To the Graduate Council:

I am submitting herewith a thesis written by Olga Chesteen Eisenhower entitled "An Evaluation of Self Esteem, Social Support and Maternal-Fetal Attachment in the Pregnant Adolescent." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science in Nursing.

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AN EVALUATION OF SELF ESTEEM, SOCIAL SUPPORT AND MATERNAL-FETAL ATTACHMENT IN THE PREGNANT ADOLESCENT

A Thesis

Presented for the

Master of Science in Nursing

Degree

The University of Tennessee, Knoxville

Olga Chesteen Eisenhower

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DEDICATION

To the memory of my parents, Charles and Hazel Chesteen, who taught me it was okay to care about other people.

To the two loves of my life, my husband Mike and my son Michael. Things will be back to normal soon.

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ABSTRACT

The purpose of this descriptive correlational study was to evaluate any association between self esteem, maternal-fetal attachment and social support of the pregnant adolescent. The study used the Coopersmith Self-Esteem Inventory (CSEI), the Cranley Maternal-Fetal Attachment Scale (MFAS), the Norbeck Social Support Questionnaire (NSSQ) and a demographic questionnaire for assessment. Dorothy Johnson's System Theory of Nursing provided the theoretical framework for the study.

A non-probability convenience sample of forty primigravida subjects ages 16-18 years old in the third trimester of pregnancy were surveyed. Data were collected during a four-week period at the Knox County Health Department, Knoxville, Tennessee, where the subjects were receiving prenatal care.

Data analysis included the Pearson product moment correlation, measures of central tendency, and frequency distributions. The subjects were found to have an average self esteem (mean of 71.45 on the CSEI), a moderate amount of functional social support (mean of 160 on the NSSQ), and participated in fetal attachment behaviors (mean of 3.96 on the MFAS).

Based on correlational analysis, two of three null hypotheses were accepted as having no association. An alpha level of $p \leq .05$ was selected as the level of statistical

significance. There was significant correlation found between self esteem and social support of the pregnant subject. There was no statistical evidence of association between self esteem and maternal-fetal attachment. While there was no statistically significant level of association found between the total maternal-fetal attachment and total functional social support, there was a positive correlation between the number of people in a social network and the frequency of attributing characteristics to the unborn child.

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CHAPTER I

INTRODUCTION

Adolescent pregnancy and parenthood pose many problems for the individual and society. It is estimated there are 1.1 million teen pregnancies yearly in the United States (Bourgeois, 1989). In 1989, the pregnancy rate (sum per 1000 females aged 10-17 years) was 25.1 in Tennessee. One in four teenagers became pregnant (Tennessee Center for Health Statistics, 1989). Eight out of ten girls who become mothers at age 17 or younger do not finish high school (March of Dimes, 1990). Flick (1986) stated that many children of the adolescent mothers are informally adopted or raised by the extended family. Block (1981) stated that the teenage parent has a greater than two to one chance of being on welfare. Ryan and Schneider's research (1978) supports the idea that determinants of medical complications in adolescents are much more commonly psychosocial factors rather than biological factors. Certainly teenage pregnancy is a problem for society.

Adolescence is a time of change from childhood to adulthood and serves as a time of physiological change, cognitive, social and psychological growth, and emotional stress. The term adolescent comes from the Latin "ad alescere," which means "to grow up" (Ullman & Henry, 1959). Developmental tasks of establishing a personal identity,

developing interpersonal relationships and enhancing self esteem are resolving during adolescence (Katchadourian, 1980). Teenagers are concerned with the way they appear in the eyes of others as compared with their own self concept. Adolescents struggle to fit the roles and fashions adopted by peers and integrate their concepts and values with those of society. It is a time to develop their own identity.

Pregnancy may disrupt the developmental sequence, interfere with a lifestyle and change the future of the adolescent. Erikson (1950) explains adolescence as a time of identity versus role confusion. Negative resolution of her own identity could lead to doubt about her sexual and occupational identity and personality confusion. If pregnancy interrupts the sequential development of role identity, the following stage of intimacy may also fail. Development proceeds as a series, one stage influencing the ability to deal with the next. The adolescent who becomes pregnant is in essence attempting to skip role identity for herself and proceed to intimacy with her child.

When the adolescent becomes a parent, the normal period in which self-love appears in heightened form comes in conflict with the needs of the baby. The adolescent girl who has not completed developmental maturation may find herself strained or incapable of effectively functioning as a parent. Teen parents are not likely to be emotionally and

psychologically mature and therefore may have problems assuming the parental role.

The transition to motherhood is a developmental process that also involves transition to adulthood (Leifer, 1977). Mercer (1980) characterized the pregnant adolescent as one deprived of the luxury of transition time from childhood to adulthood. She is rather catapulted into the adult role of mother before completing her own psychosocial development. The young mother thus is handicapped in assuming adult roles. While pregnancy has the potential to serve as a catalyst for the maturational process, Deutsch (1944) observed that pregnancy in early adolescence could be crippling to an immature personality.

Overview of the Problem

The physical and emotional changes of pregnancy may have significant impact on the teenager's developing self concept. Adolescence is a time when one's self image of being attractive and desirable is heightened and peer opinion assumes paramount importance. The teenage mother may feel that social interaction has decreased as a result of the pregnancy. There may be a sense of moral badness if the pregnancy occurred out of wedlock. As the pregnancy progresses, the young mother may develop a dissatisfaction with her physical appearance. Because adolescence is a period when girls are striving to be like their peers and

pregnancy sets the girl apart, the pregnant teen may feel inferior to her peers. Negative feelings about self may develop or increase during pregnancy. Zongker (1977) demonstrated that a lower self esteem is present during the prenatal period as well. Gabrielson (1970) identified suicide attempts as a complication of pregnancy.

During the time of pregnancy, social support within the family system is vital to the adolescent. Adolescence is usually a time of separation from the family in order to develop an individual role identity and a time to explore new interpersonal relationships. Behavior styles grow from the need of authoritarian support to a desire for self-discipline during adolescence. Pregnancy may confuse the support network. The father of the baby may accept or deny paternity. Parents may express anguish or disappointment over the daughter's sexual behavior. Families are often in conflict and turmoil associated with teenage pregnancy. More and more adolescents are being raised in single-parent homes where the custodial parent is struggling with social, financial and psychosocial issues. Single parenthood is no longer unusual. All of these factors add to confusion or uncertainty of social support for the pregnant adolescent at a time when the adolescent needs support from family and friends.

Nearly two decades ago, Feiring (1976) observed that maternal behavior was positively influenced by the amount of

social support the teenage mother received. Later, Mercer (1980) demonstrated that the teenage mother was hampered in her mothering role by her psychosocial immaturity. However, supportive responses from mates, parents, relative and friends provided sanction for her mothering role and seemed to communicate confidence in the ability to mother. The lack of such sanctions in unsupportive responses raised doubts in her mind about the mothering capabilities, decreased her feelings of competency and led to feelings of isolation. If the pregnant teenager sees her life as less than favorable, how will she view the unborn baby? A decrease in self esteem could conceivably lead to failure to properly care for herself and her fetus during the pregnancy.

Numerous authors believe the attachment process begins during the prenatal period (Carter-Jessop, 1981; Cranley, 1981; Klaus & Kennell, 1982; Leifer, 1977; Rubin, 1975). Failure to develop normal parent-child love may precede the parenting problem of abuse or neglect. Attachment may be influenced by various biopsychosocial factors such as cultural background, individual lifestyle, parental and societal support, development status, and educational background (Feller, Henson, Bell, Wong, & Bruner, 1983). Parental role problems related to immaturity of the mother may begin as early as the prenatal period.

This study was an effort to investigate the self esteem, social support and maternal-fetal attachment of the pregnant adolescent. Information about these aspects of the adolescent mother may provide a better understanding of her adaptation to parenthood. The relationship, association or influence of these factors on health care is an important concern for the nurse with advanced preparation, because it is often the nurse practitioner who is involved with prenatal care of the teenager. Increased knowledge concerning self-concept, social support and prenatal attachment could provide an opportunity for improved nursing interventions.

Theoretical Framework

The nursing theory of Dorothy E. Johnson (1980) provided a conceptual framework for this study. Johnson explained that behavior is the sum total of biological, social, cultural and psychological behaviors. The individual's goal is to achieve a behavior balance and steady state by adjustment and adaptation to certain forces.

The behavioral system is characteristic of the individual's life, with its pattern of purposeful behavior. The individual has many tasks to perform in order to maintain his/her integrity. This maintenance of integrity is achieved through integration and effectiveness of seven subsystems. The seven subsystems are: (1) attachment and

affiliation; (2) dependency; (3) sexuality; (4) aggression; (5) elimination; (6) ingestion; and (7) achievement. Each subsystem has drives or goals, a predisposition to act, a scope of possible actions, and behavioral actions.

In an analysis of Johnson's theory, Meleis (1985) concluded that nursing problems stem from a problem within the system reflecting behavior that is less than optimal. Nursing contributes through identification of a behavioral subsystem that is or could be potentially threatened. The focus of the nursing process is on the behaviors of the individual. It is important that the nurse is able to identify a particular stress which is upsetting the subsystem balance. The nurse then acts as an external regulatory force to maintain, restore or attain a stability in the subsystem. Nursing actions include protection, nurturance and stimulation to a subsystem.

With the adolescent, pregnancy may serve as a stress to upset the subsystem balance. Three subsystems of concern are attachment/affiliation, dependency and achievement.

Attachment/affiliation involves inclusion into relations, intimacy, and bonding. Attachment to a fetus is an anticipated maternal behavior. Any deviation would indicate a subsystem imbalance and the need for nursing intervention.

The term dependency includes the aspects of approval, attention, recognition and physical assistance from others

(i.e., social support). The adolescent is now dependent on others to provide medical, social and emotional support. Meanwhile, there is a developing fetus who is totally dependent on the young mother for survival. Social support is a dependency need of the subsystem.

Achievement during pregnancy may present problems to the adolescent. She may no longer accomplish the tasks of other nonpregnant teenagers. The bodily changes of pregnancy may limit physical activities and social events. The educational process is interrupted by possible prenatal appointments, discomfort or illness, and the absence from school necessitated by labor and delivery and the postpartum period. The adolescent may have lower academic achievement directly relating to the pregnancy. Physical and emotional changes of pregnancy are not viewed as favorable when they negatively distinguish the adolescent from her peers. The distinction from peers may equate with a lower self concept.

Poor self esteem may be fostered when the pregnant adolescent is no longer able to continue the normal developmental sequence with her peers, but rather has to attempt adult tasks. The decrease or absence of participation in peer activities can attribute to low social achievement and poor self esteem.

Self esteem is also influenced by the adolescent's ability to successfully achieve the maternal role. This accomplishment is difficult when the young girl is still

developing in her adolescent role. Progressive adolescent achievement may be redirected by the pregnancy.

Using the Johnson theory as a framework, the three subsystems (attachment/maternal-fetal attachment, dependency/social support, and achievement/self esteem) considered to be at risk for imbalance were examined. Instability of one or all subsystems, independently or related, would identify a need and appropriateness for nursing intervention.

Problem Statement

The purpose of this study was to investigate the association of self-concept, social support and maternal-fetal attachment in the pregnant adolescent. For clarity, D. Johnson's nursing theory terms are included in the hypotheses.

Null Hypotheses

1. There is no association between self esteem (achievement) and social support (dependency) in the pregnant adolescent.

2. There is no association between self esteem (achievement) and maternal-fetal attachment (attachment/affiliation) in the pregnant adolescent.

3. There is no association between social support

(dependency) and maternal-fetal attachment (attachment/affiliation) in the pregnant adolescent.

Nominal Definitions

1. Self esteem - refers to the perceptions, feelings and beliefs about oneself. It is a socially derived, personal evaluation or overall appraisal of self.

2. Maternal-fetal attachment - refers to the emotional, affectionate bond between the mother and the fetus during the existing pregnancy. Emotions of love, tenderness and caring are indicators of positive attachment. Prenatal attachment refers to a sense of knowing the fetus through shared experiences, history and time on an intimate and exclusive plane.

3. Social support - "interpersonal transactions that include one or more of the following: the expression of positive affect of one person toward another; the affirmation or endorsement of another person's behaviors, perceptions, or expressed views; the giving of symbolic or material aid to another" (Kahn, 1979).

4. Adolescent - a youth ranging from 13 years to 18 years of age.

5. Third trimester - pregnancy time period occurring 25 weeks from last menstrual cycle until delivery of fetus.

6. Primigravida - this term defines the female who is pregnant for the first time.

Summary

Teenage pregnancy is a continued problem for society and the adolescent. The teenage mother is confused about her role identity as an adolescent or as a mother. Pregnancy complicates the psychosocial developmental stages of adolescence.

Emotional and psychological immaturity may predispose the young mother to parenting difficulties. Problems which may occur prenatally are (1) maternal-fetal attachment deficiencies, (2) dysfunctional social support, and/or (3) poor self esteem.

Dorothy Johnson's nursing theory provided the conceptual framework for the study. Attachment/affiliation (maternal-fetal attachment behaviors), dependency (social support) and achievement (self esteem) were considered possible imbalanced subsystems during pregnancy.

It was believed that this research would contribute to the existing knowledge of the adolescent's perceptions of self, the baby and others during pregnancy. Such information may assist the nurse in planning and providing holistic care for young mothers and their families.

CHAPTER II

LITERATURE REVIEW

The major focus of this research study was to evaluate self esteem, social support and maternal-fetal attachment of the pregnant adolescent. The following topics, which were essential components of the study, are reviewed in chapter II: (1) self esteem of the pregnant adolescent; (2) social support during the pregnancy of an adolescent; and (3) maternal-fetal attachment.

Self esteem

In 1975, Abernathy, Robbins, Abernathy, Grechbaum and Weiss examined self esteem in pregnant adolescents. Their study revealed that low esteem was present and related to family experiences of excessive paternal intimacy or an unsatisfactory identification with the mother. The investigators believed that low self esteem was derived from identification with a mother who was neither warm nor respected. Earlier, Shiller (1974) had reported poor self images of pregnant adolescents who were participating in behavior and attitude modification counselling programs. In 1977, Zongker compared self-concept of pregnant adolescent girls with a control group using the Tennessee Self Concept Scale. The study found that the pregnant subjects exhibited a decidedly low self-concept. Pervasive feelings of being

"bad," dissatisfaction with their behavior, intense doubts about their identity and nominal feelings of self-worth were identified. The group was basically overwhelmed by feelings of low self esteem, inadequacy and unworthiness. Interestingly, the pregnant group did not show lower scores on self-acceptance. Apparently the girls had come to accept their lower opinions of themselves. In later research, Zongker (1980) found that single mothers, compared with married school-age mothers, had lower levels of self esteem and self-concept. Patten (1981) investigated the differences in self-concept (i.e., perceptions of themselves) and self esteem (i.e., perception of how others view them) of the pregnant adolescent. She found that both were significantly lower in relation to norms of the general population, with esteem lower than concept. Horn and Rudolph (1987) also found lower self-concept in pregnant adolescents. Although the adolescent mothers scored lower than the norm group on the Tennessee Self-Concept Scale, their response to interview questions relating to how they viewed themselves did not coincide with the measured scores. When interviewed, most of the adolescents reported positive feelings about themselves.

Not all studies agree with the idea of lower self esteem as a characteristic of the pregnant teenager. Vernon, Green and Frothingham (1983) surveyed 874 teenage women using the Coopersmith Self Esteem Inventory. During

the following year, 95 of the women became pregnant and were surveyed again. The prospective study found no significant association of self esteem with the subsequent pregnancy. Lineberger (1987) compared personality traits of self-concept, anxiety and depression in pregnant adolescents who attended a parent education program (PEP), those who did not attend a PEP, and nonpregnant adolescents. Pregnant subjects in the research were not significantly different from nonpregnant subjects in levels of self-concept. In studying sexual behaviors and self esteem of young adolescents, Orr, Wilbrandt, Brack, Rauch and Ingersoll (1989) found that pregnancy did not seem to affect self esteem of the sexually experienced adolescent.

Assessment of self esteem, whether increased or decreased, is a part of understanding the adolescent. Wylie (1961) states that knowledge of a person's perception of herself provides a means of understanding and predicting behavior. The young mother's self esteem may influence her expectations for the future of herself and her child. Her behaviors of attachment and dependency may be influenced by the perception she has about herself. Self esteem may assist in understanding and possibly predicting the behavior of the pregnant adolescent.

Social Support

Pregnancy is a dynamic time when a female's emotional state and life situation undergo great changes. Presently, there is a lack of conceptual agreement on the meaning of social support and how it relates to the health of a pregnant teen. Norbeck, Lindsey and Carrieri (1981) explain that social support may be as simple as having a person present during a stressful situation or as complex as elaborate formulations about social network properties. Nuckolls, Cassel and Kaplan (1972) found that women with high psychosocial assets (including social support) had only one-third the pregnancy complication rate of women with low psychosocial assets. In 1983, Norbeck and Tilden also found significant interactions between social support and complications during pregnancy in white middle class women. Norbeck and Anderson (1989a) later found similar results with a low income black population. Their research (Norbeck & Anderson, 1989b) identified two significant sources of support to be the female's partner or/and mother.

Information about social support for the pregnant adolescent is somewhat limited. Block, Saltzman and Block (1981) suggested that a support system should provide factual information, counseling and discussion, alternatives and medical guidance. Landy, Shubert, Cleland, Clark and Montgomery (1983) proposed a specific family syndrome that increases the likelihood of teenage pregnancy. This family

consists of a weak, distant, nonaffectionate father and a warm, dominant, somewhat smothering and overprotective mother. Another study by Horn and Rudolph (1987) showed a different family situation with the pregnant adolescent. Mothers and pregnant daughters shared a good relationship and were able to discuss problems. The mothers were understanding without being overprotective or controlling. The family relationship was important in providing emotional support for the adolescent. Speraw's (1987) study agreed that mothers or other family members were the primary providers of support during the pregnancy.

Social support also affects the adolescent after the pregnancy. Dormire, Strauss and Clark (1989) found that social support related to the adolescent mother's sense of competence and acceptance of her infant. Certainly the interpersonal transaction of the adolescent is of concern and deserves further investigation, because it may influence the way she feels about herself as well as her acceptance of her baby.

Maternal-Fetal Attachment

The concept of attachment of the pregnant woman to her developing fetus is relatively new. Reva Rubin is one of the well known researchers and authors about this topic. In 1975, she explained that pregnancy was more than a period of gestation, growth and development of a fetus. She

hypothesized that it was a time of identity reformation and personality maturation. One area of pregnancy development is the "binding-in" of the woman to her unknown child. In the first trimester, the necessary precondition of bonding is acceptance of the pregnancy. During the second trimester, the feeling of fetal movement and a sense of goodness and self-respect is associated with the binding-in. During this term of pregnancy, the sense of goodness is assisted by elevated hormonal levels. The feeling of goodness is generally ascribed to the fetus at this time. The child's value and worth becomes increasingly meaningful and a possessive love generates. During the last trimester the binding-in endures but does not grow at the same rate as during the second trimester. There is a conflict between holding on to the child but letting go of a now physically burdensome pregnancy. The wish to unburden from the pregnancy is tempered by the concern for the welfare of the child involved in labor and delivery. These phases of binding-in assist in developing what Rubin referred to as a sense of we-ness, and a sense of I-and-you between mother and fetus.

Leifer (1977) acknowledged that maternal-fetal attachment can be identified by observable behaviors such as talking to the fetus by name, reprimanding it for increased movement, and tactile stimulus to the fetus to elicit movement. Findings indicate that maternal feelings develop

along a continuum throughout the pregnancy. The association between emotional attachment toward the fetus during pregnancy and maternal feelings toward the baby at postpartum indicated that the degree of affective involvement by the third trimester is an accurate predictor of later maternal feelings toward the new infant.

Various studies have been undertaken to identify factors which affect the attachment process. The studies of Kohn, Nelson and Weiner (1980) and Fletcher and Evans (1983) support the idea that seeing the fetus through ultrasound increases the attachment process, while others (Grace, 1984; Thiel, 1987) suggest that knowledge of the fetal gender also aids in maternal-fetal attachment. Using the Cranley Maternal-Fetal attachment instrument, Heidrich and Cranley (1989) found that women who reported feeling fetal movement early in the pregnancy had higher attachment scores. Women who had amniocentesis because of genetic concerns had lower attachment scores before the procedure, but one month later the attachment scores were not significantly different from other pregnant women. Attachment was also found to significantly increase from 16 to 20 weeks of gestation. Lerum and LoBiondo-Wood's (1989) research found maternal age and the physical symptoms of pregnancy were not correlated with maternal-fetal attachment. Their findings did reveal increased attachment with (1) quickening, as well as degree

and frequency of fetal movement; (2) modest income; (3) ultrasound; and (4) a planned pregnancy.

Most of the research specific to adolescent maternal-child attachment has occurred during the postpartum period. Feller and her associates (1983) found that first-time adolescent mothers process attachment in an orderly and predictable pattern. Data indicated that the adolescent mothers used the en face position, displayed affectionate behaviors, progressed from fingering to encompassing and maintained contact with their infants. Fraiberg (1982), in a study of adolescent mothers diagnosed with severe maternal-child attachment disorders, found that intense unresolved conflicts of adolescence and depression were psychological obstacles to the nurturance of a child. Unresolved conflicts between the adolescent and her mother were impediments to the attachment of the girl to her baby. Attachment was also hindered by the obstacle of self-love in the adolescent. Fraiberg concluded that a girl who is still longing for a mother to hold and nourish her is not ready to assume mothering responsibilities. Normally adolescence is a period of egocentricity and narcissism. However, when the adolescent becomes a parent, the self goals come in conflict with the needs of the baby. Incomplete psychological maturation does not allow her to subjugate self interest for the interest of the baby.

Three studies have been reported which incorporate self esteem and prenatal attachment. Cranley (1981) and Gaffney (1986) found no relationship between self concept and maternal-fetal attachment. The Koniak-Griffin (1988) study was specific to pregnant adolescents. Using the Coopersmith Self Esteem Inventory and Cranley's Maternal Fetal Attachment Scale, these researchers found no relationship between self esteem and overall maternal fetal attachment in 90 pregnant adolescents.

Maternal-fetal attachment behaviors may be associated with later parenting problems. Lynch and Roberts (1977) first coined the term "bonding failure" to describe the failure to develop parent-child love. They suggest that when signs of bonding failure appear, a child is at risk for abuse. If the signs are recognizable, action can be taken to prevent abuse. Josten (1981) developed a prenatal assessment guide to identify women who may need assistance in providing a healthy environment and care of the infant. Prenatal attachment, one of the maternal tasks of pregnancy, is assessed as part of the determination of potential problems with parenting.

Carter-Jessop (1981) found that maternal-fetal attachment could be promoted with enhancement activities. The activities included (1) feeling for babies' parts and checking fetal position daily; (2) increasing awareness of fetal activity and how the pregnant mother affects that

activity; and (3) rubbing, stroking, and gently massaging the abdomen over the baby. Unfortunately, Carson and Virden (1984) were unable to replicate attachment enhancement with their sample of 69 primiparas and multiparas from a low income, multi-ethnic population.

According to Gay (1981), attachment is a gradual, continuing, reciprocal process that occurs between individuals and incorporates the components of an acquaintance process. She contends that acquaintance and attachment are prerequisites to bonding between a mother and her child. Once established, bonds permit strong affective associations to exist in periods of separation. Bonds permit only positive affect and are not terminated. In order for a lasting bond to form between the mother and child, the young mother must first engage in the process of prenatal attachment to her baby.

Summary

Literature focused on three areas: (1) self esteem of the pregnant adolescent; (2) social support of the pregnant adolescent; and (3) maternal-fetal attachment.

Self esteem of the pregnant adolescent has been measured by several researchers, with mixed results. However, more researchers have found a lower self esteem (in relation to norms of nonpregnant population) than an equal or higher self esteem in the pregnant adolescent.

Researchers are uncertain of a single definition of social support. However, social support is known to be an important component for the pregnant adolescent during gestation. Social support is relevant because of the influence it has been shown to have on the perception of the pregnant adolescent and her baby.

During the time of pregnancy, the mother begins to form an attachment to her developing baby. This maternal-fetal attachment serves as a foundation for later maternal-child bonding. Research has shown the attachment process can be positively influenced or seriously hindered. Adolescence may serve to complicate maternal-fetal attachment.

The pregnant adolescent is at risk both physically and emotionally and is able to adapt to the responsibilities of parenting only within the constraints of her abilities. The review presents a framework to investigate three aspects of her adaptation to parenthood.

CHAPTER III

METHODOLOGY

Chapter III describes the design and methodology utilized for this study. Research design, research hypotheses, operational definitions, sample, procedures and instruments are presented.

Research Design

The research followed a non-experimental descriptive correlation model. A list of all patients receiving prenatal care at the approved facility during the four weeks of data collection was obtained, and fifty subjects were identified as meeting eligibility criteria. A convenience sample of 40 women who agreed to participate in the study was utilized. Eligibility for entry into the study included a primigravida, aged 13-18 years, presently in the third trimester of pregnancy, with a fourth-grade reading ability.

Subjects

In this research, 40 young women who received their prenatal care at the Knox County Health Department voluntarily participated. The first forty individuals who agreed to participate were used in the research.

Three races (Black, White and American Indian) were included. The subjects were either married or single, and

their ages ranged between 15-18 years. The subjects lived in a variety of settings including: with one or both parents, the baby's father, in-laws, or other family members. Thirty-nine of the 40 had an ultrasound and received a picture of the fetus. Only 14 were currently or had previously been participating in prenatal classes. Educational levels varied from completion of the ninth grade to twelfth grade. Two subjects had completed the GED program. Sixteen were presently in school, either in a public high school, technical school, or college. Only one subject had not acknowledged the pregnancy to family members, peers and school officials; the baby's father was the only other person to know of the pregnancy. Table III-1 summarizes the subject characteristics.

Income level was not included in the demographic data. However, all subjects had been approved for Medicaid health insurance coverage. All subjects were eager and cooperative participants. Two individuals declined to participate for lack of time and a previously scheduled appointment.

Operational Definitions

1. Self esteem: The self perceptions, beliefs and feelings of the pregnant adolescent related to peers, parents, school and personal interests, measured by the Coopersmith Self Esteem Inventory. Range of scores is 0-100.

Table III-1

Subject Characteristics (N=40)

Characteristic	N	%
Age in years		
15	3	7.5
16	6	15
17	10	25
18	21	52.5
Race		
White	24	60
Black	14	35
American Indian	2	5
Marital Status		
married	11	27.5
single	29	72.5
Ultrasound with picture		
yes	39	97.5
no	1	2.5
Prenatal class participant		
yes	14	35
no	26	65
Living Arrangement		
with mother	17	42.5
with both parents	6	15
with husband	7	17.5
with boyfriend	1	2.5
with husband and in-laws	2	5
with boyfriend and his parents	1	2.5
other	6	15
Last Grade Completed		
9	4	10
10	11	27.5
11	9	22.5
12	14	35
GED	2	5
Continuing Education Status		
in school	16	40
not in school	24	60

2. Maternal-fetal attachment: The relationship existing between the mother and the fetus during the pregnancy. Aspects of the relationship include: differentiation of self from fetus, interaction with the fetus, attributing characteristics and intentions to the fetus, giving of self, and role-taking, as measured by The Cranley Maternal-Fetal Attachment Instrument. Scores range from 1-5.

3. Social support: An interpersonal transaction (1) providing supportive actions of affect, affirmation and aid; (2) provided by a set of persons on whom an individual relies for support and those who rely on her for support; and (3) subject to change over time, as measured by the Norbeck Social Support Questionnaire. Scores may range from 0-300.

Instruments

Data collection from the subjects involved completion of a demographic sheet and three questionnaires. Approximately 30 minutes were required for the data collection process from beginning to end. Approximately 15-20 minutes of this time period was for completion of the sheet and questionnaire.

The demographic sheet (Appendix C) was constructed by the researcher. Information included age, race, marital status, educational status, knowledge of the pregnancy by

others, estimated date of delivery, living arrangements, ultrasonic fetal visualization, and participation in prenatal classes. Information from this sheet was for descriptive purposes.

The next instrument was the Coopersmith Self Esteem Inventory (CSEI), School Form (Appendix D), which is copyrighted by the author, Stanley Coopersmith. The instrument consists of 58 items appropriate for ages 8-15 years. The school form was chosen because eligibility criteria included 13-18-year-old subjects. The researcher believed that the younger subjects might not be able to comprehend the adult form. It was also anticipated that the reading ability of the sample might be below grade level.

Each question on the CSEI presents respondents with generally favorable or generally unfavorable statements about the self, which they indicate as "like me" or "unlike me." The instrument yields six scores, which include general self subscale, social self-peers subscale, home-parents subscale, school-academic subscale, total self score and lie scale score. The CSEI has been administered to tens of thousands of children and adults. The author reports alpha coefficients for reliability ranging between .87 and .92. There is supporting evidence of construct validity, concurrent validity and predictive validity. The test

booklets, manual and scoring key were purchased from Consulting Psychologists Press, Inc.

The Cranley Maternal Fetal Attachment Scale (MFAS) was developed by Mecca Cranley in 1981 (Appendix E). The scale consists of 24 descriptive statements related to behaviors that represent attachment to the fetus. Respondents answered on a 5-point Likert scale from "definitely yes" to "definitely no." The instrument yields a total attachment score and five subscales (role taking, differentiation of self, giving of self, attributing characteristics to fetus, and interaction with the fetus). The author reports a coefficient reliability of .85 for the total score and reliability subscales ranging from .52 to .73. Evidence supports an increased coefficient of reliability of .87 when the subjects are greater than 20 weeks gestation. The instrument is not copyrighted, and the author granted permission for use (Appendix F).

The last instrument used for data collection was the Norbeck Social Support Questionnaire (NSSQ) (Appendix G). The NSSQ is a self report questionnaire designed to measure multiple dimensions of social support. Based on Kahn's (1979) conceptual definitions of social support and definitions from network theory (Barnes, 1972), the instrument has three main variables: total functional, total network and total loss. The total functional score is comprised of positive affect of one person toward another,

the affirmation or endorsement of another's behavior, and the perception of giving material aid to another. The network score indicates the set of persons on whom the participant relies for support and those who rely on the participant for support. The network is established at the first of the questionnaire when the participant is asked to list each significant or important person in his or her life. Respondents answer eight questions using a 5-point Likert scale and one question indicating the number of losses of significant people in the past year.

The total functional score was used for data analysis. The researcher chose this score because it measures the supportive transactions of affect, affirmation and aid. The significant people identified on the NSSQ serve as a convoy through which social support is provided. The questions and answers relate to the duration, frequency of contact or losses of relationships provide information associated with the network properties of social support and were not used for correlational analysis. Numbers relating to the support network were included in descriptive analysis of the subjects. The author reports a reliability coefficient ranging from .56 to .88. Evidence is presented by the author for content, convergent and divergent validity. The average time required to complete the questionnaire was 10 minutes. The NSSQ does not have a copyright; author permission was obtained for use (Appendix H). The

instrument was used to provide a score for the functional social support available to the pregnant adolescent.

At the end of each data collection day, the three questionnaires were hand-scored and transferred to a master summary sheet which included demographic data, total questionnaire and subscale scores. Once data collection was completed, information on the summary sheet was entered into an Apple II Plus computer at the College of Education Computer Center using the Keystat Statistical Program and the Elzey Statistical Program for analysis.

Procedures

The researcher obtained permission to conduct this research from The University of Tennessee, Knoxville, Human Subjects Committee and the Knox County Health Department (Appendix A).

Once all appropriate permissions had been obtained, the researcher initiated data collection. Eligibility for entry into the study included a primigravida, aged 13-18 years, presently in third trimester of pregnancy, and fourth-grade reading ability. When the parent or legal guardian of a minor accompanied the potential subject, the adult was invited to co-sign the informed consent. In view of the "mature minor" ruling per Supreme Court of Tennessee case Cardwell v. Bechtol, 724 S.W.2d 739 (1987), parental consent was not required if the minor was unaccompanied by an adult.

A pregnancy diagnosis, providing her own transportation, and initiation of prenatal health appointment served as factors in the assessment of the "mature minor." Judgment was made by the researcher.

A data collection schedule and routine were agreed upon by the researcher and director of nursing services for the prenatal clinic. Data collection times included Monday, Tuesday, Thursday and Friday mornings, between 8 a.m. and 12 p.m. because these hours were the hours for return visits of patients without medical complications.

Prospective subjects were approached (1) following their initial check-in of weight and blood pressure while waiting to see the nurse practitioner, (2) following a prenatal class, prior to seeing the nurse practitioner, or (3) after the prenatal examination and before going home. The researcher introduced herself to each subject and gave a statement of research purpose, description and duration of participation. Following verbal agreement to participate, a printed consent form (Appendix B) was given and explained.

Explanation included confidentiality and anonymity protection, voluntary participation, no penalty for refusal or withdrawal, storage of data, analysis of summarized total data, and a gift for participation in the study. The researcher kept the signed consent form and gave each participant a blank copy which included a telephone number for any later questions pertaining to participation in the

research. At this point, no further contact has been initiated by any participant.

Each instrument was explained individually to the subject. Questions were answered. The researcher stayed with the subject while the subject was completing the surveys to define any words, clarify any instructions and answer any questions. When the subject finished, the researcher collected the papers.

In conjunction with verbal gratitude, each participant was given a wrapped package for the baby. Presents included various types of rattles. One subject refused the gift because she intended to release the baby for adoption. (The researcher considered excluding this subject from the study. However, her scores were near the mean for the total sample, and there seemed to be no reason for exclusion.) Subjects were appreciative of the gift, and many commented this was the first gift their baby had received.

Summary

Chapter III presented the methodology used for the research study. A convenience sample of 40 primigravida adolescents in the third trimester of pregnancy was surveyed using the Coopersmith Self Esteem Inventory (CSEI), the Maternal Fetal Attachment Scale (MFAS), and the Norbeck Social Support Questionnaire (NSSQ). Characteristics for the sample were presented. Operational definitions for self

esteem, maternal-fetal attachment, and social support were given. Instruments used in the research were individually presented.

CHAPTER IV

DATA RESULTS

Chapter IV presents the research findings. The first section provides the descriptive analysis for the 40 subjects of the research. In the next section, each hypothesis is stated and statistical testing presented. Tables are present to illustrate and summarize findings.

Descriptive Analysis

Table IV-1 presents the maximum and minimum scores, the mean, variance, and standard deviation for each of the numeric variables of the research. Table IV-2 presents the profile for high, medium and low self esteem levels of the subjects as measured by the CSEI.

The mean for the Coopersmith Self Esteem Inventory (CSEI) was 71.45. The author of the tool suggests that a score ranging from 26-74 is considered as a medium or average self esteem. The mean score of the sample fell into the medium range; 60% of the subjects scored in the medium range, 40% in the high range, and none in the low range.

The MFAS mean was 3.96. Cranley defines the scale of frequency of prenatal attachment behaviors as: one - never, two - rarely, three - sometimes, four - frequently, and five - most of the time. In this research, 100% of the subjects indicated they had either "frequently" or "sometimes"

Table IV-1

Descriptive Profile of Variables

Variable	Range	Mean	Variance	SD
CSEI	44-96	71.45	189.74	13.77
MFAS	3.07-4.7	3.96	.15	.39
NSSQ	37-296	160.7	4646.06	68.16

Table IV-2

CSEI Score Profile

	Range	N	%
High Self Esteem	75-100	16	40
Medium Self Esteem	26-74	24	60
Low Self Esteem	0-25	0	--

engaged in behaviors or attitudes represented on the scale. There were no individuals with a total MFA score of one or five, indicating that no one was at either extreme in consistently engaging in prenatal attachment behavior or never engaging in prenatal attachment behavior. Table IV-3 profiles the total MFAS scores.

Interestingly, when analyzing the subscales, the most frequently practiced behaviors were in the areas of role taking (picturing themselves holding, feeding and caring for the infant) and differentiation of self from the fetus (watching the baby kick, picturing a face and deciding on a name). Twenty-five percent responded that differentiation behavior occurred most of the time. Several (27.5%) responded that they rarely interacted (talking, stroking, grasping or poking) with the fetus. More than half (55%) of the subjects frequently engaged in giving of the self (eating healthy, giving up harmful things). Table IV-4 represents a profile of the subscales of the MFAS.

The mean for the total functional score on the NSSQ was 160.7. There was a large range of 259. The number identified in the support network ranged from 3-10 individuals. The mean number of persons listed in the network was 6.58 (SD $\pm$ 2.6). The number of lost important relationships in the past year ranged from 0-15. The total loss variable mean was 1.03 (SD $\pm$ 2.55). The majority of subjects (62.5%) had not experienced a loss.

Table IV-3

MFAS Total Score Profile

		N	%
(5)	Most of the time	0	--
(4)	Frequently	19	47.5
(3)	Sometimes	21	52.5
(2)	Rarely	0	--
(1)	Never	0	--

Table IV-4

MFAS Subscale Profile

Category	Most of the time n (%)	Frequently n (%)	Sometimes n (%)	Rarely n (%)	Never n (%)
Role Taking	9 (22.5)	25 (62.5)	6 (15)	------	-----
Differentiation of self from fetus	10 (25)	23 (57.5)	7 (17.5)	------	-----
Interaction with fetus	------	10 (25)	19 (47.5)	11 (27.5)	-----
Attributing characteristics to the fetus	------	17 (42.5)	21 (52.5)	2 (5)	-----
Giving of self	1 (2.5)	22 (55)	16 (40)	1 (2.5)	-----

The researcher chose to calculate a mean quantity score to clarify the totals and allow for comparison of subjects. The NSSQ has six questions: two for each area of affect, affirmation and aid. The average amount of social support available to the subject was determined by dividing the total functional support score by the number of people in the support network multiplied by six. This average presents the quantity of social support available regardless of the number providing the support. Table IV-5 presents the results.

Only one subject perceived she had no social support (the lowest score on the scale). Not surprisingly, this is the same subject who reported 15 losses in the past year. Only one adolescent reported a great deal of support (the highest level). The majority of subjects (55%) indicated quite a bit of support (next-to-the-highest level on scale).

Test of the Hypotheses

This research was a descriptive correlational study. Information collected from the three surveys (CSEI, MFAS, and NSSQ) was treated as interval data and analyzed using parametric tests. Data analysis was completed using the Elzey Statistical Program and The Keystat Statistical System. Pearson product moment correlations were computed to analyze associations among the numerical scores for the variables of self esteem, maternal-fetal attachment and

Table IV-5

NSSQ Average Functional Support Profile

Quantity of Social Support	N	%
(5) A great deal	1	2.5
(4) Quite a bit	22	55
(3) Moderate	14	35
(2) A little	2	5
(1) None	1	2.5

social support. The probability of a Type I error (rejecting a true hypothesis) was established at $p=.05$.

Hypotheses and Results

Hypothesis 1: There is no association between self esteem and maternal-fetal attachment in the pregnant teenager

The Pearson product moment correlation was used to test this hypothesis. The hypothesis proposed that the perception the pregnant teenager has about herself neither increases nor decreases her attachment to the unborn child. This research found no association ($r=.032$, $p=.838$) for self esteem and maternal-fetal attachment. Therefore, the hypothesis was accepted as true.

Hypothesis 2: There is no association between self esteem and social support in the pregnant adolescent

The Pearson product moment correlation was used to test the hypothesis. The research was conducted to determine if social support provided by family and friends had any association with how the pregnant teenager perceived herself. Data supported a correlation ($r=.338$, $p=.031$) for the variables of self esteem and social support. The hypothesis of no association was rejected.

Hypothesis 3: There is no association between maternal-fetal attachment and social support

The Pearson product moment correlation was used to test the null hypothesis that there was no association between maternal-fetal attachment and social support. Data analysis for the total scores did not demonstrate significant correlation ($r=.264$, $p=.096$) of the two variables.

However, because this correlation approached significance, the researcher analyzed various subscales of each instrument to identify factors which might be significant. There was a positive correlation ($r=.343$, $p=.014$) found between attributing characteristics to the fetus (MFAS) and the expression of positive affect of one person toward another (NSSQ). A second positive correlation ($r=.313$, $p=.023$) was found between attributing characteristics to the fetus (MFAS) and the number of people providing social support (NSSQ) to the adolescent. A negative correlation ($r=-.338$, $p=.016$) was observed between attributing characteristics to the fetus (MFAS) and the number of losses of important relationships in the past year (NSSQ). The researcher believes that these significant associations indicate that Hypothesis III may not be valid. The instruments may not have measured the variables accurately with the adolescent sample. Table IV-6 presents a summary of data analysis for the three hypotheses.

Table IV-6

Summary Data Analysis For Hypotheses I, II, III

Hypothesis	r	p
(I) CSEI[a] & MFAS[b]	.032	.838
(II) CSEI & NSSQ[c]	.338	.031*
(III) MFAS & NSSQ	.264	.096

* Statistical significance

$p \leq .05$

[a]CSEI - Coopersmith Self Esteem Inventory

[b]MFAS - Maternal Fetal Attachment Scale

[c]NSSQ - Norbeck Social Support Questionnaire

Summary

Chapter IV presented the results of data collection on 40 adolescent pregnant subjects. The group reported an average self esteem, moderate social support, and participation in maternal-fetal attachment behaviors. There was no association found between self esteem and maternal-fetal attachment behaviors. There was a correlation between self esteem and social support. There were also correlations found with the subscales of maternal-fetal attachment and social support. These included (1) attributing characteristics to the fetus and the expression of positive affect, and (2) attributing characteristics to the fetus and the number in the support network. However, there was no reported association of the total maternal-fetal attachment and the total social support quantity.

CHAPTER V

DISCUSSION, CONCLUSIONS, IMPLICATIONS, LIMITATIONS AND SUMMARY

Chapter V presents discussion of data presented in the previous section. Conclusions relating to the research and the implications for nursing practice are discussed. Theoretical implications and limitations of the research are given. A summary of the study is included.

Discussion

Descriptive Analysis

Unlike the research of Abernathy et al. (1975), Shiller (1974), and Zongker (1977), the self esteem of this sample of pregnant adolescents did not appear decidedly low. The group, as a whole, reported medium to high self esteem ($x=71.45$, CSEI). These findings are in agreement with Streetman (1987) and Lineberger (1987), who found no differences displayed in the self esteem of pregnant adolescents. The findings of the present research were similar to those of Porter and Sobong (1990), who also reported medium levels of self esteem.

Three factors could have contributed to the average self esteem of the subjects in this sample. Twenty-seven percent of the subjects were married, and forty percent had completed high school. Marriage may have been an elevating factor of self esteem for the adolescent. It may provide an

increased feeling of security and acceptance, thus enhancing general self worth. The completion of a high school program perhaps also fostered an increased acceptance of self and accomplishment. Thirdly, with the present widespread cultural change in sexual morals and behaviors among adolescents, pregnancy may have been viewed as acceptable, without any negative connotation by the pregnant girl or her peers.

The results of the MFAS indicated that all subjects had, at some point, engaged in attachment behaviors with the fetus. This finding supports the work of Leifer (1977), Deutsch (1945), and Rubin (1967), who believe attachment begins much earlier than birth. The most frequently practiced behavior of role taking coincides with Leifer's explanation of dreams and fantasies during the emotional attachment period of pregnancy. Another commonly practiced behavior of differentiating the fetus from herself is well explained by Rubin as the third phase of "binding in." The mother is anxious about the end of a burdensome pregnancy and anticipates the arrival of her child. One differentiation question inquired if the mother had chosen a name for the baby. Because data collection was done in the third trimester of pregnancy, many subjects knew the sex of the child from ultrasound visualization. It would seem that naming the baby would follow identification of the sex.

Knowledge of the child's gender may have contributed to a higher differentiation score.

Another thought on the high incidence of role taking and differentiation is related to the study of Brown and Urback (1989) who reported that adolescents often have expectations of motherhood with blind spots of reality. The idea that life with baby will be wonderful and their emotional needs will be met may be such an example. The adolescent may picture motherhood only as holding, feeding and loving the baby. Because all subjects were primigravidas, their answers may have reflected an idealistic (and unrealistic) picture of motherhood.

The two least practiced attachment behaviors were interaction with the fetus and attributing characteristics to the fetus. Both behaviors may be related to the psychological maturity level of the adolescent. At this time the young mother may not be comfortable in touching and watching her own body. She may also be uncomfortable with the body changes produced by pregnancy. The adolescent may have a knowledge deficit relating to the pregnancy. She may not know that the fetus can hear her words and respond to external stimuli. She also may have a fear of harming the fetus through stroking, poking and grasping.

The adolescent mother may be developmentally incapable of attributing characteristics or behaviors to the fetus. The concept of a fetus having a personality may be

difficult for an adolescent to comprehend. Some of the questions on the MFAS subscale deal with personality, thinking, and feeling. Another question asked if the mother knew when the baby had the hiccoughs. Most of the young mothers (67.5%) could not identify fetal hiccoughs. Clearly, this attachment behavior was practiced less frequently.

The large range of scores on the NSSQ gave a diverse range of total functional support. This score does not account for the number in the social network system. It seems possible that a subject with only a few supportive individuals in her network could have a high level of social support. In order to further investigate the quantity of social support reported by the total score, an average was calculated. The results indicated that 55% of the subjects reported quite a bit of social support. Interestingly, the individual who reported no social support identified five people in her social network, while the subject reporting a great deal of support identified only four in her network. The average clarified how two individuals, each with ten support people, could have a large difference in their total functional support score. Ten was the most frequently listed number in a support network; this finding was probably related to the ten spaces provided to list people. No subject requested additional space to identify a network greater than ten.

Hypothesis I

Hypothesis I was accepted because there was no correlation found between self esteem and maternal-fetal attachment ($r=.032$, $p=.838$). Research by Cranley (1981), Gaffney (1986), and Koniak-Griffin (1988) has also supported this hypothesis of no relationship. Koniak-Griffin's (1988) research using 90 subjects, was the only one of the three using adolescents specifically. Findings were a mean MFAS score of 3.94, correlation coefficient (r) of .08, $p>.05$, and showed a remarkable similarity to the findings of the present research, including the mean MFAS score of 3.96.

With these results, several points should be considered. The total CSEI score is derived from the four subscales of self attitudes relating to academic, social, family and personal areas of experience. The total score may not have been an accurate measure of self esteem because (1) 60% of the subjects were not presently in school; (2) socialization opportunities with peers is decreased because the subjects were not in school, thus possibly altering their social subscale; (3) only 15% of the subjects were living with both parents; (4) the general self perception is complicated by the physical changes of pregnancy; and (5) the instrument was designed for use with 8-15 year old subjects. The author of the CSEI acknowledged that the results may be invalid for assessing self esteem among members of a particular group.

One aspect of the results is conflicting. The group averaged a medium self esteem score (71.45), yet 50% reported their body was ugly on question 22 of the MFAS. One question would probably not alter the total score findings of the MFAS. It may be that the adolescent perceives her body as ugly related to the physical changes of pregnancy; however, she understands the changes are only temporary. This supports the idea that the CSEI may not have produced accurate scores for the group of pregnant adolescents.

Hypothesis II

Hypothesis II was rejected because a significant correlation ($r=.338$, $p=.031$) was found between self esteem and social support. These results are contrary to the findings of Koniak-Griffin (1988), who found no significant correlation ($r=.02$, $p>.05$) of these variables. However, the findings of this study are similar to those of Dormire (1989) who reported that emotional support influenced the adolescent's feelings about herself in the new role as a mother. Another study by Lamb (1981) found social support tended to promote self esteem. Coopersmith (1990) explained that persons doubting their worthiness avoid closeness in their relationships and may feel isolated as a consequence. This researcher suggests that an adequate social support system can increase the perception a teenage

mother has about herself. Adequate self esteem encourages interaction rather than isolation.

In this study, the findings indicate a positive association between how a teenage mother perceives herself and the available functional social support. It is not surprising to this researcher that a pregnant adolescent has a better perception of herself when the people who are important in her life express love, respect, approval and are willing to provide assistance to her.

One interesting finding was that many of the individuals who were listed in the social support network (NSSQ) could not or did not provide support to the subject. The participants often commented that the support person lived out-of-state or was very young (usually a younger sibling). These support people would be unable to lend money, provide transportation or offer physical assistance to the teenager. One young mother asked if she could list her dog; the researcher responded that it would be easier for her to answer the questions about people rather than pets. Another adolescent listed God as significant in her life but did not give answers relating to the listing. These are two examples of a problem with the measurement instrument. An animal or small child is capable of providing positive affectionate support but is unable to provide assistance to another person.

Hypothesis III

While a correlation was not found between the total MFAS and the total NSSQ ($r=.264$, $p=.096$), when subscales were compared, correlations were significant. Cranley (1981) had a similar finding that women with more people available to help them had higher MFAS scores. The studies of Norbeck and Shainer (1982) and Dormire (1989) indicated that the characteristics of support and the number of persons in the support network were related to the incidence of dysfunctional parenting. It is reasonable that adequate functional support may buffer the stress of adaptation to parenthood for the adolescents.

The results of the NSSQ may not be accurate. Many of the subjects had difficulty understanding how to complete the survey (following an explanation) and did not understand certain words (e.g., confide and confined). The NSSQ was developed using senior and graduate level college students. The researcher questions how many subjects marked answers without understanding the question. Also, the NSSQ was the last questionnaire, and several participants appeared to answer hastily to be finished with the study. Any of these factors could have altered the validity of the results.

However, because the p value ($p=.096$) approached significance for Hypothesis III, further analysis of the data seemed in order. There was a positive correlation

(r=.343, p=.014) found between the MFAS subscale of attributing characteristics and intentions to the fetus and the expression of positive affect (love and respect) on the NSSQ. This is an interesting finding since this MFAS subscale was the least practiced attachment behavior. There were also significant correlations between attributing characteristics to the fetus and the number of people in the support network and the number of losses. A positive correlation was found between the network number and characteristic attribution, perhaps indicating that a larger support network yields more comments about the baby and possibly influences the mother's perception of the unborn child.

A negative correlation (r=-.338, p=.016) was found between characterizing the baby and the number of recent losses to the support network. As the number of losses increased, attributing characteristics to the baby decreased. Again, the fewer people from whom the mother received feedback and opinions from, the less likely it seems she would characterize the unborn child. Moreover, during a time of loss an individual may become more dependent on others for social support. The loss of a significant person may inhibit the initiation of new relationships. Replacement or acceptance of losses may be a slow and painful experience.

Conclusions

The present research found no association between maternal-fetal attachment and self esteem or between maternal-fetal attachment and total social support. Findings supported the existence of maternal-fetal attachment behavior relating to the developmental tasks of pregnancy. The adolescents reported a good self esteem (one aspect of the "binding in" process), perhaps related to the pregnancy, although no significant correlation was demonstrated in this study between self esteem and attachment. A direct association of self esteem and maternal-fetal attachment might be demonstrated with an instrument which measures self esteem specifically during pregnancy. Psychological changes and emotional upheaval which are known to exist during pregnancy could produce inaccurate assessments of self esteem.

There was no statistical support for an association between maternal-fetal attachment and total social support. However, the number in the support network was shown to be positively associated with maternal-fetal attachment behavior. This finding is perhaps related in part to the age of subject and the assessment instrument. The adolescent could easily identify how many people provided social support but not as easily provide conceptual information about the individuals. Perhaps an adaptation of the NSSQ for adolescents would have provided a stronger

total association between social support and maternal-fetal attachment.

It was not surprising that a significant association was identified between self esteem and social support. Logically, an increase in the expression of love, respect and acceptance would tend to have a positive effect on the girls' self perception. The girls were generally in good health and receiving prenatal care regularly. Many were accompanied by friends or family for the care.

The group showed an average self esteem, adequate suport, and some attachment to the unborn child. Self esteem during pregnancy may be related to personal acceptance of the pregnancy as well as acceptance by significant others. A decision had been made to continue the pregnancy rather than terminate. The young mothers possibly had a sense of pride and accomplishment in providing the vehicle for the growth and development of another human being. Even though this study did not find a statistical association between self esteem and maternal-fetal attachment, the researcher still believes there may be some relationship between these variables. It is difficult for the researcher to accept that a mother who has high regard for herself would not transcribe the positive feeling to the baby. The mother would be caring about a very special part of herself. Instruments developed specifically

for the pregnant adolescent might better measure the concepts studied.

Applications To Nursing Theory

Dorothy Johnson's (1980) theory provided a framework for the study. Behavior is explained as the sum total of biological, social, cultural and psychological behaviors. The present research investigated subsystems of these behaviors to identify any imbalance that might benefit from nursing intervention.

Pregnancy was proposed to serve as a stressor which could imbalance the behavior system. The three subsystems that were most at risk for imbalance were determined as achievement (self esteem), dependency (social support), and attachment (maternal-fetal attachment).

Each of these subsystems was evaluated. The data provided unexpected results. The subsystems were found to be in balance. The subjects reported average achievement, adequate dependency and participation in attachment behaviors. If Johnson's model is accepted, the pregnant teenager is not in need of nursing intervention because behavioral integrity remains intact. Most nurses would disagree with this idea.

The theory did not provide as much guidance for the nursing implications as anticipated. The lack of guidance could be related to the age of the subjects, the inadequacy

of the measurement instruments, or the pregnancy condition. Perhaps a different theoretical framework would have been more useful in explaining the nursing needs of the pregnant adolescent.

The theory may be better suited for a physical illness rather than for pregnancy (which is not considered an illness). Johnson's theory seems practical and effective for the nurse working in a hospital setting, but for the advanced prepared nurse who is working in the prenatal setting, another nursing theoretical framework which incorporates developmental theory should be considered.

Implications For Nursing Practice

The nurse must recognize the pregnant adolescent as a unique and essentially healthy individual with special needs and concerns. When providing prenatal care and education, we must work with the young mother in a holistic manner, so not only the medical but also the psychological, social and developmental needs are considered.

The research has indicated a correlation between self esteem and social support and certain variables of social support and maternal-fetal attachment behavior; therefore, it is a nursing responsibility to assess and intervene in these areas to promote optimal wellness and positive emotional development for the adolescent during her pregnancy. Guiding the adolescent mother's growth-fostering

behaviors should be an integral component of prenatal educational programs.

If one agrees with the idea that prenatal emotional attachment is an accurate predictor of later maternal feelings towards the newborn, then assessment and intervention are critical. It is the nurse who can identify a young mother in need of extra help in loving and caring for her child. Early recognition of "bonding failure" could possible lead to prevention of child abuse and neglect. If the attachment process is strengthened during the sensitive period of development, it is more likely that maternal-fetal attachment will reach its optimal level.

Social support for the pregnant adolescent was associated with self esteem and some aspects of maternal-fetal attachment. Strengths and deficiencies in the social support network should be clearly identified for each individual. From these assessments, nursing intervention could be directed toward individual support needs such as parent support groups, home health nursing visits or mother-to-mother programs. The nurse in the patient advocacy role could individualize interventions to augment social support.

Because self esteem is an important aspect of every life, the nurse should make every effort to enhance the self perception of the adolescent who has watched her body undergo radical physical changes during the pregnancy. Advocation of worth, esteem and pride is vital to the young

mother as she struggles to develop her self identity while moving from the world of a child into the world of the adult.

As health care providers, nurses must realize that our teenage patients do not come to us with a predetermined list of needs. It is our responsibility to assess the entire patient and provide psychosocial support, and assistance in planning for the future, as well as direct physical care and education. Nurses must continue to investigate new and improved ways to provide the best possible health care services.

Nursing Interventions

The following suggestions are given to assist the nurse in planning and providing holistic care of young mothers and their families.

1. Consider the developmental level of the adolescent and plan extensive teaching using hands-on experience and concrete explanations.

2. Encourage activities which provide peer interaction both during and after pregnancy to decrease any feeling of isolation.

3. Assist the adolescent to evaluate the strengths of her support system and anticipate each individual's role in assisting her to successfully adapt to motherhood.

4. Assist the adolescent mother to see beyond the all consuming task of motherhood to the establishment of a separate identity for herself.

5. Serve as an advocate for the young mother (be part of support system).

6. Address the normal physiological effects and psychosocial changes of pregnancy at a developmentally appropriate level.

7. Assess maternal-fetal attachment and plan interventions to promote the development of attachment.

Limitations

Interpretation of the results of the research should include these considerations:

1. The sample size was a relatively small number of subjects. Results may have been different if a larger sample had been taken, possibly using more than one data collection site.

2. The data used for the research were limited to the completed questionnaires. There was no opportunity for subjects to expand or qualify a particular response.

3. The study was limited to individuals living in eastern Tennessee. Southern cultural values or beliefs may have impacted data results.

4. Data collection was a one-time event. It is

impossible to determine the extent to which findings were limited by measuring variables at only one point in time.

5. The gift for the baby was designed to encourage participation. However, it is possible that the gift reinforced participants to provide socially desired responses.

6. Racial distribution was not equal. The majority of subjects (60%) were Caucasian, which limits generalizibility.

7. There was no randomization of sample selection. The convenience sample did utilize 80% of the eligible sample population.

8. The measurement tools may not have been precise enough in measuring the concepts studied.

9. The measurement instruments were not age specific, and terminology may have been confusing or unclear.

10. The CSEI and the NSSQ were designed for the nonpregnant subject.

Suggestions For Future Study

This investigation found association between self esteem and social support. Further research is warranted to determine which individuals most influence self esteem during pregnancy. Maternal-fetal behaviors were associated with only select variables of social support. Additional information is needed to determine why the total scores did

not reflect an association. Also, testing is needed to learn about the qualities or types of substitute support that would be effective.

Self esteem instruments could be researched for reliability for use with the pregnant population, along with follow-up studies with the subjects one year postpartum for comparison of self esteem scores. Alternate evaluation forms of maternal-fetal attachment behaviors could be utilized for standardization of the Cranley MFAS.

Summary

This research involved surveying 40 first time pregnant adolescents, aged 15-18 years old, in the last trimester of pregnancy. Hypothesis I, there is no association between self esteem and maternal-fetal attachment, was accepted as true. Hypothesis II, there is no association between self esteem and social support, was rejected. Significant positive correlation was found between the variables. Hypothesis III, there is no association between maternal-fetal attachment and social support was accepted as true. However, the number of individuals in the support network was positively correlated with maternal-fetal attachment behavior.

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APPENDICES

APPENDIX A

KNOX COUNTY HEALTH DEPARTMENT

KNOXVILLE-KNOX COUNTY REGIONAL OFFICE
TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

CLEVELAND PLACE
KNOXVILLE, TENNESSEE 37917

02-21-91

Permission has been given to Olga Eisenhower by the Knox County Health Dept. to collect data for completion of her Thesis.

APPENDIX B

Subject Consent Form

Dear Expectant Mother:

You are invited to participate in a research study to find the feelings a mother has about her unborn child, the feelings a mother has about herself, and the mother's relationship with other people who are important to her. My name is Olga Eisenhower, and I am a graduate nursing student at The University of Tennessee here in Knoxville. Your participation will involve completion of three questionnaires and an information sheet about yourself. The questionnaires will take approximately 30 or 40 minutes to complete while you wait for your appointment. This study is part of the requirements to complete my master's degree in the College of Nursing at The University of Tennessee.

Your help may provide information to help nurses better understand what it is like to be a pregnant teenager. This could in turn help nurses improve the care given to teenagers in the future. There are no risks associated with participation, and your health care will not be affected in any way.

To make sure no one knows what you have answered, the information sheet does not contain your name or address. Once completed and turned in, there will be no way to tell who filled out which questionnaire. All information will be kept and stored in a locked filing cabinet in my home. The data will be summarized for presentations or publications that come from this research study. No names of subjects will be used.

Your help with this project is voluntary. There is no penalty for refusal or withdrawal. .In appreciation for your time spent in answering these questions, I have a small gift for your baby.

If you have any questions about your taking part in the study, please feel free to contact me; the telephone number is below. Your help will be greatly appreciated.

I have read and understand the above statements. I voluntarily consent to participate in this project under the above conditions.

Signed _____ _____
client date

_____
parent or guardian*

Thank you,

Olga Eisenhower
College of Nursing
1200 Volunteer Blvd.
Room 207
Knoxville, TN 37996-4110
(615) 974-4151

Johnie N. Mozingo, Ph.D., R.N.
College of Nursing
1200 Volunteer Boulevard
Knoxville, TN 37996-4110
(615) 974-4151

APPENDIX C

Demographic Sheet

1. Date of birth _____ Age _____

2. Race: Black ____ White ____ Oriental _____ Hispanic ____

American Indian ____ Other (specify) _____

3. Marital Status: single ____ separated ____ divorced ____

How many times have you been married? ____

4. Are you currently in school? _____ Where? _____

What grade? ____ What was the last grade you completed? __

5. Who is aware of your pregnancy? my mother ___ my father ___

baby's father ____

baby's father's parents ____ my brother or sister ____

best friend ____ no one knows but m e _____

teacher/counselor ____ Others (specify) _____

6. When was your last menstrual period? _____

7. When is the baby due? _____

8. With whom are you presently living? my mother_____

my father _____ both parents _____ baby's father ____

baby's father's parents _____ other _____

9. Have you had an ultrasound? yes _____ no _____ ; Did you receive an ultrasound picture of the baby? yes ___ no ___

How many times per week do you look at this picture? _____

10. Are you currently participating in prenatal classes? yes ___ no _____ if yes, where _____; if you are not, do you plan to participate in prenatal classes? yes ____ no____; where _____; other than prenatal classes, where do you get information related to the pregnancy? _____

APPENDIX D

SCHOOL FORM SEI

Coopersmith Inventory

Stanley Coopersmith, Ph.D.
University of California at Davis

Please Print

Name _____ Age _____

School _____ Sex: M __ F__

Grade _____ Date _____

Directions

On the next pages, you will find a list of statements about feelings. If a statement describes how you usually feel, put an X in the column "Like Me." If the statement does not describe how you usually feel, put an X in the column "Unlike Me." There are no right or wrong answers.

Consulting Psychologists Press, Inc.
Palo Alto, CA

Like Me	Unlike Me		
☐	☐	1.	Things usually don't bother me.
☐	☐	2.	I find it very hard to talk in front of the class.
☐	☐	3.	There are lots of things about myself I'd change if I could.
☐	☐	4.	I can make up my mind without too much trouble.
☐	☐	5.	I'm a lot of fun to be with.
☐	☐	6.	I get upset easily at home.
☐	☐	7.	It takes me a long time to get used to anything new.
☐	☐	8.	I'm popular with kids my own age.
☐	☐	9.	My parents usually consider my feelings.
☐	☐	10.	I give in very easily.
☐	☐	11.	My parents expect too much of me.
☐	☐	12.	It's pretty tough to be me.
☐	☐	13.	Things are all mixed up in my life.
☐	☐	14.	Kids usually follow my ideas.
☐	☐	15.	I have a low opinion of myself.
☐	☐	16.	There are many times when I'd like to leave home.
☐	☐	17.	I often feel upset in school.
☐	☐	18.	I'm not as nice looking as most people.
☐	☐	19.	If I have something to say, I usually say it.
☐	☐	20.	My parents understand me.
☐	☐	21.	Most people are better liked than I am.
☐	☐	22.	I usually feel as if my parents are pushing me.
☐	☐	23.	I often get discouraged at school.
☐	☐	24.	I often wish I were someone else.
☐	☐	25.	I can't be depended on.
☐	☐	26.	I never worry about anything.
☐	☐	27.	I'm pretty sure of myself.
☐	☐	28.	I'm easy to like.
☐	☐	29.	My parents and I have a lot of fun together.

Short ☐

Like Me	Unlike Me		
☐	☐	30.	I spend a lot of time daydreaming.
☐	☐	31.	I wish I were younger.
☐	☐	32.	I always do the right thing.
☐	☐	33.	I'm proud of my school work.
☐	☐	34.	Someone always has to tell me what to do.
☐	☐	35.	I'm often sorry for the things I do.
☐	☐	36.	I'm never happy.
☐	☐	37.	I'm doing the best work that I can.
☐	☐	38.	I can usually take care of myself.
☐	☐	39.	I'm pretty happy.
☐	☐	40.	I would rather play with children younger than I am.
☐	☐	41.	I like everyone I know.
☐	☐	42.	I like to be called on in class.
☐	☐	43.	I understand myself.
☐	☐	44.	No one pays much attention to me at home.
☐	☐	45.	I never get scolded.
☐	☐	46.	I'm not doing as well in school as I'd like to.
☐	☐	47.	I can make up my mind and stick to it.
☐	☐	48.	I really don't like being a boy / girl.
☐	☐	49.	I don't like to be with other people.
☐	☐	50.	I'm never shy.
☐	☐	51.	I often feel ashamed of myself.
☐	☐	52.	Kids pick on me very often.
☐	☐	53.	I always tell the truth.
☐	☐	54.	My teachers make me feel I'm not good enough.
☐	☐	55.	I don't care what happens to me.
☐	☐	56.	I'm a failure.
☐	☐	57.	I get upset easily when I'm scolded.
☐	☐	58.	I always know what to say to people.

Gen ☐ Soc ☐ H ☐ Sch ☐ Total x2 = ☐ L ☐

APPENDIX E

Cranley Maternal Fetal Attachment Scale

Please respond to the following items about yourself and the baby you are expecting. There are no right or wrong answers. Your first impression is usually the best reflection of your feelings. Key: DY=Definitely Yes; Y=Yes; U=Uncertain; N=No; and DN=Definitely no.

Make sure you mark only one answer per sentence.

I think or do the following:	DY	Y	U	N	DN
1. Talk to my unborn baby					
2. I feel all the trouble of being pregnant is worth it					
3. I enjoy watching my tummy jiggle as the baby kicks inside					
4. I picture myself feeding the baby					
5. I'm really looking forward to seeing what the baby looks like					
6. I wonder if the baby feels cramped in there					
7. I refer to my baby by a nickname					
8. I imagine myself taking care of the baby					
9. I can almost guess what my baby's personality will be from the way s/he moves					
10. I have decided on a name for a girl baby					
11. I do things to try to stay healthy that I would not do if I were not pregnant					
12. I wonder if the baby can hear inside of me					
13. I have decided on a name for a boy baby					
14. I wonder if the baby thinks and feels inside of me					
15. I eat meat and vegetables to be sure my baby gets a good diet					
16. It seems my baby kicks and moves to tell me it's eating time					
17. I poke the baby to get him/her to poke back					
18. I can hardly wait to hold the baby					
19. I try to picture what the baby will look like					
20. I stroke my tummy to quiet the baby when there is too much kicking					
21. I can tell that the baby has hiccoughs					
22. I feel my body is ugly					
23. I give up doing certain things because I want to help my baby					
24. I grasp my baby's foot through my tummy to move it around					

APPENDIX F

School of Nursing
University of Wisconsin-Madison

Office of Academic Affairs
Telephone: 608/263-5171
FAX: 608/263-5332

Center for Health Sciences
Clinical Science Center
600 Highland Avenue
Madison, Wisconsin 53792

October 3, 1990

Olga Eisenhover
969 Roderick
Knoxville, TN 37923

Dear Ms. Eisenhover:

Thank you for your interest in the Maternal-Fetal Attachment Scale. I am enclosing a copy of the scale and the breakdown by subscale. The scale and subscales are scored on a scale of 1 to 5, with 5 being the most positive statement. Note that for item 22 the scoring is reversed with "Definitely yes" being a 1 and "Definitely no" being a 5. A mean score is then calculated by dividing the sum of the item scores by the number of items answered.

I would appreciate receiving a copy of any research report or paper which utilizes this tool. Best wishes in your work.

Sincerely,

Mecca S. Cranley

Mecca S. Cranley, R.N., Ph.D.
Professor, Perinatal Nursing

MC:mv
enclosures

APPENDIX G

I.D. No. _____

NORBECK SOCIAL SUPPORT QUESTIONNAIRE

Please list each significant person in your life below. Consider all the persons who provide personal support for you or who are important to you. For example, spouse or partner, family members or relatives, friends, work or school associates, neighbors, health care providers, counselor or therapist, minister/priest/rabbi, others. Use only first names or initials, and then indicate the relationship, as in the following example:

Example:

	First Name or Initials	Relationship
1.	Mary T.	Friend
2.	Bob	Brother
3.	M.T.	Mother
4.	Sam	Friend
5.	Mrs. R.	Neighbor

LIST THOSE IN YOUR PERSONAL NETWORK BELOW: (you do not have to list any particular number of people; list only those people who provide support for you or are important to you).

	First Name or Initials	Relationship
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____

For each person you listed, please answer the following questions by writing in the number that applies. 1 = not at all
2 = a little
3 = moderately
4 = quite a bit
5 = a great deal

1. How much does this person make you feel liked or loved?

(Person No.) 1 __ 2 __ 3 __ 4 __ 5 __ 6 __ 7 __ 8 __ 9 __ 10 __

2. How much does this person make you feel respected or admired?

(Person No.) 1 __ 2 __ 3 __ 4 __ 5 __ 6 __ 7 __ 8 __ 9 __ 10 __

3. How much can you confide in this person?

(Person No.) 1 __ 2 __ 3 __ 4 __ 5 __ 6 __ 7 __ 8 __ 9 __ 10 __

4. How much does this person agree with or support your actions or thoughts?

(Person No.) 1 __ 2 __ 3 __ 4 __ 5 __ 6 __ 7 __ 8 __ 9 __ 10 ___

5. If you needed to borrow $10, a ride to the doctor, or some other immediate help, how much could this person usually help?

(Person No.) 1 __ 2 __ 3 __ 4 __ 5 __ 6 __ 7 __ 8 __ 9 __ 10 ___

6. If you were confined to bed for several weeks, how much could this person help you?

(Person No.) 1 __ 2 __ 3 __ 4 __ 5 __ 6 __ 7 __ 8 __ 9 __ 10 ___

7. How long have you known this person?
   1 = less than 6 months
   2 = 6 - 12 months
   3 = 1 to 2 years
   4 = 2 to 5 years
   5 = more than 5 years

(Person No.) 1 __ 2 __ 3 __ 4 __ 5 __ 6 __ 7 __ 8 __ 9 __ 10 ___

8. How frequently do you usually have contact with this person (phone calls, visits or letters)
   1 = once a year or less
   2 = a few times a year
   3 = monthly
   4 = weekly
   5 = daily

(Person No.) 1 __ 2 __ 3 __ 4 __ 5 __ 6 __ 7 __ 8 __ 9 __ 10 ___

9. During the past year, have you lost any important relationships due to moving, a job change, divorce or separation, death, or some other reason? No____ Yes____
   If yes, specify the number of persons who are no longer available to you: _____

APPENDIX H

Request Form

I request permission to copy the Norbeck Social Support Questionnaire (NSSQ) for use in research in a study entitled: The influence Of Self Esteem, Age and Social Support on Prenatal Maternal-Fetal Attachment in Adolescents.

In exchange for this permission, I agree to submit to Dr. Norbeck a copy of the one-page scoring sheet for each subject tested. These data will be used to establish a broad normative database for the instrument for clinical and non-clinical populations. Aside from use in the pooled data bank, no other use will be made of the data submitted. Credit will be given to me in reports of normative statistics that make use of the data I submitted for pooled analyses.

Olga S. Eisenhower
(Signature)

December 3, 1990
(Date)

Position and Full Address of Investigator: Graduate Nursing Student
Univ. of Tennessee, Knoxville
969 Roderick Drive
Knoxville, Tennessee 37923

Permission is hereby granted to copy the NSSQ for use in the research described above.

Jane S. Norbeck
Jane S. Norbeck

12/10/90
(Date)

Please send *two signed* copies of this form to:

Jane S. Norbeck, D.N.Sc.
Department of Mental Health and Community Nursing
University of California, San Francisco
N505-Y
San Francisco, California 94143

VITA

Olga Chesteen Eisenhower was born on August 28, 1956, Newport, Tennessee. She attended Edgemont Elementary School, and three years later, in 1973, graduated from Cocke County High School with honors. She attended Walter State Community College during her senior year of high school and one year following high school graduation. In August of 1977, she received her B.S. in Education from The University of Tennessee, Knoxville. Olga received her M.S. degree with a major in guidance and counseling in June of 1982.

After receiving her undergraduate degree, Olga was employed by the Cocke County School System at Edgemont Elementary School. After completing her graduate degree, she worked as a guidance counselor in Bloomington, Indiana, and Sweetwater, Tennessee. She is currently working for a third year with the Knoxville School System.

In the fall of 1986, Olga returned to graduate school to pursue a second master's degree. She enrolled in the Non-Nurse Master's Program at The University of Tennessee, Knoxville. The M.S.N. degree was conferred in August 1991 with the concentration as a Family Nurse Practitioner.

In 1971, while in high school, she met her husband. In 1974 she married B. Michael Eisenhower. Sixteen years later, on July 10, 1990, she gave birth to their son, Michael Martin Murphy Eisenhower. Dr. Eisenhower, Olga, and Michael currently make their home in Knoxville, Tennessee.