instruction and supervision by others, and by experience in in performing self-care measures (Orem,1985).

The art of nursing includes making a comprehensive determination of reasons why people can be helped through nursing and nursing interventions. It is necessary that an individuals ability to engage in self-care agency now or in the future be diagnosed. With the information, on self care agency, nursing has a basis for making judgments about existing or projected self-care deficits as well as nursing can select valid and reliable methods for helping and nursing can prescribe and design nursing systems (Orem,1985).

The individualized factors of age, developmental state, and health generally determine the self-care activities a person can perform (Orem,1985). An adolescent can perform self-care activities but what activities she can perform will be dependent on the age, developmental stage and what self-care

activities she has performed previously in her life. Orem, (1985) describes infants, children and adolescents require care by others because they are physically and mentally underdeveloped. Denyes (1980) describes that it is a logical assumption to assume that young peoples self-care agency is undeveloped. The study of human development suggests that while self-care agency is not fully developed in children and youth, they do have strengths that enable them to engage in self-care (Denyes,1980).

The pregnant adolescent can become her own agent of her self-care. The adolescent is not yet complete in the mastery of her developmental stage or the developmental tasks that are associated with adolescence but there can be an argument developed that states that the adolescent is capable of self-care.

An individual's self-care agency is described in terms of strengths and limitations. There will be strengths that the individual has that will enable her to respond to her health needs and similarly there will be limitations that may interfere with the determination and/or accomplishment of self-care (Denyes,1980). These strengths and limitations are said to result, in part, from the growth and

development state of the person (Denyes,1980).

Denyes (1980) developed 6 components that determine self-care agency.

The components that were explored are as follows:

1. Ego Strength and Health Decision-making Capability
2. Relative Valuing of Health
3. Health Knowledge and Decision-making Experience
4. Physical Energy Levels
5. Feelings
6. Attention to Health.

In the component of ego strength and health decision-making capabilities Denyes (1980) states the more of this component that the adolescent processes the better she will be able to be the agent of her own self-care. If the adolescent feels good about herself, about her body and about her achievements and thinks clearly and logically about her health, then she would be said to possess a high degree of this component of self-care agency (Denyes,1980).

The pregnant adolescent may have the component of ego strength and health decision-making capabilities. The entire prenatal period should be viewed as a learning and maturational experience (Mercer,1979). She may have more difficulty than the

non-pregnant adolescent to engage in self-care agency due to the pregnancy interfering with the journey from childhood to adulthood. The pregnant adolescent will be working on the tasks of pregnancy as well, working toward resolution of the conflicts of identity vs. role confusion. If the pregnant adolescent has the component of ego strength and health decision-making capabilities then this will influence her attendance at prenatal clinic.

Prenatal Care

Prenatal care is important to the well-being of the pregnant woman as well as the fetus. Prenatal care refers to the medical and nursing supervision and care provided to a pregnant woman during the period beginning with conception to the delivery of an infant. It is during this time that the pregnant woman is monitored physiologically as well as psychosocially.

The initial task for the adolescent is to accept the pregnancy. This may come after the adolescent misses periods and the physical changes of pregnancy have begun to occur. The adolescent then must confirm her pregnancy. To do this the adolescent may

need to find someone that she can confide in and tell them that she thinks that she is pregnant. The pregnancy will be confirmed. The adolescent will choose to continue the pregnancy or terminate it. If the adolescent chooses to continue that pregnancy then she needs to begin prenatal care. Once the adolescent has entered care then she has made a decision to provide some care for herself and her fetus. One important aspect of prenatal care is to influence the adolescents behavior by providing information for decision-making that will help the adolescent engage in positive self-care behaviors.

Prenatal care can improve pregnancy outcomes and promote the delivery of healthy infants (Leppert,1984). The adolescent may be more impulsive and may not have as much responsibility towards self as the older female who is pregnant. It is important that the FCNS attempt to increase the adolescents ability to engage in self-care behaviors. A comprehensive prenatal program for adolescents would address the components of physical and psychosocial needs of normal adolescence, as well as for the pregnant adolescent. In addition, the prenatal program should maximize the adolescents potential to care for herself, and for her fetus.

Low income status has an impact on adolescent pregnancy. Moore (1984) states that there has been an increase in deliveries of infants of women who have no prenatal care or inadequate prenatal care. This increase has occurred since a reduction of federal funding for prenatal care. These women who had no or minimal care also had more complications during the pregnancy and post partum. Singh,(1985) states that the amount of prenatal care a women receives plays an important role in the positive or negative outcome of the pregnancy. This is especially true among low income adolescent women.

The American College of Obstetrics and Gynecology (ACOG) developed standards for maternity care in 1982. These standards are widely accepted in the health care community. The standards include that every woman is entitled to a comprehensive program of prenatal care. Prenatal care should begin as early in the first trimester as possible for uncomplicated as well as complicated pregnancies. The ACOG standard states that visits should begin as early as six weeks and the visits should be one every four weeks until the gestation age of twenty-eight weeks. The visits should be every two weeks from twenty-eight weeks through thirty-six weeks gestation

and one time per week until the delivery of the infant. If the minimum number of prenatal visits is five fewer than the ACOG recommends the the care is considered below standard. If the pregnant adolescent makes one or none visit(s) in the third trimester than prenatal care is considered below standard (ACOG,1982). (See Figure 2)

Attendance

Pregnant adolescents need to attend a minimum number of prenatal visits to help improve their chances of having a viable, healthy infant (Bucker,1985). Auvenshine (1985) states that pregnant adolescents receive less prenatal care than older women. The adolescents receive fewer prenatal visits and the visits start later in pregnancy. Auvenshine (1985) states that there are several reasons as to why pregnant adolescents receive less prenatal care. The adolescent may deny the pregnancy. The adolescent may not recognize the importance of prenatal care or have a casual attitude toward the importance of prenatal care for herself and her unborn child. The adolescent may not have access to prenatal care or transportation to get to

FIGURE 2

ACOG RECOMMENDATIONS OF PRENATAL VISITS

RETURN APOINTMENT FOR PRENATAL CARE	GESTATIONAL WEEKS OF PREGNANCY		
	6 - 28 WEEKS	28 - 32 WEEKS	36 WKS - BIRTH
EVERY 1 MONTH	X		
EVERY 2 WEEKS		X	
WEEKLY			X

the site of prenatal care.

Corbett (1987) states that it is imperative to listen to adolescent complaints related to the prenatal clinic setting and care. The adolescent is often correct in her evaluation of the situation. It is necessary that the adolescents are heard because an adolescent may choose not to attend care if she feels that there are too many problems, stressors at the care setting.

Attendance at prenatal appointments is a component of compliance. It should be noted that keeping appointments does not infer that there is compliance with other dimensions of the treatment plan (Westfall,1986). For the purposes of this project compliance will not be evaluated, attendance will be measured. The number of appointments kept or not kept is a measure of attendance.

Prenatal visits may include a visit with a nurse that is functioning in a educative-supportive role. In this role the nurse provides an environment conducive to learning and information related to how the adolescent can improve her ability to engage in self-care. Healthful habits of eating, exercise, rest, coping, and developing interpersonal relationships can be learned and discussed during

prenatal visits. Information related to self-care for pregnant adolescents can encourage the adolescent to progress through her normal maturational changes of adolescence as well as the tasks of pregnancy.

In summary, the adolescent has normal physical and psychosocial changes that occur in adolescence. The pregnant adolescent must accomplish the same changes as the adolescent who is not pregnant as well as the changes that occur in pregnancy. It is important for the adolescent to attend adequate numbers of visits because the adolescent is at greater physical risk for herself and her unborn infant due to her age. It is also important for the adolescent to attend an adequate number of prenatal visits to learn and engage in self-care behaviors.

Relation to Nursing Theory

Orem (1985) uses the term in her book Nursing Concepts of Practice. Self-care is a learned behavior that regulates human structural integrity function and human development. Orem (1985) defines self-care as "the practice of activities that individuals initiate and perform on their own behalf in maintaining life, health and well being" (p. 84).

Orem's theory of self-care has an adult orientation. Denyes (1980) has based her work on Orem's study of self-care. Orem (1985) describes infants, children and adolescents as mentally and physically underdeveloped and identified parents as the primary self-care agents for children. Researchers who study human development suggest that while self-care agency may not be completely developed, the adolescent does have strengths that enable them to engage in self-care (Denyas,1980).

Self-care is a learned behavior. Individuals are not born with the ability to determine our own self-care. One learns about self-care as one matures. Since self-care is a learned behavior and that is taught ones family of origin as well as schools, friends and peers throughout ones life. Orem (1985) states that individualized factors of age, developmental state and health generally determine what self-care activities a person can perform. The health care system recognizes that children and adolescents can engage in self-care activities. Examples of self-care would be that children can brush their teeth two times a day and an adolescent who is diabetic can learn to manage her own diet and insulin therapy. It can be assumed that

an adolescent has the ability to engage in at least some self-care behaviors and become their own self-care agent.

Denyes (1980) work is based more on health rather than illness and assumes that individuals take a more active part in their care than does Orem (Denyes,1980). Denyes (1980) states that adolescents have strengths and limitations that constitute self-care agency at adolescence. Denyes (1980) states that Erikson's work clearly suggests that the power an individual has to engage in self-care increases as a result of growth, maturation and learning. Denyes (1980) draws from human development and clusters self-care agency in six areas or components:

1. Ego strength and decision-making capability regarding own health
2. Valuing of health by self, family and family
3. Knowledge, decision-making experience, and skill in relation to self-care;
 - (a) Knowledge of own personal strengths
 - (b) Sense of control over own health
4. Sufficient strengths and energy for self-care;
 - (a) Limiting peer pressure to engage in activities detrimental to health

- (b) Access to sufficient information for self-care
- (c) "In touch" with own health
- 5. Awareness of own feelings and own sexuality and ability to describe and talk about own feelings
- 6. Attention to own health and future
 - (a) Access to encouragement for self-care from family and friends
 - (b) Willingness to seek health information;
 - (c) Uncertainty regarding own feelings.

Orem (1985) describes three nursing systems:

1. wholly compensatory nursing system
2. partly compensatory nursing system
3. supportive educative nursing system.

Nursing functions within these three systems. In wholly compensatory nursing system, the patient takes no active role in self-care, such as a unconscious patient or a newborn infant. The partly compensatory nursing system is a system where both the nurse and the patient perform tasks respectively depending upon the patients limitations. An example would be a pregnant adolescent who is in labor. The adolescent needs a reminder on how to breath during labor. In the supportive-educative nursing system the patient may need assistance in decision-making, behavioral

control and acquiring knowledge and skills. The patient can perform self-care but needs guidance and support. A person needing the supportive-educative nursing system would be a adolescent who is pregnant. The nurse who works with pregnant adolescents will provide guidance, facilitating the adolescents ability to make decisions regarding her health and her pregnancy. The nurse needs to be available to the adolescent. The adolescent needs information about pregnancy and how her health decisions will effect the outcome of the pregnancy. The nurse can provide this. The adolescent also needs information about how to make decisions and how decisions will move her away from depending on family thus increasing her independence. Increasing the ability to make informed decisions and become more independent will encourage the adolescent to continue the process of developing self-identity. The adolescent needs support and guidance so she can make health decisions and move toward the attainment of self-care and she can recognize her self-care agency.

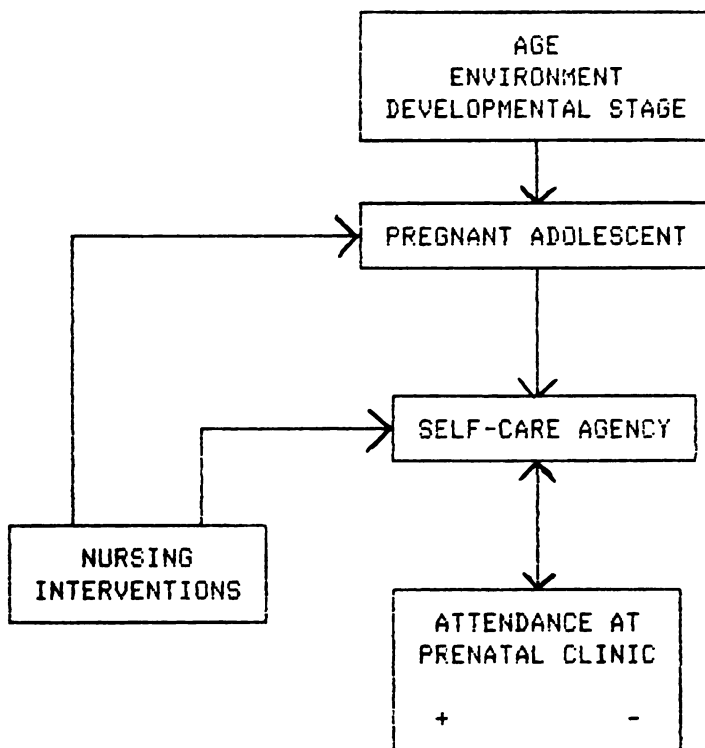
The pregnant adolescent will have many factors that contribute to who she is. Factors such as the socioeconomic background, chronologic age, and developmental stage will influence the pregnant

adolescent's ability to be the agent of her own care during pregnancy. Adolescence is a stage which involves growth in many spheres. The adolescent enters prenatal care with a history of experiences with the health care field. These experiences may be positive or negative. The pregnant adolescent may enter prenatal care with abilities that will enable her to engage in self-care. The adolescent's ego strengths and health decision-making capacity will influence her ability to be an agent of her self-care. These abilities can be altered through nursing interventions. The adolescent's self-care agency will influence her attendance negatively or positively. (See Figure 3)

In summary Orem developed a theory of self-care. Denyes expanded upon Orem's theory of self-care and also believes that adolescents are capable of being agents of their own self-care. Denyes work was done with healthy, male and female nonpregnant adolescents but her work is applicable to pregnant adolescents.

FIGURE 3

EGO STRENGTHS AND HEALTH DECISION-MAKING CAPACITY COMPONENT OF
SELF-CARE AGENCY AND INFLUENCE ON ATTENDANCE AT PRENATAL CLINIC



Summary

In chapter II a conceptual framework of self-care agency and attendance at prenatal clinic was presented. The concepts of adolescence, pregnant adolescent, self-care agency, prenatal care and attendance were also presented. A conceptual model that was based on Orem's model of self-care as adapted by Denyes (1980) was discussed. In chapter III, literature pertinent to the concepts presented in chapter II will be reviewed and critiqued.

CHAPTER III
LITERATURE REVIEW
Introduction

This chapter contains the pertinent literature related to the purpose of this scholarly project. The chapter will be divided into the following categories: prevalence of adolescent pregnancy, adolescence, ego strength, health decision-making and the pregnant adolescent, self-care agency, prenatal care and attendance.

Prevalence of Adolescent Pregnancy

Adolescent pregnancy is a widespread social problem in the United States today (Mercer,1979; Alan Guttenmacher Institute,1981). In 1978, 1,100,000 adolescent females became pregnant and 554,000 delivered live children (Alan Guttenmacher Institute,1981). Henshaw (1987) states 1,031,000 adolescents become pregnant in 1985. Of those 1,031,00 pregnancies 477,710 ended with a live birth and 416,170 ended in induced abortion, the rest ended in miscarriage or stillbirth (Henshaw,1987). In

Michigan, in 1985, 14,830 adolescent females age 15 to 17 became pregnant and 5829 delivered live infants (Planned Parenthood,1989). The rest of the pregnancies ended in spontaneous or elective abortion. 40 percent of all adolescent pregnancies end in abortion (Henshaw 1985; Guttenmacher,1990). The actual number of births among adolescents has been declining but so has the number of adolescents in the United States. More adolescents are sexually active than in the past; the use of contraception and the availability of abortion has increased since the 1970's (Corbett,1987; Henshaw,1987).

From the review of literature it is obvious the adolescent pregnancies are still occurring and that there does not seem to be an end in sight. It will be necessary for health care professionals to understand the stage of adolescence and the pregnant adolescent to render appropriate care.

Adolescence, Ego Strength, Health
Decision-making and the Pregnant Adolescent

The stage of adolescence is a difficult emotional journey for adolescents. Erikson (1963 p.306) states "Adolescence is the age of final establishment of a

dominant positive ego identity". The conflict of identity versus role confusion begins in adolescence and finds solution in adolescence. Erikson (1963) makes it clear that role confusion may be part of an individual's life even when adolescence is over. As an adult, the individual should have a greater ratio of ego strength to role confusion. Erikson's stages are said to pervade the individual, at the conscious as well as the unconscious level (Denyes, 1980).

Monserat (1980) uses 12 tasks and characteristics in a school based program for pregnant adolescents. All twelve tasks are interrelated and pertain to both males and females. The twelve tasks that are defined are as follows:

1. Developing a self identity
2. Seeking peer acceptance
3. Concern with body image
4. Seeking relationships with the opposite sex
5. Striving for independence
6. Experiencing mood changes and unpredictable reactions
7. Experimenting with adult behaviors
8. Primarily present oriented
9. Seeking successful experiences
10. Formulating sex role identity

11. Concern with choices of career lifestyles
12. Developing a value system.

The 12 tasks which Monserrat describes in her book Working With Childbearing Adolescents are all interrelated. The first and primary task Monserrat describes is developing a self identity. This is the task in which all of the other tasks are related. The development of self identity is essential for the adolescent to attain during the stage of adolescence. The adolescent often becomes self-absorbed during this stage of development (Monserrat,1980). The pregnant adolescent may have difficulty accomplishing this work because of the stress that is related to the pregnancy. The adolescent will be struggling with the idea of who she is as well as the idea of what she will be like as an adolescent who is pregnant and will be a parent. If the professional who works with adolescents has an adequate knowledge base of the pregnant adolescent, with respect to the struggle of who she is, the professional may have better success in communicating the importance of attendance at prenatal appointments. The professional working with the pregnant adolescent must recognize the need to encourage the adolescent toward the development of her self-identity or ego

strength. If the pregnant adolescent has a well developed ego strength she may be more likely to attend a minimum number of prenatal clinic appointments.

Mercer (1979) defines six tasks of adolescence. She states that the developmental stage of adolescence varies from culture to culture and changes for each individual adolescent because each has different goals for her life. The six tasks that Mercer (1979) defines are as follows:

1. Acceptance and achievement of comfort with body image
2. Determination and internalization of sexual identity and role
3. Development of a personal value system
4. Preparation for productive citizenship
5. Achievement of independence from parents
6. Development of an adult identity.

Mercer (1979) also states that the the development of of an adult identity is an interdependent aspect of all of the tasks of adolescence. Self identity evolves from earlier experiences and identifications in ones life. Identity is integrated with the adolescents biological drives, social roles and vocational roles

and her native endowment.

Holland (1987) states that there are six developmental tasks of adolescence. They are based on Erikson's development of self identity as well as Mercer's six developmental tasks. Holland's developmental tasks are as follows:

1. becoming comfortable with one's own body
2. striving for independence
3. building relationships with the same and opposite sex
4. seeking economic and social stability
5. developing a value system
6. learning to verbalize conceptually.

Holland (1987) also relates Piaget's development of abstract conceptualization or the ability to consider, appreciate another's thoughts perspective. Adolescence allows the individual the opportunity to modify or rectify childhood needs (Holland, 1987). The time adolescence allows individuals to move toward the development of an ego or self identity or ego strength is based upon how the individual has move through the other stages of development in Erikson's theory. Erikson traces the beginnings of self identity back to infancy (Denyes, 1980). Erikson (1968) states the individual develops basic

trust, essential trust and ones own trustworthiness from the early interactions between mother and child. As the individual grows and moves through stages, each stage builds upon what is developed in the earlier stage.

Holland (1987) believes that a female adolescent that becomes pregnant must abandon behaviors that help her accomplish her adolescent developmental tasks. The adolescent then must take on behaviors that are considered positive by adult authority figures (Holland,1987). It becomes difficult for the adolescent to become independent when adult authority figures and the adolescents changing body have directed her toward certain behaviors.

Mercer (1979), Monserrat (1980), and Holland (1987) have identified several tasks and the authors believe that self identity is the end product of adolescence. The authors identify that the development of a self identity or ego strength is interdependent with all the other tasks of adolescence.

Mercer (1979), Monserrat (1980) and Holland (1987) choose six or twelve tasks. Each stated that the development of self identity was the most critical of the adolescent's development. Each of

the tasks chosen are all related to and based upon the development of self identity or ego strength. There are many influences or stressors that affect how the adolescent progresses with her development. Some of the stressors that the researchers identified were pregnancy as well as family constellation.

The resolution of the conflict of identity vs role confusion is the most important developmental need that an adolescent has. The tasks that are identified by Mercer (1979), Monserrat (1980) and Holland (1987) are all dependent upon the resolution of this conflict. The adolescent experiences, related or unrelated to pregnancy are incorporated as the adolescent develops her ego strength.

Ulvedal and Feeg (1983) collected information to identify and describe the common characteristics of the pregnant adolescent who chooses childbirth. This study analyzed data collected over a two year period of time by interviewing adolescents in an alternative educational program. The adolescents who were involved in the alternative school program were pregnant and chose to remain in high school. The thirty-two adolescents that participated in the study were from mixed ethnic and socioeconomic backgrounds. All participants in the study chose the alternate

educational track as well as chose to participate in the study. The information that was collected was coded into five areas and four variables were found. They were family configuration and relationships, substance abuse, special problems and pregnancy outcome. The findings of the Ulvedal and Feeg study were that pregnant adolescents have many other health related complaints other than pregnancy. The researchers also stated that there were common characteristics within the group of adolescents. The common characteristics were the absence of a biological father, the pattern of heavy alcohol use in the family and the family pattern of pregnancy in adolescence. The findings in this study support other findings in literature that pregnant adolescents have numerous problems other than the pregnancy that may interfere with their development of self identity. If there are stressors that interfere with the development of ego strength there may also be stressors that interfere with the capability to make decisions related to health.

Blum and Resnick (1982) interviewed 206 sexually active adolescents ages 15-18 years, approximately one third of the participants were black. The purpose of this study was to distinguish what

developmental factors differ between those who are successful contraceptors, those who become pregnant and chose to abort and those who were pregnant and chose to give birth. The findings of the study were based on 6 developmental factors. The six developmental factors were ego development, locus of control, future time perspective, moral development, sex role socialization and irrational beliefs.

Blum and Resnick found that adolescents who chose to terminate a pregnancy had the most developed time perspective as well as the lowest demand for external approval and lowest dependency needs. The developed time perspective implies that these adolescents were attaining their ego identity. There is also the implication that the individuals that chose to terminate can also make health decisions for themselves. The adolescents also may have the ability to understand how the consequences of continuing a pregnancy may effect their life.

The adolescents who chose to terminate their pregnancies in the Blum and Resnick (1982) study were probably more independent and felt as if they had some control over what lifestyle would be than the adolescents who did not terminate their pregnancies. The adolescents who terminated their pregnancies had

some understanding of self and knew that they did not want to be a parent at this time in their life. The adolescents who chose to continue a pregnancy were found to have the least developed conceptualization of the future. These adolescents had an external locus of control and had more traditional notions of female roles. These pregnant adolescents saw their role as a female as traditional which implies a mother who cares for her infant. There was an inclination toward passivity, that whatever happens happens implying that they have little control over having successful experiences or what they might do with their life. This could imply that the adolescents who chose to continue their pregnancy have more difficulty making health decisions than did the adolescents who chose to terminate their pregnancy.

Blum and Resnick (1982) used a nonexperimental, descriptive correlational design. The sample was probably nonrandom but the authors did not specifically state that information in the article. There are no controls or analysis of the results presented. It also should be noted that the issue of terminating a pregnancy has moral as well as religious implications.

Blum and Resnick (1982) conclude that psychological as well as physical development consideration are crucial when working with adolescents around sexual decisions. "To assume that a 13 year old with the physical appearance of someone five years her senior has the advanced cognitive skills is to run the risk of failing to reach the patient, it is akin to misdiagnosis", (Blum and Resnick, 1982).

Blum and Resnick (1982) infer that it is important to keep developmental stage, characteristics, and the needs of the adolescent in the forefront when working with the adolescent. It appears to be especially important when working with pregnant adolescents to identify and adjust care to the developmental and physical needs. When an adolescent does not have a developed ego strength or adult self identity, the adolescent may have difficulty making health decisions that are appropriate for her gravid state.

Blum and Resnick (1982) and Ulvedal and Feeg (1983) refer to the need to keep the adolescent's developmental level at the forefront when working with them. The adolescents may have a multitude of problems that hinder the development of their self

identity.

In a study done by Rosen (1980), Rosen examined to what extent an adolescent involves their parents in decision-making with regards to unwanted pregnancies. It was found that adolescents don't initially involve their parents when they first find out that they are pregnant, but more than half of the adolescents involve their mothers in the pregnancy resolution decision. Rosen (1980) indirectly refers to self identity as well as striving for independence from parents. Striving for independence for parents is a adolescent task that involves how the adolescent views herself or her self identity. When the adolescent involves her mother in the pregnancy resolution decision, this may mean that the adolescent is unsure of herself to make a health decision that will affect her for a lifetime.

The Rosen (1980) study used a survey and a questionnaire to obtain information from 432 females, white and black, who were less than 18 years of age and unmarried when they conceived. The questionnaire had items that dealt with the environment of mother, father, parents combined, peers, girl friends and the male partner in pregnancy and the pregnancy resolution. It was found that adolescents, black and

white, usually didn't involve their parents when they believed that they were pregnant. Once the adolescent had a diagnosis of interuterine pregnancy, more than one half of the adolescents involved their mothers in how the adolescent would resolve the pregnancy. Blacks that chose abortion as their pregnancy resolution generally turned to their mothers for support, not to their friends. This infers that one half of the black adolescents surveyed still used family support for decision making which may infer that the adolescent has not yet fully developed her ego strength or adult sense of identity. Without that ego strength than it becomes difficult to have a fully developed capability to make health decisions.

The results of the study by Rosen (1980), infer that adolescents still may need the support of their parents when it comes to major decisions about how to resolve pregnancy. The adolescents in the Rosen (1980) study had the option to keep their pregnancy a secret. When abortion was the decision, the laws allowed the adolescent to keep her decision a secret, and moving the adolescent forward in her development of her ego strength or adult self identity and thus the capability to make adequate health decisions.

The black adolescents turned to their mother for support, when they felt they needed help with decision-making. This may indicate that the adolescent isn't yet sure enough of who she is to confidently make the decision of pregnancy resolution without parental support.

The question the Rosen (1980) study poses is, do black adolescents need the support of parents to perceive that prenatal appointments are important to attend? If this is the question then it may be important to involve the adolescent's mother or father or other support person in a program to help the adolescent identify the importance of attending prenatal appointments. The study also poses the question, do single black primigravid adolescents have the added stress and thus have difficulty moving forward in their development of their adult self identity? If the answer to this question is true then it is important to investigate the additional stress that the adolescent has and help the adolescent move toward resolution of this stress so that she can move forward with her development of her self identity.

The available literature on ego strength development in adolescence generally refers to

adolescents as a whole group. The literature does not differentiate between cultural and ethnic groups. When the available literature has the cultural and ethnic groups broken down, the literature generally does not address the concept of self identity. In the literature, portions of the concept such as decision-making is addressed. It is necessary to attempt to assess the adolescent with relationship to her developmental level, since this is her most important stage, the resolution of ego identity versus role confusion. With the developmental level of the adolescent, the caregiver can implement the needed interventions with the adolescent so that she can strive towards resolution of the conflict stage of adolescence.

Self-care Agency

Orem (1985) in her book Nursing Concepts of Practice defines concepts of self-care, therapeutic self-care demand, self-care agency, and self care deficit. These are the concepts that are necessary to define persons who are in need of nursing.

The central theory of self-care and care of dependent family are learned behaviors that regulate human structural integrity, functioning and human development. Individuals need constant self-maintenance and self-regulation through self-care. Self-care is the care that is performed by oneself when one has reached the state of maturity that is enabling for consistent, controlled, effective and purposeful actions.

Nursing defines legitimacy in terms of capabilities for providing the kind and amount of nursing required by persons under their care. Due to developmental factors, however, adolescents may have barriers to implementing their own self-care. There are some adolescents who will be able to complete their own self-care as well as those that will be unable to implement their own self-care. There will be adolescents that will be able to do only portions of their self-care. Those that are unable to complete or do only portions of their own self care are considered an at risk population.

Gast (1989) traces the interactive process in which theoretic analysis of Orem's concepts from which the operationalizations of the concepts has occurred. Findings from studies serve to confirm and

further inform theoretic constructions. With the operationalization of Orem's concepts, the concept of self-care agency has been further developed. Gast (1989) states that there must be a high degree of correspondence between the theoretical meanings and operational indicators of self-care agency for the development of Orem's theory of nursing to move forward.

Gast (1989) states that there is a complex structure consisting of three types of abilities which are arranged in a hierarchy. At the base of the triangle is the foundational capabilities and disposition. These are the traits that consist of basic abilities such as sensation, perception, memory and orientation. Next on the triangle are the power components or the enabling capabilities for self-care. These include ten components. The ten components are as follows:

1. to maintain attention and requisite vigilance
2. to controlled use of the available physical energy
3. to control of the position of the body
4. to reasoning within a self-care frame of reference

5. to motivate or goal orientation toward self-care
6. to make decisions about self-care
7. to acquire, retain, and operational technical knowledge about self-care
8. to have a repertoire of skills for self-care
9. to order discrete self-care operations with other aspects of living
10. to integrate self-care operations with other aspects of living.

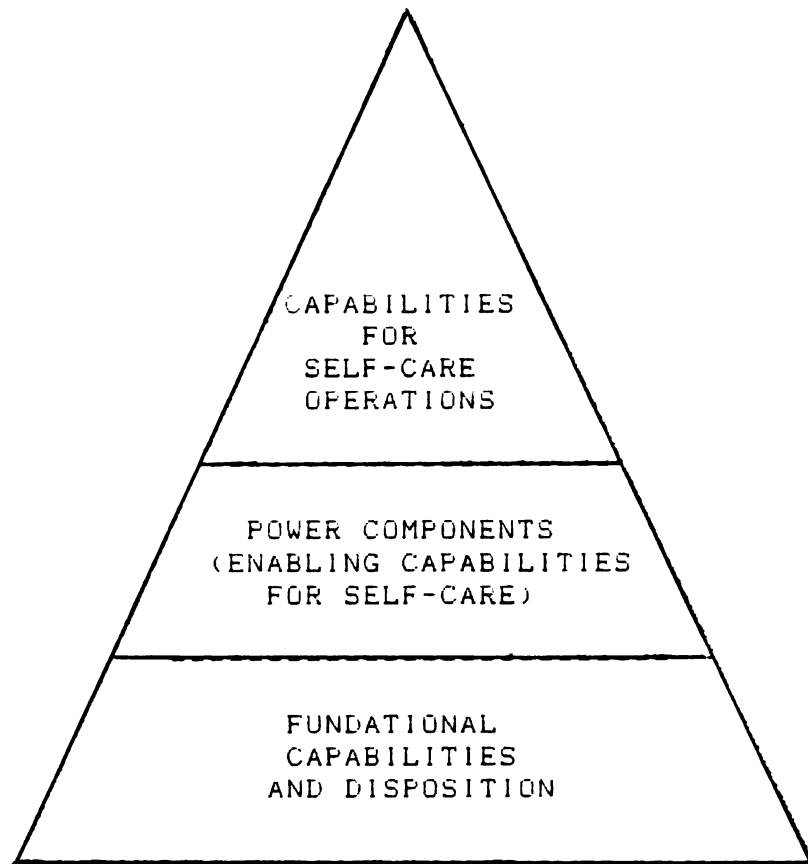
The top tier on the triangle is capabilities for self-care operations. There are the operations that are necessary to perform self-care:

1. estimative operations-investigating conditions and factors in self and environment that are significant for one's self-care
2. transitional operations-making judgements and decisions about what one can, should and will do to meet one's self-care requisites
3. productive operations- performing measures to meet one's self-care requisites. (See figure 4)

Denyes (1980,1982) developed instruments, one measured self-care agency and the other measured self-care practices. Both of Denyes' (1980,1982) instruments are closely aligned to the ten power

Figure 4

THE SUBSTANTIVE STRUCTURE OF SELF-CARE AGENCY



From Gast (1989)

components. Kearney and Fleischer (1979) were the first to operational self-care. Hanson and Bickel (1985) and Evers (1986) developed an instrument to measure the ten power components. Finally, Neves (1980) developed two instruments self-care abilities (agency) and self-care actions. Gast (1989) critiques each of the studies and makes observations and implications.

Gast (1989) states that much activity in the past decade has been done in the area of self-care agency. Gast (1989) suggests that Orem's three part conceptualization of self-care agency is vast and that the concept has not been completely operationalized with any one study and that it probably could not be operationalized in one study. Gast (1989) states there are four instruments that were factor analyzed to be aligned with the ten power components.

Gast (1989) states that it is necessary to continue to investigate self-care via theory development and instrument development. This will be needed to continue to test Orem's model of self-care.

Gast's (1989) work defines the Denyes (1980) Self-care Agency Instrument as one that is most likely to define the foundational dispositions. The

foundational dispositions are the traits and basic abilities that relate to sensation, memory and orientation. In this study the ego strength or self identity and health decision-making capability will be measured to see if there is a relationship between ego strength and health decision-making capability and attendance at prenatal clinic.

Denyes (1988) uses research data to further develop and clarify the concept of health and how the concept of health and health promotion can be placed within Orem's model. Denyes (1988) reviewed data that was gathered in 5 previous studies. The aggregate sample of 369 adolescents was diverse. The adolescents had differing socioeconomic, cultural and illness/wellness status. Their ages ranged from twelve to twenty years. The mean age was 16.4. The adolescents were recruited at various sites and the instruments were given at the sites in the presence of the investigators except one. In the one site, the instrument was given to the adolescents in the classroom and collected in the classroom but the adolescents completed the instrument outside class and were unsupervised. Each of the studies measured the general health status, self-care agency, and self-care by means of using the Denyes Health Status

Instrument (DHSI), Denyes Self-care Agency Instrument (DSCAI) and the Denyes Self-care Practice Instrument (DSCPI). The absence of presence of health problems correlated positively with self-care agency. This indicated that adolescents with no health problems had higher levels of self-care agency than did those with health problems Denyes (1988).

Denyes analyzed the data that was gathered in the studies. She then operationalized the data into Orem's theory. The areas that Denyes stated that she operationalized are as follows:

1. Health
2. Self-care agency
3. Self-care
4. Basic conditioning factors

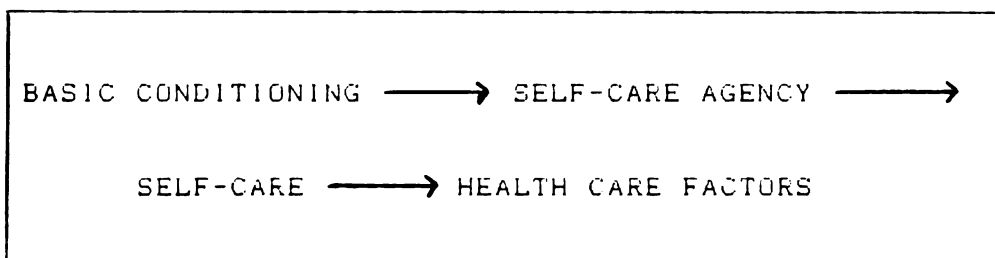
Denyes (1988) states that a diagram can describe the relationships of the above four areas. The model is as in Figure 5.

Basic conditioning factors influence both self-care agency and self-care. Self-care agency is necessary for self-care. Self-care is needed for maintaining life, health and well-being (health factors).

The major limitation in this study is that there is a potential incongruence between the theoretical

Figure 5

FOUR FACTORS OPERATIONALIZED INTO OREM'S THEORY OF
SELF-CARE



From Denyes (1988)

and the operational definitions of the health outcome variable. Denyes (1988) states that there was generally items that were close to Orem's theoretical definition of health as well as items that were consistent with Orem's definition that address normalacy of functioning. Denyes (1988) also states that are items that are designed to measure achievement of the universal self-care requisites. These items may be measuring the health outcome and not the requisite. Denyes (1988) was concerned that the constructs of self-care and health may not have been operationalized independently, that there may be some overlap. This is applicable to this researchers study because self-care has been operationalized by using Orem's theoretical framework.

Denyes (1980) used a large number of adolescents when operationalizing the data into Orem's theory of self-care. Denyes (1988) has provided insight into Orem's theory of self-care and health promotion.

Denyes (1980,1982,1988,1989) as well as others have operationalized Orem's theory of self-care as well as self-care agency. Self-care agency is power, the ability one has to engage in self-care. Each individual has a number of factors such as age, gender and development that influence self-care

agency. Self-care agency influences the level the individual can participate in self-care. Self-care is necessary for the individual's health and well-being.

There is little literature about self-care and adolescents. Denyes' (1980) original work was done with healthy adolescents. There is little available literature that specifically pertains to adolescents and self-care agency.

Howard (1985) questioned sixty-six adolescent first time mothers aged fourteen to eighteen years of age that could read and write. The mothers were asked to identify what information they needed to know to care for themselves and their infants during the first six weeks of the infants life. The data was gathered by a questionnaire. The responses were classified into four categories:

1. Infant medical needs
2. Mother-infant psychsocial needs
3. Maternal physical needs and
4. Daily physical infant care.

The questions were in Likert-scale formation ranging from "very important" to "not very important". There was also space for the adolescent mother to answer open-ended questions. The opened

ended questions were seeking more information about the mother and her infant. The questionnaire was pretested to establish reliability and to identify problems with content terminology and /or test design.

Howard (1985) stated that the responses to the questions in the four categories demonstrated that infant medical needs were most important to the mothers. Mothers' own physical needs were important also but focused most just after delivery.

The limitations of the study are that no results were given for reliability or validity. The subjects were all enrolled in adolescent parent programs which could bias the educational content these adolescents have been presented. These adolescents may have more knowledge related to post partum maternal and infant needs than adolescents who are not enrolled in parent programs. The amount of time since the adolescent was six weeks post partum was not controlled. There were some adolescent that were as much as seven months post partum. There was no separation of culture or socioeconomic factors in the group of adolescents.

Howard (1985) implies that adolescent mothers have the desire to have information in regards to

their infants and themselves. Information is a necessary tool to increase an individuals awareness of what is needed for self-care and performance of self-care agency.

Muhlenkamp (1983) described that the purpose of her study was to identify relationships among perceived social support, self-esteem and positive health practices among adults living in a southwestern metropolitan area. The sample consisted of 98 adults, ages 18 to 67, from an apartment complex, in a metropolitan area. The sample was 86% white and 69% had an income from 10,000-14,999 dollars. Muhlenkamp used three self-report questionnaires. The questionnaire were Personal Resource Questionnaire, Coopersmith Self-esteem Inventory and Personal Life Style Activities Questionnaire.

The hypothesis in the study was that persons who have high self-esteem, perceived that their social support to be adequate. Individuals who have high self-esteem participated in more positive health practices than individuals with lower levels of self-esteem and social support. The implications of the study done by Mulenkamp are just that of the hypothesis, higher self-esteem yields more

participation in healthy behaviors. The cost of health care can be decreased by individuals maintaining positive health care practices.

The limitations of the study are the sample is nonrandom in nature so only generalizations can be made. There was a broad age range as well as males and females were not separated when the data was analyzed.

Mulenkamp (1983) specifically refers to adults and not adolescents but the inference may be that adolescents are somewhat similar to adults. Adolescents that are not at risk have a well developed ego strength as do most adults. From this study it can be inferred that it is important to work toward the development and maintenance of self-esteem and social support. Adolescents that have ego strength and health decision-making capabilities will make the decision to attend at least the minimum number of prenatal clinic visits. If the adolescent attends a least the minimum number of visits she is beginning to participate in healthy behaviors related to her pregnancy. These behaviors could produce both healthier maternal and infant outcomes than the at risk pregnant adolescent that does not attend an adequate number of prenatal visits.

The information available in the literature is adequate on self-care. It appeared that the majority of the literature on self-care has been published since 1988. The information is based on Orem's model of self-care. Gast (1989) traced the interactive process between theory and research as it has been used to operationalize Orem's theoretical work. There have been instruments developed using Orem's theory of self-care. Denyes (1988) used data from information gathered in four other studies that used the same tools and analyzed the data on over 350 adolescents with regard to health, self-care agency, self-care and basic conditioning factors. With this data Denyes (1988) developed a diagram that depicts the relationships between basic conditioning, self-care agency, self-care and health factors.

The central theory of self-care and care for the dependent family are behaviors that are learned, The behaviors regulate human structural integrity, human development and functioning. Orem (1985) describes self-care as the care that is performed by oneself when one has reached the state of maturity that is enabling for consistent, purposeful and controlled actions. The pregnant adolescent should have the capabilities to engage in these activities. Her

developmental stage is evolving and therefore she may engage in activities that allow her to be an agent of her own self-care. If the adolescent is not an agent of her own self-care then she is considered at risk. The activities may not be as consistent or purposeful or controlled as the adult but since the adolescents stage is evolving she should have some capabilities to be the agent of her own self-care. If she is the agent of her care then she can attend the minimal numbers of prenatal visits to make her care adequate and thus decrease her maternal and infant risks.

There needs to be more investigation related to the adolescent and her ability to engage in self-care activities. There is very little research that is published that relates to adolescents and their ability to be agents of their own self-care. There was no research found that related Orem's theory of self-care to pregnant adolescents ability to be agents of their own self-care.

Prenatal Care and Attendance

A number of studies support the assertion that there is a relationship between attendance at

prenatal care clinic and pregnancy outcome. In this section of Chapter III on prenatal care and attendance, articles by Leppert (1988), Piechnik and Corbett (1985), Moore (1986) and others will be reviewed.

Leppert (1988) compared birth outcomes, gestational age, birth-weight, and type of delivery among adolescent and older mothers. Data was collected from nine hundred and eleven women who attended a comprehensive prenatal care program in a urban area. The prenatal care was given by four certified nurse-midwives (CNM). Physicians were used for consultations. The women involved in this program were from communities that were extremely poor, multiethnic, and contained large numbers of young adults. The individuals sampled sought care at the hospital and asked to be part of the comprehensive care prenatal program. While this could bias the outcome of the study, it does compare pregnant adolescents and adults that received comprehensive prenatal care in the same program. There were 529 adolescents aged 13 to 19 years and 382 20 years and over. The racial background was 52% Hispanic, 40% black and the remainder were white or another minority. The socioeconomic status was

similar among the two groups. The major difference between the adult and adolescents was parity. The women entered prenatal care at different points in the pregnancy. The adolescents were more likely to deliver infants less than 38 weeks gestation and less than 2500 grams than women 20 years and older. The number of prenatal visits was a stronger predictor of gestational age and birth-weight than was maternal age. The author concludes that adolescent mothers were at greater risk for adverse outcomes than older mothers. The findings of the Leppert study are significant. Prenatal care is even more important in relations to birth outcomes than is maternal age. The need for early and continuous prenatal care should be stressed for all pregnant women.

The findings of the Leppert (1988) are significant for clinical practice. The findings strengthen the position that prenatal care and attendance is extremely important. Prenatal care is more important than the age of the individual as prenatal care relates to pregnancy outcomes.

Piechnik and Corbett (1985) did a retrospective study that involved a comparison of birth-weight of infants born to adolescents who were cared for by a multidisciplinary team and the birth-weight of

infants born to adolescents who received prenatal care by other providers. Piechnik and Corbett (1985) found a lower rate of low birth-weight infants born to adolescents who were cared for by a multidisciplinary team approach. The team addressed social, psychologic and nutritional needs as well as other health problems the adolescents had with their pregnancies. These adolescents were matched to others that were not cared for in the multidisciplinary team approach. The adolescents were matched for age, race socioeconomic status and perinatal risk.

The pregnant adolescents that were cared for in the multidisciplinary team had a 9.1% rate of low birth-weight infants. The control group had a significantly higher rate of 12.7% rate of low birth-weight infants.

All adolescents involved in the study were less than 18 years of age, considered to have a low risk pregnancy and were receiving state assistance for prenatal care. The participants were 86% nonwhite and single. Of the adolescents tested 77% were attending school or had graduated from school at time of delivery. Approximately 48.9% of the participants in the team approach group entered care before their

21 week and 7.9% initiated care between the twenty first and twenty eighth week of gestation. There was approximately the same number of adolescents that entered care before the third trimester in the control group. The groups were divided in 15 through 17 years of age and under 15 years of age.

In nurse-midwife managed group the vast majority of adolescents had vaginal deliveries. The C-section rate was lower than nationally reported as well as the low birth-weight infants born to the adolescents in the study group was lower than the national average.

In this study there was about the same number as the national average that entered care in the third trimester. The number of adolescents that entered care before the third trimester was about the same as the national average also.

The Piechnik and Corbett study is extremely significant for clinical practice. These investigators reinforce the idea that the quality of prenatal care may have more of a role in prevention of complications such as low birth weight than the quantity or duration of prenatal care.

One of the weaknesses of this study however was that it was found that much of the data on return

visits was missing in the charts reviewed. There was complete information on 314 adolescents. It was found that of this group 8.3% did not keep their appointment.

The information that was gathered from this study supports the idea that nurse managed care that is multidisciplinary in its approach for pregnant adolescents, may decrease risks for adolescents. This type of care will tap the resources of many individuals and may than decrease the poor outcomes for the infants born to adolescents mothers. This study infers that the quality of prenatal care that the adolescent receives may have a greater impact on the pregnancy outcome than does the number of visits that the adolescent attends.

In reviewing the literature, it is important to realize that the number of prenatal visits made may be not as important as the setting in which the adolescent receives her care. Unfortunately, there is sparse literature that examines or studies this important topic. It is necessary to document the approach of prenatal care, multidisciplinary or physician, and compare if the approach is more significant than simply the number of visits the adolescent makes to prenatal clinic. Some literature

was found that addresses the topic of prenatal care delivered in nurse run clinics. It appears that this type of setting positively impacts the adolescents and the infants outcomes (Piechnick and Corbett, 1985). Some of the literature is research and some describes how programs are set up and others prenatal program. It is necessary to continue to document this type of research. This will support the conclusion that the multidisciplinary approach to prenatal care is important for the adolescent to continue to develop her ego strength and her health decision-making capabilities. If the adolescent has the ability to continue to develop, then she is more likely to attend an adequate number of visits and will improve the chances of a positive pregnancy outcome. The more she attends clinic the more likely that she will develop healthy behaviors.

The overview of literature implies that with prenatal care, the adolescent and the infants of adolescents have better outcomes. Moore (1987) examined the impact of long delays for appointments for family planning services and appointment failures and pregnancy prevention. Results indicated that established clients generally kept appointments. There were 238 adolescents given an appointment in a

six month period, some were new clients and others were established clients. There was a 33% failure to attend their scheduled appointment rate among the clients. Of the 132 established clients 90% came for their appointments and 67% of the new clients failed to attend. Of the new clients that failed to attend their clinic appointments 17.3% attended appointments in the maternity care program.

The Moore (1987) study specifically refers to adolescents who are obtaining care for contraception. It may be hypothesized that once an adolescent enters care that she is more likely to attend prenatal clinic. If it is possible to encourage adolescents to enter care earlier then it may be possible to get them to continue care regularly.

Moore (1987) defines attendance as a number of prenatal visits that the adolescent attends. Without adequate attendance at prenatal visits during her pregnancy, an adolescent will increase an already at risk pregnancy.

Moore (1987) states clients who received no care and inadequate care were matched with clients who received care in a Comprehensive Perinatal Program. This study was conducted in California near the United States/ Mexican boarder. The study had a

large number of Hispanic women, although the percent of Hispanic women wasn't stated. The Comprehensive Perinatal Program's prenatal care was given by a nurse midwife. The Comprehensive Perinatal Program provided a program of perinatal care and educational services that included obstetric care, nutritional assessment and support, social service, and home outreach services. The data collection was done by reviewing medical records of 100 Comprehensive Perinatal Programs patients and infant records and 100 "no care" client and infant records. The "no care" group had more risks with more maternal and infant complications than did the group that received prenatal care. These complications lead to a greater economic cost for the client, the insurance company and/or the government. The clients that were involved in the Comprehensive Perinatal Program generated fewer hospital costs for mother and infant than did the "no care" group. The findings of the study were that clients who received comprehensive care had a reduction of prenatal morbidity and health care costs as compared to the "no care" group.

Singh (1985) states that prenatal care plays an important role in pregnancy outcome especially among low income, minority and adolescent women. Singh

reviewed vital statistics for 1980 and the National Natality Survey, 1980 and the 1982 National Survey for Family Growth. Singh (1985) states that disadvantaged adolescents with respect to prenatal care, appear to be the largest in certain groups of adolescents. The disadvantaged adolescent groups are adolescents who are black and have less than a twelfth grade education and live in an urban area. This information from Singh implies that the most at risk pregnant individuals are poor and black. The inference is that pregnant adolescent black, low socioeconomic women are more likely to receive inadequate or no prenatal care than individual who are socioeconomically advantaged and white.

Isberner and Wright (1987) conducted a study to determine if a relationship existed between adolescents who participated in a comprehensive adolescent prenatal care program called AHC and positive pregnancy outcomes as compared to pregnant adolescents outcomes who were matched with adolescents that did not participate in the AHC program. The adolescents were from a rural midwestern county. The adolescents were primigravida, ages 13-20 years. The medical records were obtained for 316 adolescents, 60 had

participated in the AHC. The control group was chosen from the remaining 256 records. Maternal complications were less in the participants of the AHC than in those who didn't participate in AHC. There were no significant differences among the outcomes of the infants.

The findings of the Isberner and Wright (1987) study appear to indicate that maternal complications could be reduced with comprehensive adolescents prenatal care. The infants of those that participated in the adolescent comprehensive prenatal care had lower rates of low birth rates and prematurity rates but the rates were not statistically significant. This indicates a need for further studies that involve rural adolescents. This study does not state what the race and socioeconomic status of the adolescents is but the adolescents in the study were matched with a control group.

Comprehensive prenatal care may decrease maternal and infant morbidity and mortality. Primigravid adolescents need an environment that meets their developmental needs as well as their prenatal needs. The single primigravid adolescent must attend minimal number of prenatal care visits, 80% of visits to decrease the risks of poor maternal

outcomes.

Summary

In conclusion much of the literature pertains to adolescents as a entire group. There is literature that pertains to pregnant adolescents and their need to attend prenatal care to have better outcomes for the adolescent and her infant. Self-care is a subject that has been studied for the last ten years. The literature that is published generally pertains to adults and little exists that pertains to adolescents. There was no published literature that pertained to pregnant adolescents and their ability to be an agent of their self care.

A description of the study sample in relation to the sociodemographic data, development of the questionnaire as well as tentative plans for the testing of the questionnaire will be presented in Chapter Four.

CHAPTER IV

METHODOLOGY

Overview

In this chapter, the methodology for identifying ego strength and health decision-making capability component of self-care agency in a select group of pregnant adolescents will be discussed. The assessment tool to be used will be discussed. Also included is a discussion on assessment of adolescent self-care agency and how this influences attendance at a prenatal clinic. Development of the instrument as well as a proposed methodology for its implementation will be presented.

Sample

The sample selected for this study will include first time pregnant, single, females between the ages of 14-18, 24 to 28 weeks pregnant, who are low income and receiving public assistance. Younger adolescents ages 12-14 are different in their psychological and physical maturity levels and therefore will not be included in this study.

Other factors that could affect the results of

the study include the adolescent's state of health and so for this reason chronically ill adolescents will be excluded. Cognitive abilities may also affect the outcomes of this study so any adolescent with documented mental retardation will be excluded.

The sample would be chosen by convenience sampling in the Mercy-Memorial Outpatient prenatal clinic. A sample as large as possible is suggested to assist in establishing reliability and validity of the instrument in the pregnant adolescent population. Time restraints for the researcher, money, and the actual number of pregnant adolescents who meet the eligibility inclusion criteria will also influence the actual number of participants. In addition, the number of pregnant adolescents who are willing to participate in the study will also influence the final sample size. In general, the larger the sample, the more likely it is that it will represent the population in question. For the purposes of this study, at least 50 pregnant adolescent females will be sampled to assess self-care agency and to determine how this influences attendance at a prenatal clinic.

Study Site

The optimal site to to assess self-care agency and how this influences prenatal attendance in pregnant adolescents would be at a urban public agency, due to a variety of factors. One factor is the fact that a larger sample size would be obtainable. Another factor would be the ability to sample adolescents from each particular age group to assess small changes in self-care agency with age and how this influences attendance at prenatal clinics.

The study site used for this project could be the Mercy-Memorial Outpatient prenatal clinic in Benton Harbor, Michigan. The prenatal clinic is run in partnership with Berrien County Public Health Department and Mercy-Memorial Medical Center. The Mercy-Memorial Outpatient prenatal clinic is offered to all individuals who qualified for public assistance, including a medicaid card. This prenatal clinic is not specifically geared for the adolescent, or to the adolescent's prenatal needs. A multidisciplinary approach is used in the nurse run clinic.

The client begins her prenatal care with an

intake appointment. It will be the intake appointment that the instrument from this study would be administered. The appointment is with the nurse who will be managing her care throughout the pregnancy. The nurse determines the needs of the client through an interview process. The medical history is elicited from the client. The medical risks are assessed with a Holister risk evaluation form (See Appendix B). The nutritional and social risks are also evaluated through the interview process. The nurse then schedules the next appointment. The next appointment is generally with the managing nurse and the physician. The client will continue to see the same nurse at every clinic visit.

At the present time the developmental needs of the adolescent are not being formally assessed. Self-care agency or any portion of self-care agency is not being evaluated currently at the Mercy-Memorial Outpatient prenatal clinic.

Operational Definitions

I. Sociodemographic variables/characteristics are included in the questionnaire to characterize the

sample obtained. Sociodemographic characteristics include age, race, health status, religion, education level, present living arrangements. (See Appendix A, Part 1, Questions 1-13).

II. Self-care agency was defined as the complex acquired ability to meet one's continuing requirements for care that regulates life process, maintains or promotes the integrity of human structure and functioning and human development and promotes well-being. This is based on Orem's (1985) theory of self-care. Self-care was operationalized for this study as the composite score of nine questions on self-care agency in the ego-strength and health decision-making capability component from Denyes (1980) questionnaire on self-care agency. The questions are scored using a seven point Likert scale with one being "never" and seven being "always" (See Figure 6). The questions are stated in a positive manner, therefore, a higher score indicates a greater self-care agency. A total number of points possible is sixty-three. The range of scores would be from nine to sixty-three. Scores for the nine items would be totaled and a mean score for each individual would be derived (See Table I). A score of thirty-six would indicate that the adolescent is able to meet

Figure 6

LIKERT SCALE 1-7

1	2	3	4	5	6	7
never	very infre- quently	infre- quently	some- times	fre- quently	very fre- quently	al- ways

TABLE I

Likert Scale Values Corresponding to Response Category

Questionnaire	Likert Scale Values						
	1	2	3	4	5	6	7
1. How often do you think about your own health?							
2. How often do you think you are in touch with what is going on with your health?							
3. How often do you feel good about yourself?							
4. How often do you think you are capable of making good decisions about your own health?							
5. How often do you have good feelings about yourself?							
6. How often do you feel good about doing things well?							
7. How often do you make good decisions about your health?							
8. How often do you feel proud about doing things well?							
9. How often do you feel good about your body?							

her own self care agency on a regular basis (See Appendix A, Part 2).

III. Attendance was defined as the number of visits the adolescent actually attends at the prenatal clinic. The total number of visits and timing of the visits will be recorded on a separate attendance sheet throughout the pregnancy. In addition to actual appointments, failure to keep an appointment and re-scheduling of appointments will be recorded for possible further statistical analysis. The ACOG standards will be used as a guide for meeting minimal standards. The total number of regularly scheduled prenatal visits range from a low of one visit to a high of fourteen (See Appendix B). The data on attendance will be gathered retrospectively by chart audit. The data will be gathered by the researcher.

Instruments

Several instruments aimed at assessing various aspects of adolescent development are available in the literature. However, no instrument can be identified that assesses the ego-strength and health decision-making capability component of self-care

agency in pregnant adolescent females. Denyes (1980) developed a thirty-five item questionnaire that assessed six components of self-care agency of adolescents.

Denyes (1980) operationalized self-care agency into six components. The six components are ego strength and health decision-making capability, relative valuing of health, health knowledge and decision experience, physical energy levels, feelings and attention to health. However, the population that Denyes sampled consisted of well adolescents aged twelve to eighteen years of age who were not experiencing any alterations in their health status. Thus the purpose of this study is to assess the relationship between ego strength and health decision-making capacity component and attendance at prenatal clinic.

Denyes (1980) developed a valid, reliable self-report instrument to measure self-care agency in adolescents. Pearson product-moment correlation coefficients were $r=.80$, $n=152$, $p=.005$. In development of the instrument, Denyes (1980 p. 101) states that "a series of criteria relative to instrument quality and ultimate utility guided the process of instrument development". Chief among

these criteria for the instrument were the issues of reliability, validity and ease of administration.

Denyes (1980) stated that one of the objectives for the instrument was that results obtained from its use be reliable. Estimates of reliability based on both internal consistency and stability across alternate forms were obtained.

Reliability refers the ability to obtain consistent results when the instrument is reused. A instrument is considered reliable when it consistently does whatever it is supposed to do in the same way. Reliability is expressed in a number or coefficient. A high coefficient indicates a high reliability. A perfect reliability is reported as 1.0. It is rare that a 1.0 would be reported. That would mean that the instrument is perfect. Usually reliability levels of .80, .70 or .60 are reported. Less than perfect scores of reliability indicate that there are errors in measurement. The errors may be related to conditions under which the instrument was administered or a poorly constructed instrument. The stability of a measurement refers to the extent to which the same results are obtained on repeated administrations of an instrument.

Denyes (1980) used alternate forms reliability

when developing her instrument to measure the six components of self-care agency. Denyes (1980) developed two alternate or parallel forms of the instrument and administered them within a relatively short period of time. One instrument used the Likert scale and the other used a interval level scale. The most difficult factor when using alternate forms is that both forms are measuring the same thing. It is also essential that the forms are administered under similar circumstances. The final instrument that Denyes (1980) developed consisted of 35 items and had an alpha coefficient of .86.

Internal consistency refers to the extent to which all items on a scale measure the same variable. Coefficient alpha is a basic formula that is used for determining internal consistency reliability. It would be used in this study due to the limited number of items that are in the questionnaire.

In addition to the issue of reliability, several components of validity were important in the development. Denyes (1980) stated that in regards to both content and construct validity it was important that the parameters of the phenomenon being measured be clearly specified. One way this was achieved was by developing items that represented the construct of

self-care as well as the several dimensions or components of self-care agency. Once the subset items were developed, the interrelatedness of these items was ascertained using factor analysis. Denyes (1980) sought clusters of items that correlated highly with each other and thus would represent components of self-care agency. In addition, the presence of clusters of highly correlated variables provided support for the external consistency of the instrument and thus contributed to confidence in reliability content and construct reliability.

Usability of an instrument refers to how practical is it to use an instrument. This would relate to ease of administration, scoring and interpretation (Dempsey,1986). Also included in usability are financial, time and energy considerations (Dempsey,1986).

PROPOSED METHODOLOGY

Pretesting the Instrument

The initial step in using the questionnaire would be to pretest it for readability and clarity. This pretesting allows areas of unclear sentences to be identified and appropriate word changes to be

made. The pretesting may also highlight areas where additional questions are needed. In addition, items which are determined to be redundant may be deleted. The pretesting may also identify where additional instructions are needed. Participants in the pretest should be similar in characteristics to participants in the full scale study project.

It would be assumed that the attendance instrument would be an accurate description of actual prenatal visits. Each visit will be recorded on the attendance sheet, including cancelations, "no shows" and rescheduled appointments. The researcher will confer with staff personal if any questions arise. However, due to the current legal climate, this information is already transcribed on the prenatal charts Mercy-Memorial outpatient prenatal clinic. (See Appendix B, Part 3).

Validity

Validity refers to the ability of a data-gathering instrument to measure what it is supposed to measure; to obtain data relevant to what is being measured (Dempsey, 1986 p. 60). The questions that are asked for the estimation of the validity of an

instrument are "Valid for whom?" and "Valid for what?". There are three main types of validity. Logic or judgement determines logical validity. Statistical measures are used to determine statistical validity and psychosocial traits or constructs are used to determine construct validity. Content validity is concerned with the sampling adequacy of the content area being measure (Dempsey,1986). This type of validity is most relevant to individuals designing a test to measure knowledge in a specific area. Content validity is based on judgement. There are no objective methods of assuring the adequate content coverage of a subject on a instrument (Polit,1983).

Content validity may be judged by a panel of experts through analyzing the items on a instrument. Content validity rests upon careful consideration and specification of the behavior or attribute the researcher is interested in (Polit,1983). For the purposes of this study the content validity will be established by a panel of experts in a university setting. By establishing content validity the construct of ego strength and health decision-making capability component will be established.

Human Subject Protection

Prior to any distribution of questionnaires, the Michigan State University Committee on Research Including Human Subjects will be presented a complete description of this project. Guidelines of this committee, as well as professional ethics will be strictly followed during the administering, scoring and debriefing of participants.

Potential participants will be approached in the prenatal clinic and asked to participate in a study. Participants will be told that the study will examine self-care. Participants will be assured of confidentiality, as well as being assured that they have the right to refuse to participate in the study. The decision to participate in the study will not affect the health care the pregnant adolescent receives. In addition, participants will be told that they may withdraw from the study at any time. Depending on the site chosen to carry out the project, parental consent as well as the adolescent's consent will be obtained. Currently at Mercy-Memorial Outpatient prenatal clinic, parental consent for prenatal care is not required. However, in some settings or states, parental consent for prenatal

care or participation in a research project by adolescents may be required.

Data Collection Procedure

Pregnant adolescents who meet the criteria for inclusion into the project will be approached by clinic personnel at the prenatal clinic and asked to participate in the project. Confidentiality and anonymity will be explained to the adolescent prior to a full explanation of the purpose of the project. The adolescent's chart will be assigned a number to help maintain confidentiality. The participants will also be supplied with the researcher's work phone number so that they may contact the researcher in the event that they develop questions or wish to withdraw from the study at a later date.

Participants who agree to participate in the project will receive a questionnaire that contains information of demographics and the ego-strength and health decision-making capacities component of self-care agency. Participants will be taken to a private room to complete the questionnaire. It is estimated that the entire questionnaire can be completed in a ten minute period. Participants will be asked to

place the questionnaire in an envelope and return the sealed envelope to the researcher. Participants will be reminded not to discuss the questionnaire with other prenatal patients. On the participants chart there is a record that is kept that includes weeks gestation at each visit as well as regularly scheduled visits, missed appointments with and without cancelations, and extra appointments (See Appendix B, Parts 3 and 4). This record is currently kept by clerical personal due to the litigious nature of todays society. The researcher will have the names of the participants in the study so the she can retrospectively review the charts for the attendance information. If a participant joins the study at 24-28 weeks she will have a total of 10-12 visits if she does not miss any appointments. The participant could have as few as one visit and could have more than 10-12 visits if there are special problems or concerns. At the end of the study, a letter will be sent to each participant thanking them for their participation.

Data Analysis

The first step in the analysis for this project

would be to analyze the sociodemographic questions using descriptive statistics. Frequency distributions could be examined for all of the variables. Marginal frequencies and percentages could be computed for all nominal and ordinal data. The range, mean, and standard deviation could be used to identify significant correlations between sociodemographic data and the ego strength and health decision-making capability component of self-care agency as well as clinic attendance. The statistics will allow the researcher to establish if a relationship exists between ego strength and health decision-making capabilities component and attendance at prenatal clinic.

Do adolescents with ego strength and health decision-making capability component of self-care agency attend the prenatal clinic on a more regular basis than adolescents who do not have this component? This is classified as correlation. Pearson product moment correlation may be used to identify these correlations. A correlation coefficient may range from -1.0 for a perfect negative correlation through 0 for no relationship to + 1.0 for a positive relationship. In addition, the

stronger the relationship, the higher the absolute value. An acceptable value for this study would be 0.5.

A Pearson Product Moment Correlation may be used to identify significant correlations between demographic variables and clinic attendance.

A discriminant analysis makes predictions about membership in a particular group. The groups are identified by the researcher, and the purpose of the analysis is to distinguish the groups from one another on the basis of the independent variables available for prediction purposes (Polit,1983). In this study, participants would be divided into attenders and nonattenders and then the discriminating variables on which these groups are expected to differ would be examined. This analysis would then enable the researcher to develop a profile of an adolescent who is "at risk" for not attending prenatal clinic. The profile that will be developed will help to identify those adolescents that are at risk for not attending prenatal clinic or those are the nonattenders. If the adolescent that is at risk for nonattendance can be identified before attendance becomes a problem, then appropriate nursing interventions can occur so that the chances of the

adolescent attending prenatal clinic will increase.

Summary

In this chapter the development of an instrument by Denyes' (1980) to measure ego strength and health decision-making capacity component in adolescents was presented. A proposed methodology for implementation was presented, A summary of the project and implementation for nursing practice, research and education are included in Chapter V.

CHAPTER V

SUMMARY AND CONCLUSIONS

Introduction

In Chapter V a brief summary of the project is presented. Limitations of the study, recommendations for further study, as well as implications for nursing practice, education, and research are also discussed.

Summary

Adolescent pregnancy has been a concern of the American public as well as a subject that has been extensively studied. The statistics regarding the incidence of adolescent pregnancy have been brought to the attention of the American public by the mass media.

The purpose of this scholarly project was to further develop the work of Denyes (1980) by measuring the component of ego strength and health decision-making capacity of self-care agency and assessing how this influences attendance at prenatal clinic. This project adds new information to the

data base on self-care agency in pregnant adolescents. Denyes (1980) studied a healthy adolescent population, while the population in this project was comprised of pregnant adolescent females ages 14-18 years. By carrying out the study and gathering data, new information can be added to the data base on adolescents. This information can be used to identify adolescents at risk for pregnancy complications due to lack of ego strength and health decision-making capacity as well as identify adolescents at risk for nonattendance.

Psychosocial development of the adolescent will influence her ability to render self-care. Self-care is the deliberate action directed to self or the environment to regulate ones functioning in the interest of one's life (Orem,1985). Self-care agency is the complex capability for action that is activated in the performance of the actions or operations of self-care (Orem,1985). Health care is provided not by health care professionals but by individuals and families for themselves (Denes, 1985). The adolescent who is pregnant is expected to seek prenatal care for herself as well as attend the clinic regularly. This may be difficult for the

pregnant adolescent to do. When the pregnant adolescent enters care it is essential that information be gathered on her self-care agency. Adequate information will be gathered regarding the adolescents self-care agency and then a plan of care would be developed to encourage the development of her self-care agency and thus increase her attendance.

Denyes (1980) suggested that adolescents may have the capability to engage in self-care. Denyes (1980) study of self-care agency identified six factors or components of self-care agency. The purpose of this study was to use Denyes (1980) questionnaire and use it on a new population of adolescents , and then also to identify whether or not a relationship existed between ego strength and health decision-making and attendance.

Nurses in advanced practice can design interventions that can identify the strengths and limitations of self-care agency or any of its components. These interventions can assist the pregnant adolescent to enhance, exercise and further develop self-care agency. These interventions may result in adequate or increased attendance at

prenatal clinic and this may lead to a decreased maternal and neonatal morbidity and mortality.

Decreased maternal and neonatal morbidity and mortality will decrease the cost of health care for pregnant adolescents and their infants. If the adolescent has a healthy child and a good health care experience this may encourage her to continue with self-care.

A tool was presented based on Denyes (1980) self-care agency assessment questionnaire. Denyes (1980) questionnaire measured six components of self-care agency. The tool that was presented was based on Denyes (1980) as well as the pertinent literature. Data collection will be needed to determine if the tool is useful. This project will increase the nurse's understanding of the pregnant adolescent's physical and psychosocial needs by identifying the adolescents ability to engage in self-care behaviors. The adolescent who is unable to engage in self-care behaviors is at risk for increased complications of pregnancy. This project will enhance Denyes (1980) statement that adolescents have self-care agency.

Limitations for this study as well as the limitations of the questionnaire and implications for

nursing practice, education and research will be presented in the following sections.

Limitations of the Study

In Chapter I the limitations of the study were reviewed. Generalizations of this study may be limited due to the questionnaire, studied sample, as well as the research methodology. In this chapter more of the limitations will be presented.

Limitations of Questionnaire

The following limitations may be noted regarding the questionnaire:

1. The questionnaire is limited to ego strength and health decision-making capabilities of self-care agency. Other factors may influence self-care agency that are not assessed by the questionnaire.
2. The instrument only measures one component of self-care agency. Denyes (1980) identified six components of self-care agency.
3. The questionnaire will be answered while

the adolescent is at the prenatal clinic setting. This may affect the adolescent's responses to the questionnaire.

4. The wording of the questionnaire may be unclear or misunderstood by the pregnant adolescent.
5. The concept of self-care agency is assessed at a single point in time in this study as an indication of future behavior. Future research may include a longitudinal study to assess changes of the adolescent's self-care agency.
6. The length of the tool may affect how the pregnant adolescent responds.
7. The questionnaire was not specific to pregnant adolescents and to attendance at a prenatal site, and therefore may not yield accurate results for the pregnancy experience.
8. The instrument developed in this project has a short number of items and therefore may not be complete enough to capture the complexity of the developmental stage.
9. The instrument measures attitudes and does not measure actual behavior.

Limitations of Sample

The following limitations may be noted regarding the sample:

1. The sample was described as a volunteer convenience sample from a rural area. A randomly selected sample from an urban as well as rural area may differ in self-care agency and attendance.
2. The study sample was described as pregnant adolescent females ages 14-18 and 24-28 weeks pregnant. A consideration for future research includes collecting data on pregnant adolescents ages 11-13 as well as collecting data on adolescents who are at a different number of gestational weeks in the pregnancy.
3. The sample was described as being volunteer. The pregnant adolescents who refuses to participate in the study may have characteristics that differ from those who participate. Recommendations for further research includes collecting data from pregnant adolescents that chose not to participate in order to determine if they differ from those who did participate.

4. The sample was described as being single, first time pregnant adolescents receiving public assistance. There may be a difference in adolescents who are married than those who are not as well as adolescents who do not receive public assistance. Recommendations for future research includes collecting data on married pregnant adolescents as well as those who have been pregnant before and those that do not receive public assistance to determine if there is a difference in self-care agency and attendance between the groups.

Limitations of Methodology

The following limitations may be noted regarding the methodology:

1. Clinic visits, missed appointments cancelations and reschedules may not be recorded accurately.
2. The assessment tool used in this study will be administered to pregnant adolescents and will yield a one time measure.
3. A specific time limit for questionnaire administration was not described in the study.

The questionnaire should be administered uniformly to all participants, and a time limit needs to be established.

4. The present study was to be administered by the researcher and did not include participation by staff nurses. To increase the scope of the study, it may be worthwhile to establish strict guidelines for administration of the questionnaire so that staff nurses could be utilized to administer the questionnaire in a variety of settings due to financial and time constraints.
5. There may be factors other than self-care agency that affect attendance at prenatal clinic such as clinic personnel and their personalities. Future researchers may want to begin to address what the other factors include.

Implications for Nursing Practice

The implications for nursing practice related to self-care agency are vast. The Family Clinical Nurse Specialist (FCNS) working with pregnant adolescents in a primary care setting such as a prenatal care

clinic may have an effect on the outcome of the pregnancy. The goal is to assess the pregnant adolescent's ego strength and health decision-making capability and identify if having this component of self-care agency will effect attendance at prenatal clinic. Researchers have stated that the adolescent who regularly attends her prenatal clinic appointments will more likely have a pregnancy that has fewer risks and an infant that is healthy than adolescents who do not regularly attend prenatal clinic. The FCNS in a primary care setting can identify the adolescent who is at risk early in the prenatal care period and than appropriately intervene to help the adolescent strengthen the ego strength and health decision-making capabilities of self-care agency, thereby increasing the likelihood that the adolescent will attend the prenatal clinic.

The information gathered from the project could be used to establish protocols for pregnant adolescents. The protocol would be used in clinical practice. Once the tool has been given to the adolescent and scored the FCNS could follow the appropriate protocol. If the adolescent scores 36 or above she is considered not at risk for

nonattendance. In addition, it would be assumed that this adolescent would be capable of rendering self-care to herself. Her care would be guided by a protocol that may include:

1. Anticipatory guidance related to growth and development of the fetus.
2. Anticipatory guidance related to the adolescents shape changes and weight gain.
3. Positive reinforcement related to continuing to attend prenatal care clinic on a regular basis.

If the adolescent scores less than 36 the adolescent is considered to be at risk for nonattendance. In addition, it would be assumed that this adolescent would need assistance in rendering self-care. The protocol for this adolescent may include:

1. Provide individualized client education as well as group education with respect to growth and development of the fetus and changes in her body.
2. Contact by phone or by person the adolescent one to two days prior to the next scheduled appointment.
3. Provide transportation for the adolescent to

prenatal clinic.

4. Involve the adolescent's guardian in the adolescent's prenatal care.

The adolescent who is at risk for nonattendance at prenatal care clinic is the adolescent who has an undeveloped sense of self. She would be similar to the adolescent that Orem (1985) describes as needing a dependent-care agent. Dependent-care agent is the provider of infant care, child-care or a dependent adult (Orem,1985). Orem (1985) considers the adolescent to still be a child. The adolescent who is not at risk for nonattendance will be her own self-care agent.

The FCNS in primary care setting can intervene to increase the at risk as well as the not at risk adolescents ego strength and health decision-making capacity. One such strategy would be to have the adolescent identify beliefs and values that she considers important. The FCNS could have the adolescent identify some of her own values, including health related values. The FCNS would then discuss with the adolescent how values influence actions that are undertaken by an individual. The FCNS could then have the adolescent identify a situation where a

value influenced her behavior. This values clarification exercise will help the adolescent identify the process of value clarification. Values clarification may help strengthen ego strength and health-decision making capacity of the adolescent.

In addition, the FCNS could help the adolescent identify how values influence her decision-making. After the FCNS has helped the adolescent identify important values, the FCNS can then help the adolescent identify the steps inherent in the decision-making process. The adolescent can tell the FCNS or a group about a decision she made. Next the adolescent could identify all of the steps she took in the process of that decision as well as the factors that helped or hindered taking action on the decision. After the adolescent feels comfortable with the process of how she makes a decision, the FCNS can then have the adolescent identify a health related decision. The adolescent can become involved in a exercise that exams health related decisions as well as decisions that apply the decisions related to pregnancy. By allowing the adolescent to become cognitively aware of the process by which she make decisions, the FCNS can facilitate strengthening the

ego strength and health decision-making capability of self-care.

The FCNS should also help the pregnant adolescent move from the stage of decision-making to actual actions or behaviors. After the adolescent has made the decision to engage in a particular health behavior, the FCNS can work with the adolescent to put a time frame on when the behavior should take place. The FCNS may use contracts, daily logs, short-term memory joggers to help the adolescent turn decisions into action. Additionally, the adolescent can articulate a reward that will be granted after performing the behavior for a certain time period. This in turn will lead to a greater sense of autonomy, satisfaction with self, and also reinforce the likelihood that the behavior will be repeated. This type of system can be used for both health behaviors, and actions that benefit the adolescent and her fetus.

Adolescents that are identified as being at risk for nonattendance are also assumed to need more supervision in rendering self-care. The at risk for nonattendance adolescents may need more health care supervision and thus a more structured

environment. For the at risk adolescent, it may be necessary to include more frequent visits to the clinic, contracts renewed weekly, use of peer support systems, and involvement of a dependant care agent.

Primary care is accessible to clients. For the FCNS to render accessible prenatal care to the pregnant adolescent, that care may have to be rendered in non-traditional settings. Examples of settings that may be more accessible to adolescents include offering the prenatal clinic at schools, close to bus routes or as a mobile unit similar to breast screening vans. Additionally, the hours of the clinics appointments need to be tailored to fit the adolescents schedule. Offering late afternoon and evening appointments is imperative when working with pregnant adolescents.

Inherent in the concept of primary care is the component of affordable health care. Pregnant adolescents that have marginal financial resources have barriers to entering prenatal care as well as attending prenatal clinic regularly. By utilizing a FCNS to render prenatal care, the overall cost can be reduced in comparison to traditional physician rendered care. In addition, if the FCNS is able to

impact the various factors that influence the adolescents self-care agency, the incidence of complications may be reduced, again reducing the overall cost of the care.

If the pregnant adolescent is identified early in her prenatal care as being at risk, the FCNS can encourage the pregnant adolescent to attend prenatal visits. If the adolescent attends prenatal care clinic then interventions can be done by the FCNS. These interventions will attempt to increase development of the adolescent's self-care agency.

The FCNS is available to the adolescent for any questions or concerns that she may have with her pregnancy. Due to the continuous relationship with the pregnant adolescent, the FCNS can serve as an excellent role model for the adolescent. In addition, due to the frequent contact, the FCNS can positively reinforce any progress that the adolescent makes in achieving self-care. By offering continuity of care, the FCNS may develop a trusting relationship with the pregnant adolescent. The continuity of care offered by the FCNS may impact the pregnant adolescents attendance at the prenatal clinic by providing over time the adolescent with a sense that the FCNS cares

for her as an individual.

The FCNS may also include members of the adolescents family in the treatment plan to achieve agreed upon goals. The adolescent should be encouraged to bring family members to prenatal visits as well as to educational sessions. The FCNS could help family members identify family values as they relate to health behaviors, and have the family identify already existing strengths in health decision-making capacities. The family as a group could set goals for increasing healthy behaviors, such as eating vegetables three times a week or taking a walk after dinner. Not only would lead to a greater state of wellness, but would also potentially lead to greater family harmony. The family could also identify how the family members could serve as a resource for the pregnant adolescent, and again set up a plan to achieve the goal of a healthy outcome for the adolescent and her fetus.

In the role of coordinator, the FCNS would provide the direction of the adolescents care as well being responsible for any referrals necessary to other health care professionals. After identifying the adolescents self-care agency potential by

administering the questionnaire, the FCNS can coordinate the services and resources necessary to strengthen the adolescents ability to render self-care. This may include setting up groups where adolescents can share feelings and begin value clarification. The FCNS may also want to start innovative programs where the adolescent receives a benefit for attendance at the prenatal clinic such as tickets to the local theater. The FCNS in the role of coordinator needs to draw in a cross section of the community leaders to identify the needs of the community and get the necessary backing for creative and effective programs. Additionally, in the role of coordinator, the FCNS can monitor the attendance by the pregnant adolescent at the prenatal clinic and intervene as necessary. The FCNS as coordinator needs to also be able to evaluate whether goals are being met, and then change the treatment plan, the clinic, the environment or the intervention strategies as necessary.

The challenge that nursing has is to identify the adolescent that is at risk. This must be done at the beginning when the adolescent enters the primary care setting. The FCNS must provide accessible,

continuous and coordinated prenatal care. The identification process of self-care agency must begin early in the care. This can be gathered by Denyes Self-care Agency Instrument. The FCNS can further gather data regarding the adolescent through questions regarding her past experiences with the health care system. The FCNS in primary care is in a unique position to identify the ego-strength and health decision-making component of self-care agency that may have a bearing on the adolescent's ability to attend prenatal clinic. Previously assessed information may be added to the data base and applied to designing strategies that will enhance the adolescents ego strength and health decision-making capabilities. In addition, because of the continuity of the relationship, the FCNS is in the unique position of gathering immediate feedback on nursing interventions.

By utilizing the questionnaire developed by Denyes (1980), the FCNS could elicit information that the adolescent may otherwise not reveal in the traditional setting. Additionally, the instrument could add information to the data base on pregnant adolescents, as well as on adolescents in general.

Finally, the results obtained from the instrument could help identify interventions to increase self-care agency in adolescents that would result in the adoption of a healthy lifestyle that would decrease the adolescents risk for developing diseases later in life.

In the primary care setting, the questionnaire could be used to identify adolescents at risk. One way of doing this is to assess for ego strength and health decision-making capacity, identifying all of the adolescents that fall below the mean for their age group. At this point a further in-depth assessment can be performed by the FCNS. By keeping meticulous records, the FCNS may be able to identify associations between ego-strength, health decision-making and attendance that at this point are not known.

In addition to self-care agency, one area rarely assessed is the reasons why an adolescent did not attend a prenatal appointment. The FCNS must acknowledge that this nonattendance is significant, and in conjunction with the pregnant adolescent develop interventions that increase the likelihood

that the appointments will be kept. In addition, questionnaires that can assess the reasons for nonattendance can be shared with other health professionals so that they too can begin to study the issue of nonattendance.

In the planning and implementation stage the FCNS and the adolescent together design a plan of action that will facilitate the attainment of both short term and long term goals.

Implications for Nursing Education

This scholarly project can increase the understanding of self-care agency capabilities, and how self-care agency capabilities influences attendance at a prenatal clinic by pregnant adolescents. The recommendations made for nursing education could be valuable in increasing the understanding of these concepts and the eventual integration of the questionnaire into nursing practice.

Nursing education curriculum at the baccalaureate level should include course work on family development to help students view the

adolescent in terms of the family system. It is from this family system that the adolescent derives basic value systems that help guide the adolescent's actions. It is also from this family system that the adolescent derives values that help guide actions in regards to self-care. Nursing students also should take course work that pertains to self-care agency to understand better some of the factors that influence the adolescents ability or potential to render self-care.

Nursing education curriculum should include course material that pertains to the normal development stages that an adolescent will pass through on the way to developing an adult identity. Nurses should be aware of potential barriers to growth on the part of the adolescent, as well as specific nursing interactions that can help foster adolescent growth and development.

Nursing education curriculum should also contain information pertinent to the topic of sexuality in adolescence. While it may be a controversial subject, it is imperative for the nurse to examine and become aware of her own feelings on adolescent sexuality. The nurse must also be aware of how her

feelings impact the care she delivers to the adolescent. Nursing education curriculum needs to emphasize that the nurse needs to render care in a caring and non-judgmental way, being careful not to pass judgement, nor impose one's own value system on the adolescent client.

Nursing education must include curriculum on nursing theory. Orem is a theorist that is commonly referred to in the nursing literature. It is Orem that defined self-care and self-care agency. The nurse must understand that the individual is responsible for obtaining his or her own health care when capable. It is at the stage of adolescence that the individual may attain the necessary maturity to render self-care or actions directed to regulate one's functioning in the interests of one's life. Self-care agency is defined as the "complex capability for actions or operations for self-care" (Orem, 1985 p.31). These concepts that Orem developed help the nurse to more clearly define her practice.

Nursing education should provide the nurse with a basis for the development of nursing practice. Included in nursing education should be family

systems theory, developmental theory, nursing theory as well as values clarification. These will help the nurse to lay the groundwork for working with pregnant adolescents. For those nurses already working with adolescents, continuing education is necessary. The FCNS may offer expertise as a consultant to further develop the skills of those already working with adolescents.

Examples of offering of expertise would be to offer a one day workshop on adolescent development, self-care agency and how these impact compliance related to health care for the adolescent. The FCNS could act as a role model if she/he is employed in a adolescent clinic setting. The FCNS can also share expertise by the introduction of assessment tools that will allow the staff nurses to better assess and develop a plan of care for the adolescents.

Implications for Future Nursing Research

Adolescent pregnancy is a current concern of the American public as well as medical and nursing personnel. It has been a concern in the past and probably will be a concern of the future. Many

aspects of adolescent pregnancy have been investigated such as how attendance at prenatal clinic affects the outcome of adolescent pregnancy. Self-care agency is a topic that is just beginning to be researched. No research was found on pregnant adolescents and their self-care agency. The majority of the research on self-care agency appears to be with adolescents that are healthy. However, one researcher did focus on self-care agency in adolescents that had diabetes. The general conclusion is that adolescents are capable of self-care agency.

It is recommended that the instrument that was presented in this project be administered pregnant adolescents. The following research questions would be addressed:

1. Does the pregnant adolescent have a developed self-care agency?
2. Did the pregnant adolescent attend the minimum number of recommended prenatal visits?
3. Is there any relationship with an adolescent with a developed ego strength and health decision-making capacity component and the number of prenatal visits that she attends?

4. Are there any demographic variables that influence the attendance of the pregnant adolescent at prenatal clinic?
5. Does ego-strength and health decision-making relate to any other negative health behavior? Negative health behaviors might include multiple sexual partners, drinking alcoholic beverages, smoking, or using illicit drugs.

This instrument could be used to identify those pregnant adolescents that are at risk in the beginning of their prenatal care period. Once those adolescents have been identified then an effort can be made to develop their self-care agency so that they will increase their attendance at prenatal clinic and improve the chances of having a positive pregnancy outcome as well as having a healthy infant. An example of how the FCNS might increase self-care agency of an adolescent would be to employ values clarification and decision-making clarification. In addition, the FCNS can also impact attendance by use of mutual goal setting with the adolescent. The FCNS may implement contests featuring prizes for attendance, and certificates for adequate attendance. By doing this the adolescent

will get positive reenforcement for meet her goals.

Recommendations for future research include the use of this instrument on larger groups of adolescents that are pregnant. Including a larger age range than this project presented. Further research would include testing urban pregnant adolescents as well as adolescents from a variety of social and ethnic groups and see if there is a difference in self-care agency. The groups to be examined may include pregnant as well as non-pregnant adolescents, as well as female and male participants. Additional research could include evaluation of a relationship between general self-care agency and pregnancy specific self-care agency. Nursing interventions that are prescribed to increase the adolescents ego strength and health decision-making capabilities component should also be separately evaluated in the future.

In addition it is recommended that this instrument be administered at a variety of health care centers such as hospitals, public health clinics and private group practices that are rural as well as urban. This would be done to try to determine if the setting itself has any impact on attendance. It is

further recommended that a separate tool be developed to assess satisfaction with the care received as well as the setting and correlate this with attendance at prenatal clinic.

Additionally, it is recommended that further instrument development be undertaken to expand the questionnaire to Denyes (1980) six components of self-care agency. It is also recommended that the questionnaires wording, while remaining similar to Denyes original tool, be changed to become more pregnancy specific.

The timing of entry into the health care system for prenatal care may be a significant factor in the development of self-care. An implication for future nursing research would be administer the tool to different groups of adolescents based on weeks of gestation to ascertain whether more self-care is done after the recognition of the advent of fetal movement. If done as a longitudinal study it is recommended that the participants be followed for at least one year. Information can be gathered not only on health care practices during pregnancy but also on health care practices in the post partum period. Information can also be gathered to determine if

there is a relationship between ego-strength and health decision-making and subsequent bonding and infant care.

Implications for future nursing research on ego strength and health decision-making capabilities would include a longitudinal study to assess changes in ego strength and health decision-making capabilities over time as well as how these effect attendance for nursing care. This type of study could be carried out on healthy adolescents of various ages, and then compared with other problems such as substance abuse and chronic illness.

Implications for future nursing research includes researching ego strength and health decision-making capacities and attendance at prenatal clinic in adolescents of different cultural backgrounds to determine the effect of culture on the dependent variables. The information gathered could lead to more specific interventions that could benefit clients from minority populations. In addition research studies such as this would disseminate information on cultural differences, thereby raising the FCNS' consciousness on cultural issues.

A study could also be conducted to assess the effectiveness of specific interventions on ego strength and health decision-making capabilities and attendance at prenatal clinic. One specific intervention might be to conduct sessions on values clarification with the adolescent clients and measure if this intervention has an effect on ego strength and health decision-making capabilities and attendance.

Summary

In summary, this project has presented conceptual framework for self-care agency and how this may influence attendance at a prenatal clinic. In addition, a portion of a questionnaire that was developed by Denyes (1980) was presented for use in assessing a component of self-care agency in pregnant adolescents. Recommendations for nursing practice, nursing education and future nursing research were also presented.

APPENDIX A

Part 1 Sociodemographic Questionnaire

Instructions: The first few questions ask you to fill in some background information about yourself. Please write in or circle the appropriate answer for each question.

1. What is your age? Write in your answer.

2. What is birth date? Write in the month, day, and year. _____
3. Is this the first time you have been pregnant?
Circle your answer.
Yes No
4. Are you enrolled in school? Circle your answer.
Yes No
5. What grade are you enrolled in or the last grade that you completed? Write in the grade number in the blank. _____
6. With whom do you live? Circle all answers that apply.
mother
father
mother and father
brother, sister, aunt or uncle
friend or friends
boyfriend
any other person (write in) _____
7. Do you or does anyone that lives with you receive public assistance. Circle your answer.
Yes No
8. Is this your first visit to the prenatal clinic?
Circle your answer.
Yes No

GO ON TO NEXT PAGE

9. What is your ethnic background? Circle your answer.
black
white
native American
Hispanic American
other (write in) _____
10. Are you glad that you are pregnant? Circle your answer.
Yes No
11. Did you plan to get pregnant? Circle your answer.
Yes No
12. Have you ever used birth control? Circle your answer.
Yes No
13. Have you ever been told that you have any of the following problems? Circle the correct answer.
heart disease
diabetes
respiratory disease
cancer
kidney diseases
epilepsy
other (write in) _____
none of the above

YOU ARE NOW FINISHED WITH THIS PART OF THE
QUESTIONNAIRE. GO ON TO THE NEXT SECTION

APPENDIX A
Part 2
Instructions

EGO STRENGTH AND HEALTH DECISION-MAKING CAPACITY COMPONENT

- Please answer the following questions to your best ability. If no answer is quite right for you, circle the number that comes closest.
- There are no right or wrong answers.
- There may be questions that seem similar; please answer all the questions.
- Please feel free to write comments and explain your answers in the margins or on the back of the paper.

	Never	Very Infrequently	Infrequently	Sometimes	Frequently	Very Frequently	Always
1. How often do you think about your own health?	1	2	3	4	5	6	7
2. How often do you think you are in touch with what is going on with your health?	1	2	3	4	5	6	7
3. How often do you feel good about yourself?	1	2	3	4	5	6	7
4. How often do you think you are capable of making good decisions about your own health?	1	2	3	4	5	6	7
5. How often do you have good feelings about yourself?	1	2	3	4	5	6	7
6. How often do you feel good about doing things well?	1	2	3	4	5	6	7
7. How often do you make good decisions about your health?	1	2	3	4	5	6	7
8. How often do you feel good about doing things well?	1	2	3	4	5	6	7
9. How often do you feel good about your body?	1	2	3	4	5	6	7

APPENDIX B
PREGNATAL CARE RECORD
PART 1

AGE		RACE		RELIGION		MARITAL STATUS		YEARS MARRIED		EDUCATION		OCCUPATION	
HOME ADDRESS				HUSBAND'S NAME				HUSBAND'S EMPLOYER		HOME TEL		WORK TEL	
DATE				REFERRING PHYSICIAN				ATTENDING PHYSICIAN					

MEDICAL HISTORY		PARENT		FAMILY		CHECK AND DETAIL POSITIVE FINDINGS INCLUDING DATE AND PLACE OF TREATMENT PRECEDE FINDINGS BY REFERENCE NUMBER	SENSITIVITIES (DETAIL POSITIVE FINDINGS)					
1	2	3	4	5	6		7	8				
1 CONGENITAL ANOMALIES							30 ☐ NONE KNOWN					
2 GENETIC DISEASES							31 ☐ ANTIBIOTICS					
3 MULTIPLE BIRTHS							32 ☐ ANALGESICS					
4 DIABETES MELLITUS							33 ☐ SEDATIVES					
5 MALIGNANCIES							34 ☐ ANESTHESIA					
6 HYPERTENSION							35 ☐ OTHER					
7 HEART DISEASE							PREEXISTING RISK GUIDE INDICATES PREGNANCY/OUTCOME AT RISK					
8 RHEUMATIC FEVER								36 ☐ AGE < 15 OR > 35				
9 PULMONARY DISEASE								37 ☐ < 8TH GRADE EDUCATION				
10 GI PROBLEMS								38 ☐ CARDIAC DISEASE (CLASS I OR II)				
11 RENAL DISEASE								39 ☐ TUBERCULOSIS, ACTIVE				
12 OTHER URINARY TRACT PROBLEMS								40 ☐ CHRONIC PULMONARY DISEASE				
13 GENITOURINARY ANOMALIES								41 ☐ THROMBOPHLEBITIS				
14 ABNORMAL UTERINE BLEEDING								42 ☐ ENDOCRINOLOGY				
15 INFERTILITY								43 ☐ EPILEPSY (ON MEDICATION)				
16 VENEREAL DISEASE								44 ☐ INFERTILITY (TREATED)				
17 PHLEBITIS/VAISCOSITIES								45 ☐ 2 ABORTIONS (SPONTANEOUS/INDUCED)				
18 NERVOUS/MENTAL DISORDERS								46 ☐ ≥ 7 DELIVERIES				
19 CONVULSIVE DISORDERS								47 ☐ PREVIOUS PRETERM OR SGA INFANTS				
20 METABOL/ENDOCRINE DISORDERS								48 ☐ INFANTS ≥ 4,000 GMS				
21 ANEMIA/HEMOGLOBINOPATHY								49 ☐ IMMUNIZATION (ABO ETC)				
22 BLOOD DYSCRASIAS							50 ☐ HEMORRHAGE DURING PREVIOUS PREG					
23 DRUG ADDICTION							51 ☐ PREVIOUS PREECLAMPSIA					
24 SMOKING/ALCOHOL							52 ☐ SURGICALLY SCARRED UTERUS					
25 INFECTIOUS DISEASES							53 ☐					
26 OPERATIONS/ACCIDENTS							INDICATES PREGNANCY/OUTCOME AT HIGH RISK					
27 BLOOD TRANSFUSIONS								54 ☐ AGE ≥ 40				
28 OTHER HOSPITALIZATIONS								55 ☐ DIABETES MELLITUS				
29						56 ☐ HYPERTENSION						
						57 ☐ CARDIAC DISEASE (CLASS III OR IV)						
MENSTRUAL HISTORY						ONSET	CYCLE	LENGTH	AMOUNT	LMP	MO/DAY/YR	QUALITY
PREGNANCY HISTORY						GRAV	TERM	PRET	ABORT	LIVE	EDC	MO/DAY/YR
Q	MONTH	YEAR	W	WEIGHT	WKS	TYPE OF	DETAILS OF DELIVERY INCLUDE ANESTHESIA AND MATERIAL OR NEWBORN COMPLICATIONS USE RISK GUIDE NUMBERS WHERE APPLICABLE					
1				AT BIRTH	GEST	DELIVERY						
2												
3												
4												
5												
6												
7												
8												
INITIAL RISK ASSESSMENT												
68 ☐ NO RISK FACTORS NOTED												
69 ☐ AT RISK												
70 ☐ AT HIGH RISK												
SIGNATURE												

MERCY-MEMORIAL MEDICAL CENTER, INC.

MATERNAL HISTORY

C035-48 (8/86) M/M

ORIGINAL-Mother's Chart
YELLOW-Physician

APPENDIX B
PART 2

HISTORY SINCE LMP		CHECK AND DETAIL ALL POSITIVE FINDINGS BELOW. PRECEDE FINDINGS WITH SYMPTOM NUMBER				15. NUTRITIONAL ASSESSMENT	
1. HEADACHES 2. NAUSEA/VOMITING 3. ABDOMINAL PAIN 4. URINARY COMPLAINTS 5. VAGINAL DISCHARGE 6. VAGINAL BLEEDING 7. EDEMA (SPECIFY AREA) 8. FEBRILE EPISODE 9. RUBELLA EXPOSURE 10. OTHER VIRAL EXPOSURE 11. DRUG EXPOSURE 12. RADIATION EXPOSURE 13. OTHER 14. LAST ☐ NONE CONTRACEPTIVE TYPE _____ LAST USED _____						☐ ADEQUATE ☐ INADEQUATE REMARKS _____ _____ _____ 16. MEDICATIONS SINCE LMP (RX, NON-RX, VITAMINS) ☐ NONE DESCRIBE _____ _____ _____ _____	
INITIAL PHYSICAL EXAMINATION		HEIGHT	WEIGHT	PREGRAVID WEIGHT	B.P.	PULSE	DATE
SYSTEM		CHECK AND DETAIL ALL POSITIVE FINDINGS BELOW. USE SYSTEM NUMBERS					
17. SKIN							
18. EENT							
19. MOUTH							
20. NECK							
21. CHEST							
22. BREAST							
23. HEART							
24. LUNGS							
25. ABDOMEN							
26. MUSCULOSKELETAL							
27. EXTREMITIES							
28. NEUROLOGIC							
PELVIC EXAMINATION							
29. EXT. GENITALIA							
30. VAGINA							
31. CERVIX							
32. UTERUS (DESCRIBE)							
33. ADNEXA							
34. RECTUM							
35. OTHER							
BONY PELVIS		36. DIAG. CORU.	37. SHAPE SACRUM	38. S.S. NOTCH	39. ISCHIAL SPINES	PRE-NATAL PROBLEMS	
		40. PUBIC ARCH	41. TRANS. OUTLET	42. POST. SAC DIAM.	43. COCCYX		
46. CLASSIFICATION		☐ GYNECOID ☐ ANDROID ☐ ANTHROPOID ☐ PLATYPelloID					
47. ESTIMATION		☐ ADEQUATE ☐ BORDERLINE ☐ CONTRACTED					
						EXAM BY	

MERCY-MEMORIAL MEDICAL CENTER, INC.

PREGNANCY PROFILE

ORIGINAL- Mother's Chart
COPY-Physician

C035-45 (3/86) M/M

[illegible]

PRENATAL RECORD

PATIENT IDENTIFICATION

[illegible]

PRENATAL RECORD (SUPPLEMENTAL)

**PATIENTS
NAME**

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