A COMPARISON OF ANXIETY LEVELS DURING PREGNANCY AND POSTPARTUM

A THESIS

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CHAPTER I

INTRODUCTION

Pregnancy and the postpartum period involve profound physiological and psychological adaptation. Physiologically, multiple hormonal changes are triggered in response to the increased metabolic demands of the developing fetus. Psychological changes during this period encompass both intrapersonal stressors and interpersonal stressors causing the individual to be in a state of disequilibrium. Intrapersonal stressors include surrounding the normal development of the fetus, and the mother's ability to parent. Interpersonal stressors involve the nature and amount of support the pregnant woman receives from significant others. These psychological changes are intensified for the primigravida who must experience them for the first time.

A person who perceives any aspect of a situation as dangerous or threatening will experience an increased level of anxiety. Anxiety, a fundamental human emotion, has evolved as an adaptive mechanism for coping with the unknown. It is possible to measure these transitory increases in anxiety levels during the course of pregnancy

and the postpartum period. Recognizing the emotional manifestations of pregnancy and the postpartum period is important from the viewpoint of preventive psychiatry. Understanding the potential reactions of women during the second trimester of pregnancy and the second postpartum week may allow for appropriate intervention and prevent a disordered mother-child relationship.

Problem

The problem investigated was the relationship between anxiety levels during the second trimester of pregnancy and anxiety levels during the second postpartum week.

Purposes

The purposes of this study were to determine:

1. State anxiety levels of pregnant women during the second trimester
2. Trait anxiety levels of pregnant women during the second trimester
3. The state anxiety levels of this same group during the second postpartum week
4. The relationship between state anxiety levels of pregnant women during the second trimester and state anxiety levels during the second postpartum week

5. The relationship between trait anxiety levels and state anxiety levels of pregnant women during the second trimester

6. The relationship between trait anxiety levels and state anxiety levels during the second postpartum week

Background and Significance

There is little doubt that pregnancy and the addition of a new family member may be interpreted as stressful events. Pregnancy and the acquisition of parenthood have been cited as potential maturational crises (LeMasters 1965; Dyer 1965; Lidz 1968). Their studies support that the marital relationship changes with the addition of the first child from a dyad to a more complex system causing this period to represent a significant crisis.

Caplan (1964) defines crisis as a transitional period during which the individual attempts to maintain a state of equilibrium. Normally, the fulfillment of basic needs comes through a series of adaptive behaviors and characteristic problem solving skills which vary according to the severity and significance of the problem. The crisis situation can be conceived of in

any of the following ways: (1) as a threat to fundamental instinctual needs or to a person's sense of integrity, (2) as a loss which may be actual or experienced as a state of acute deprivation, and (3) as a challenge which necessitates mobilization of purposeful problem solving activities. The subjective feelings associated with a crisis include helplessness, depression, anxiety, fear, guilt, and shame.

Pregnancy and postpartum may become periods of crisis if they threaten fundamental instinctual needs or a person's sense of integrity. The woman's sense of integrity may be endangered during pregnancy by fears of loss. In the first trimester, she may have fears of having a miscarriage. As the pregnancy progresses, she may fear that time when she will lose her state of pregnancy; a role in which she has become comfortable, for the new unknown role of motherhood. The fantasies which pregnant women have concerning their unborn child include the desire for the perfect child, as well as the fear of bearing a stillborn or damaged infant (Schwartz and Schwartz 1977).

Coping with her fear of losing control is an important psychological component in the individual's preparation for the experience of labor. The pregnant

woman must face the reality that labor is an involuntary process which will simply "happen." Doctors may temporarily stop it or speed it up; the individual may be able to alter her perception of the contractions through psychoprophylaxis; but despite these factors the uterus will perform its work and will eventually cause expulsion of the fetus (Coleman and Coleman 1977). In addition, a couple's sense of integrity may be altered if labor and delivery are not the experience that they had anticipated (i.e., the use of unplanned medication, change in planned method of delivery).

During the postpartum period, taking on the role of a parent may become a crisis. Increasing and changing responsibilities within the home can lead to temporary disorganization. This, combined with the relative ease or difficulty with which skills of infant care develop, may influence the individual's sense of integrity (Gruis 1977).

As pregnancy and the postpartum period progresses, an individual's instinctual need for physical care and safety increases. During the first trimester, the pregnant woman's concern for safety is related to herself; with the onset of the second trimester, concerns revolve more toward the fetus. As the pregnancy nears its end,

the safety of both mother and fetus becomes equally important (Rubin 1974). The multitude of physical changes during pregnancy and postpartum usually compels the woman to seek varying degrees of medical intervention. A mother's concern for her own physical health and the continued growth of her infant occupy her thoughts during postpartum.

Related to the threats upon fundamental instinctual needs and a person's sense of integrity, Rubin (1974) has theorized that the developmental crisis of role mastery during the childbearing phase begins for the pregnant woman as a series of simultaneously occurring tasks. These psychosocial tasks which must be accomplished during pregnancy include: (1) seeking safe passage for herself and her child through pregnancy, labor, and delivery; (2) ensuring the acceptance of her child she bears by significant persons in her family; (3) binding-in to her unknown child; and (4) learning to give of herself.

The first of these tasks encompasses the mother's concern for her own changing physical condition early in pregnancy and eventually includes concerns for the safety of her growing fetus. Behaviors consistent with these worries include seeking prenatal care early in pregnancy

and avoiding activities which might cause physical injury.

The second task, involving the external world of herself and her baby, necessitates that she be actively accepted in her new role as mother. The sequelae to this would be acceptance by significant others of her unborn child. Intrinsically related to their acceptance of her child is the possibility of rejection, a concern that increases for the pregnant woman as her pregnancy progresses.

The ultimate formation of a maternal-infant bond is contingent upon successful completion of the final two tasks of pregnancy. Binding-in which progresses from an initial association of the individual with the idea of being pregnant, to recognition of the fetus when signs of life occur, to eventually, feeling love for this child. The conflicts or ease surrounding the acceptance of this child may alter the pregnant woman's self-image and self-esteem. The psychological adjustments of pregnancy depend upon constantly resolving the ambivalent feelings about wanting this child (Rubin 1974). Shereshefsky and Yarrow (1973) studied maternal adaptation to pregnancy. Variables predictive of maternal adaptation to pregnancy include: (1) the intensity of feelings about pregnancy,

(2) the degree of concern surrounding physical changes, and (3) the individual adaptability to changes in life style and interpersonal relations brought on by the pregnancy. Measuring anxiety levels in a group of primiparas, Shereshefsky and Yarrow (1973) found that these feelings tended to increase during the first trimester until the woman had accepted the pregnancy. During the second trimester anxiety reactions decrease. The emergence of the final phase of anxiety occurs in the third trimester. Anxiety during this phase is related to the potential danger and pain of labor and delivery and the reality of the baby's arrival.

The last task of pregnancy, the ability to give of oneself, is learned through life experiences. The multiple dimensions of giving, experienced during pregnancy, facilitate success with the task of mothering.

As the experience of pregnancy climaxes in delivery, the individual assumes the tasks of the postpartum period. The phases of this restorative period have been described as "taking-in," "taking-hold," and "letting-go" (Rubin 1961). The first phase lasts approximately three days. It is during this period that the parturient reviews her feelings about labor and delivery.

She progresses from passive dependent behaviors during "taking-in" to independence and autonomy upon completion of the "taking-hold" phase. In "taking-hold," she tends to the tasks of mothering with a sense of immediacy; small frustrations or failures are viewed in crisis proportion. The third phase of the restorative process is the "letting-go" phase. The new mother often has difficulty "letting-go" of the infant as part of her body. She experiences a deep sense of loss because what was once part of her body and her imagination is now reality and separate from her. The woman may silently grieve over this loss. Many changes have taken place within her, and a new life awaits her; however, she must first accept the baby as a person with a personality of his own, and second, she must establish new patterns for herself, her baby, and her family. The new mother moves from the "resting and recuperating phase, which was determined by the events of the immediate past, to embracing a commitment to the immediate present" (Rubin 1961, p. 754).

While all these transitions are occurring during pregnancy and postpartum, the individual will attempt to adapt through the usage of previously developed coping behaviors and problem solving skills. If these techniques are not successful, a crisis period will ensue

during which time the individual may experience varying levels of anxiety.

Though Caplan (1964) theorized that anxiety was a manifestation of the experience of a crisis, Freud (1936) was actually the first to give this phenomena a definition. He distinguished anxiety from other unpleasant affective states, such as anger, grief, or sorrow, by its unique combination of phenomenological and physiological qualities. The phenomenological qualities associated with anxiety include heart palpitations, disturbances in respiration, sweating, and restlessness. Spielberger (1972) defines anxiety as a palpable but transitory emotional state or condition characterized by feelings of tension, apprehension, and heightened autonomic nervous system activity.

Spielberger (1972) has studied the concept of anxiety as a manifestation of a crisis and has divided it into two types, trait anxiety (A-Trait) and state anxiety (A-State). Trait anxiety (A-Trait) refers to the relatively stable individual differences in anxiety proneness. That is, to differences in the disposition to perceive a wide range of stimulus situations as dangerous or threatening, and in the tendency to respond to such threats with elevations in state anxiety (A-State).

Trait anxiety may also be regarded as reflecting individual differences in the frequency and the intensity with which state anxiety (A-State) has been manifested in the past, and the probability that such states will be experienced in the future. Persons who are high in trait anxiety (A-Trait) tend to perceive a larger number of situations as dangerous. State anxiety (A-State) refers to an emotional state or condition that is characterized by consciously perceived subjective feelings, which may fluctuate and vary in intensity over time. The level of state anxiety (A-State) should be high in circumstances that are perceived by an individual to be threatening, irrespective of the objective danger; state anxiety (A-State) intensity should be low in nonstressful situations, or in circumstances in which an existing danger is not perceived as threatening. Through the use of the State-Trait Anxiety Inventory, it is possible to assess both A-State and A-Trait proneness as well as the relationship between A-Trait and A-State during pregnancy and postpartum.

The literature proposes that the changes occurring during pregnancy and the postpartum period have the potential for being interpreted by the individual as a crisis. Anxiety has been recognized as part of the

subjective experience of a crisis. A review of the literature proposes that during the second trimester anxiety is at its lowest and that it may be predictive of anxiety during the postpartum period. No studies were found that specifically examined the relationship between anxiety levels during pregnancy with those levels during the postpartum period. It becomes significant then that this phenomenon be measured.

Definition of Terms

For the purposes of this study, the following definitions were used:

1. Anxiety--a specific emotional state which consists of unpleasant, consciously perceived feelings of nervousness, tension, and apprehension; associated with activation of the autonomic nervous system (Spielberger 1972)

(a) State-Anxiety (A-State)--an emotional state or condition that is characterized by consciously perceived subjective feelings of tension, apprehension, and heightened autonomic nervous system activity. A-State may fluctuate and vary in intensity over time (Spielberger, Gorsuch, and Lushene 1970)

(b) Trait-Anxiety (A-Trait)--refers to relatively stable individual differences in anxiety proneness. It measures the differences between people in their tendency to respond to situations perceived as threatening with elevations in A-State intensity

2. Full Term Newborn--an infant born between 38 and 42 weeks gestation based on the Estimated Date of Confinement

3. Postpartum--period of recovery from childbirth extending through the fourth week after delivery

4. Primigravida--a woman who is pregnant for the first time

5. Second trimester--that period lasting from 14 to 27 weeks gestation, based upon the Estimated Date of Confinement. It is supported within the literature that levels of anxiety are lowest during this trimester

6. Childbirth Education--a routine six week course offered by either the local chapter of Lamaze or the hospital in which the subjects delivered

Limitations

The limitations recognized in this study were:

1. No control on the amount of support subjects received from significant others (i.e., husband, other family members)

2. The amount of experience subjects had with babies or children

3. The quality of the subject's role models for parenting

4. The effect of childbirth education classes on anxiety levels during the postpartum period

5. The content covered by different childbirth educators

6. The method of feeding newborns

7. Whether the pregnancy was planned or unplanned

Assumptions

The assumptions of this study were:

1. Pregnancy is experienced as a maturational crisis

2. An individual's anxiety level is dynamic and measurable

3. During a crisis period, the individual may experience subjective feelings of displeasure such as anxiety

Delimitations

The delimitations for participants in this study were:

1. Participants in the study were primigravidae in their second trimester of pregnancy

2. Participants did not have any medical complications during pregnancy, intrapartum, or postpartum

3. Participants were married and living with their husbands throughout the study

4. Participants were discharged from the hospital with their infants and no infants or mothers were rehospitalized during the course of this study

5. Participants attended an entire course of childbirth education classes

6. Participants were Caucasian and ranged in age from 20 to 30 years

7. Participants were not taking anxiety reducing medications at the time of the study

8. Socioeconomic status was measured using Hollingshead and Redlich's (1958) Two Factor Index of Social Position, which used educational level and occupation as variables; all subjects fell within Class II and III

Summary

The problem being investigated was whether or not there was a significant correlation between levels of anxiety during pregnancy and those same levels during

the second postpartum week. The concepts of pregnancy and postpartum as potential periods of crisis resulting in varying levels of anxiety are introduced in Chapter I. In the succeeding chapters, literature is reviewed which previously investigated the components of pregnancy and the postpartum period as a potential maturational crisis. Data based on Spielberger's State-Trait Anxiety Inventory (STAI) (Spielberger, Gorsuch, and Lushene 1970) were collected from a convenience sample and analyzed using a nonparametric statistical test. The concluding chapter summarizes the study results, potential areas for future research, and the implications for professional nursing practice.

CHAPTER II

REVIEW OF THE LITERATURE

The crisis of pregnancy and parenthood involves role reassignment, shifting of status positions within the family, and reorientation of personal values as individual needs are being re-evaluated and met through new channels. Studies have been conducted to determine what effects the arrival of the first child have upon pre-existing family roles and relationships.

A study conducted by LeMasters (1965) revealed strong evidence that the crisis reaction described by 83 percent of study participants during the postpartum period was not the result of ambivalent feelings surrounding wanting children. Thirty-five of the thirty-eight pregnancies in the group were "planned" or "desired." It was the researcher's conclusion that the crisis group appeared to have romanticized parenthood. They felt they had little preparation or training for parental roles. Mothers with professional work experience suffered an extensive or a more severe crisis in every case. The problems experienced by the group included: chronic tiredness, loss of sleep, difficulty organizing time to include husband and

housework, and a sense of inadequacy at being able to fulfill the role of a mother.

Dyer (1965) in repeating LeMasters' (1965) study found that those couples who had children under six months of age were still experiencing a more significant crisis than those whose children were beyond six months of age. He suggested that many American parents, especially those in the middle class, experienced some incompatability between their parental roles and certain other roles. The changes from the pre-parenthood husband-wife pair relationship to the husband-wife-child triad relationship is a difficult adjustment to make. The conclusion both researchers drew is that parenthood as such is not as highly valued as in some cultures, women here value other things.

Pregnancy was defined by Rappaport (1965) as a "hazardous event." It may pose a problem in the current life style of a couple which is not easily overcome, or be a threat to the instinctual needs of the individual. Pregnancy triggers unresolved or partially resolved unconscious conflicts. Previous life events interpreted by the individual as failures increase the significance and become an added burden. During pregnancy, memories of old problems linked symbolically to the present are

stimulated and easily emerge into consciousness. Rappaport (1965) found that these were successfully dealt with by relatively brief therapeutic intervention. The explanation for this phenomena seems to be that the energy needed to maintain repression of these earlier unsolved problems may now become available to solve current problems in a more mature manner. In a sense, the crisis of pregnancy with its need to mobilize energy acts as a second chance for correcting earlier faulty problem solving experiences.

Cry and Wattenberg (1965) recognized that pregnancy and the immediate postpartum period were potentially critical times for the individual. During this period there are biological and emotional changes occurring. The latter are related to the individual's role as a woman and a mother. It is important that she resolve this crisis in such a way as not to involve her child in her own problems. She is then free to recognize and meet his needs. If not accomplished, emotional disorders and social maladjustment may be potentiated.

Bibring (1959) agrees that the potential for development of a crisis situation is inherent in the endocrinological changes and the activation of unconscious psychological conflicts pertaining to the factors involved

in pregnancy and the psychic reorganization necessary for becoming a mother. Under favorable conditions this crisis represents a turning point resulting in maturational steps toward a new level of functioning. Like Cry and Wattenberg (1965), Bibring (1959) recognized that the successful outcome of this crisis has profound effects on the early mother-child relationship.

Caplan (1959) recognized pregnancy as a biologically determined psychological crisis and that during pregnancy both the interpersonal forces in the pregnant woman and the interpersonal forces in her family are in a state of disequilibrium. Understanding the reactions of an individual during pregnancy allows interventions to be made which would prevent the development of a disordered mother-child relationship. A healthy and undisturbed mother-child relationship could be established for at least the first few months of the child's life. The emotional changes accompanying pregnancy can be categorized as somatopsychic or psychogenic. Those produced as a result of variations in hormonal or metabolic processes were defined as somatopsychic. Psychogenically induced emotional responses occur early in pregnancy and are linked to reactions of the individual to the sexual aspects of the reproductive process. The focus is placed

upon the pregnancy as the result of sexual intercourse. As pregnancy develops, a woman tends to forget this and to focus her attention upon the motherhood aspects. Pregnancy is marked by increased emotional lability, irritability and sensitivity, having little relationship to external factors.

In a study involving extensive personal interviews, Deutscher (1970) confirms a common maturational pattern occurring in couples pregnant for the first time. The emotional experiences during each trimester reveal the regressive and sequential development leading toward family formation. Deutscher (1970) found during the first and third trimester profound anxieties related to fears: (1) of physical injury to self, (2) of loss of personal autonomy both during pregnancy and in the future related to the dependency needs of this new human being, and (3) in response to increased fantasy and dream material being brought into the consciousness. Added to these during the third trimester are anxieties related to labor and delivery. In contrast during the second trimester in response to fetal movement, there exists a sense of awe and respect for the "miraculous" process occurring. The fantasies and expectations involve the integration of the child within the dyad and potential

relationships. Enthusiasm and the revelation of expectations for this child occur between the parents. This research confirms the second trimester as a period of relative calm. Deutscher (1970) recognized that all of these changes are accompanied by varying degress of personal disorientation, confusion, and depression.

The second trimester was hypothesized to be the most stable period of pregnancy by Murai and Murai (1975). The Mood Adjective Checklist was administered to 128 pregnant women and an equal number of non-pregnant controls at intervals during the pregnancy of the experimental group. Results indicated that the experimental group was somewhat unstable in their mood during the first and third trimester when compared to the non-pregnant group during this same period. The experimental group during the second trimester and the control group at this same time showed stability in their mood.

The ease with which a couple makes the transition to parenthood is affected by how successfully they have defined and accepted their relationship with each other as a couple. Flexibility in seeing each other as they are and the development of behaviors which facilitate growth and risk-taking allow the couple to work collaboratively. Rossi (1968) suggested that the individual

parents' childhood experience with the parent-child relationship is the determining factor in the success with which they change from a couple to a family.

Hrobsky (1977) defines two levels of need necessary for successful passage into parenthood: (1) the individual needs of each person in the system, and (2) the needs of the parents as a couple. Preparation for parenthood begins with the anticipatory phase during which time two adults make a commitment to become a couple. During the early anticipatory phase, the couple must work out their roles and hopefully develop flexibility in task assignment. Late in the anticipatory phase, behaviors reflect preparation for the arrival of an infant. Caplan (1959) observed an increased passivity and the presence of dependent behaviors in the pregnant woman during this time. Hrobsky (1977) feels that the dependent behaviors, on the part of someone who will soon be responsible for the full-time care of a totally dependent infant, could be interpreted as the final testing of her own opportunity to take on a totally dependent role. The fact that pregnant women easily reveal fantasies and unresolved conflicts from childhood is necessary to finally separate completely from their

own parents in order to form their future relationship with this yet unborn child.

The period after childbirth is a time during which the attachment between parent and child is laid down through intimacy and prolonged contact. Ambivalence regarding the infant's existence surfaces during this period whether the pregnancy was planned or unplanned. This is a result of the child's helplessness which demands that parents exert tremendous energy, curtail some personal mobility and social life, and delay gratification of some of their own needs. Benedek (1959) describes a child's need for mothering as absolute while the need of an adult woman to mother is relative. The inconsistency in needs will stimulate ambivalence and be anxiety producing for the new mother.

As a result of the frequency with which nurses come in contact with postpartum patients, and realizing that the change in family structure can provoke both anxiety and growth; Baird (1976) found it appropriate to describe the successful use of crisis intervention during this period. The goal of nursing intervention in the crisis situation of parenthood is to promote the potential growth and joys of parenthood while minimizing the disruptive effects. Steps in this process include

recognizing the couple's perception of parenthood, determining what situational supports are present, and obtaining a history of past coping mechanisms used by the couple. Once the couple identifies the birth of the child as having caused some disequilibrium, options are explored and intervention can occur.

The postpartum period as a potential time of crisis was studied by Melchior (1975). During a series of interviews which took place during the immediate postpartum period, after one week and again in a month the interviewer compiled a list of problems for each participant. The list included physical complaints as well as family adjustments. Those women who reported few problems during their hospitalization continued to encounter the fewest number of problems in subsequent weeks after discharge.

Griffin (1976) conducted a study to identify possible components of disequilibrium during pregnancy leading to a crisis. The interpersonal relationships of participating couples were examined by using the Fundamental Interpersonal Relationships Orientation-Behavior Tool which measured their interpersonal needs; i.e., affection, control, and inclusion. The theoretical framework of her study was that the mutual satisfaction

of interpersonal needs leads to harmonious coexistence and the ability to work together. She hypothesized that when individuals involved in a marital relationship do not recognize each other's needs or are incompatible (i.e., vary greatly) in their needs for affection, inclusion and control during pregnancy, the likelihood is greater that these interpersonal needs will function as stressors. This in combination with other factors might turn pregnancy into a period of crisis. The largest discrepancy between husbands' and wives' was found in the area of affection and inclusion, indicating a degree of incompatibility between them in these aspects of their interpersonal relationships. Although incompatibility before pregnancy was not measured the increased need by women for affection and inclusion may give support to the theory that the emotional needs of women change during pregnancy (Caplan 1961).

The realities of pregnancy and postpartum are compared by Carlson (1976). The events of pregnancy for the primipara are often surprising but always gradual. The physical as well as psychological changes necessitate that an adaptive process occur, the demands for which are slow and cumulative. Labor and delivery on the other hand thrusts the individual suddenly into a lifelong

commitment with awesome responsibilities. The author describes the postpartum period as "bewildering, disrupting, and disorienting."

Carlson (1976) found that the confusion the new mother feels is related to three interwoven aspects of her recent experience. First, she must transform her throughts concerning her infant from the fantasies of pregnancy to present reality. Reconciliation with the reality of this infant must occur as well. The idea that any viable baby will please a mother is unrealistic; mothers do have their preferences and expectations. The second disrupting aspect of the postpartum period is the sudden and dramatic body changes. Many women verbalize thoughts that once delivery was over, everything physically would be back to normal. Primiparas express surprise at the trauma and discomforts that are the sequelae of the birth process. They are unprepared for painful episiotomies, enlarged hemorrhoids, and feelings of exhaustion. The final disorienting event of the postpartum period is the burden of new parental responsibilities. The focus is on the new mothers' frustrations as she attempts to gain skill in the mothering activities essential to the care and nurturing of her new baby. If her energy is directed positively, the upheaval and

anxiety of the postpartum period can serve as an impetus to gain perspective, control, and competence in this new experience of mothering.

The literature demonstrated the importance of becoming sensitive to the presence of behaviors which would indicate the existence of a crisis. The experience of both pregnancy and postpartum have the potential for causing increased levels of anxiety and maladaptive behavior. Recognizing these would allow appropriate interventions to be implemented.

CHAPTER III

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

This was a descriptive study to determine the relationship between levels of anxiety during the second trimester of pregnancy and levels of anxiety during the second postpartum week.

Population and Setting

A convenience sample of thirty subjects participated in the study based on the delimitations previously stated. The general population from which the sample was chosen was located in an urban setting (population 60,000) primarily composed of middle-class people. Those asked to participate were primigravidae in their second trimester of pregnancy receiving prenatal care from a private physician. The private physician involved in the care of these subjects was female and in practice without associates. She was very supportive of her patients and requires that all husbands who plan to participate in their wife's labor and delivery attend prenatal classes. The available classes were given either by a member of the local chapter of Lamaze or through the hospital in

which they delivered. An initial telephone contact was made with potential study participants after obtaining their names from their private physician. Data collection for the study took place in the individual residence of all subjects.

Instrument

The State-Trait Anxiety Inventory (STAI) was used to measure the participant's anxiety level (Appendix A, B, and C). The tool consisted of three parts and was designed to be self-administered. Part One was a Demographic Data Sheet (Appendix D), Parts Two and Three consisted of two 20-item rating scales. The scales measure two distinct anxiety concepts: state anxiety (A-State) and trait anxiety (A-Trait). The STAI A-Trait scale asked people to indicate how they generally feel, while the STAI A-State scale asked people to indicate how they felt at a particular moment in time (Spielberger, Gorsuch, and Lushene 1970).

Since the A-State scale was designed to be sensitive to the conditions under which the test was administered, scores on this scale can be influenced by the emotional atmosphere that may be created if the A-Trait scale is given first. In contrast, it has been

demonstrated that A-Trait scales are relatively impervious to the conditions under which they are given (Spielberger, Gorsuch, and Lushene 1970). Therefore, the A-State scale was given first, followed by the A-Trait scale, as recommended.

The instructions for the STAI A-Trait scale were those printed on the test form (Appendix A). For the STAI A-State scale however, the instructions were modified to evaluate the level of A-State intensity for a particular situation or time interval that is of interest to the experimenter (Spielberger, Gorsuch, and Lushene 1970). For purposes of this study, the investigator asked participants to complete the STAI A-State in reference to how they were feeling, at that point in time, about their pregnancy or postpartum experience (Appendix B and C). The subjects respond to each STAI item by rating themselves on a four-point scale. The items to be scored on the A-State scale ranged from 1 (not at all) to 4 (very much so). The items to be scored on the A-Trait scale ranged from 1 (almost never) to 4 (almost always).

The test-retest reliability data on STAI was based on a sample of 197 undergraduate college students. The students were retested at intervals of one hour,

twenty days, and 104 days. The test-retest correlations for the A-Trait scale were reasonably high, ranging from .72 to .54 as would be expected because a valid measure of A-State should reflect the influence of unique situational factors existing at the time of testing (Spielberger, Gorsuch, and Lushene 1970).

Evidence of concurrent validity of the STAI A-Trait scale is substantiated, due to its moderately high correlations with the IPAT Anxiety Scale (.75), as demonstrated in a study of 126 college females, and with the Taylor Manifest Scale (.80) in a study which included 66 neuropsychiatric patients (Spielberger, Gorsuch, and Lushene 1970).

Evidence bearing on construct validity of A-State scale was obtained in a study of 977 undergraduate college students. The students were first administered the A-State scale with the standard instructions (NORM conditions). They were then asked to respond according to how they believed they would feel "just prior to a final examination in an important course" (EXAM conditions). The mean score for the A-State scale was considerably higher in the EXAM condition than in the NORM conditions (Spielberger, Gorsuch, and Lushene 1970).

Data Collection

During the initial phone contact, the investigator introduced herself and provided an explanation of the study (Appendix E). If the subject agreed to participate in the study the investigator made arrangements to meet with her at her home. Subjects with additional questions regarding the study were given the explanation that it attempts to measure the intensity of feelings during the experience of pregnancy. The examiner refrained from using the term "anxiety" while administering the test because they would have contaminated the face validity of the test items, but rather made consistent references to the tests as a Self-Evaluation Questionnaire (Spielberger, Gorsuch, and Lushene 1970).

During the initial meeting, the investigator repeated the explanation of the study given over the phone and asked the participant to read and sign the consent form (Appendix F). The investigator made herself available at this time to answer any questions which the subject may have had.

The investigator then read the instructions on the STAI A-State scale (Appendix B), which were modified in order to focus upon a particular time period (i.e., second trimester of pregnancy). The subject was asked

to complete this Self-Evaluation Questionnaire first. Next the investigator read the instructions on the STAI A-Trait scale (Appendix A), which the subject then completed. After the subject had completed the STAI scales, the investigator made herself available to answer any further questions and reminded the subject that within two weeks after her delivery, she would be asked to complete twenty additional questions (Appendix C).

Human Rights

Signed consent for the study was obtained from the following: (1) Texas Woman's University Human Research Review Committee (Appendix G), (2) subjects agreeing to participate in the study (Appendix F). Subjects who agreed or did not agree to participate in the study were informed that the study in no way involved physical risk, and only minimal psychological risk. Subjects were also informed that participation would not influence the care they received, and that they may withdraw from the study at any time.

Treatment of Data

Each test was hand scored. The data were analyzed by the use of the Spearman Rank Correlation Coefficient.

This nonparametric test measured the relationship between (1) the level of A-Trait anxiety and A-State anxiety during the second trimester of pregnancy, (2) the level of A-Trait anxiety and A-State anxiety during the second postpartum week, and (3) the level of A-State anxiety during the second trimester of pregnancy and A-State anxiety during the second postpartum week.

Summary

Chapter III contained information relating to the selection of a study population and the protection of their human rights. Also included was the procedure for administering the self-evaluation tool and the statistical test used to analyze the resulting data.

CHAPTER IV

ANALYSIS OF DATA

The purpose of this descriptive study was to identify a relationship among three measures of anxiety. Each subject received three separate numerical scores based upon responses at different times to the State-Trait Anxiety Inventory (Spielberger, Gorsuch, and Lushene 1970). The Spearman Rank Order Coefficient or Correlation and the Coefficient of Determination were used as quantitative measure of correlation between two variables.

Findings

The study started with thirty participants, but the data are based on only the twenty subjects who completed the study. Ten individuals were dropped from the study for the following reasons: three Cesearean Sections, one meconium aspiration, and six who resigned from the study for personal reasons. The procedure for the collection of data went according to the protocol outlined in Chapter III. The subjects ranged in age from 20-29 years. Seventy-five percent planned their pregnancy and 75 percent breast fed their infants. Socioeconomic status

was measured using Hollingshead's Two Factor Index of Social Position, 65 percent of the subjects fell within Class II while 35 percent occupied Class III. This demographic data are outlined in Table 1.

TABLE 1

DEMOGRAPHIC DATA

Age	Frequency	Pregnancy[1]	Feeding Method[2]	Socioeconomic Class II	Socioeconomic Class III
20	1	1	--	1	--
21	2	--	--	1	1
22	1	1	1	--	1
23	1	1	1	1	--
24	4	4	3	3	1
25	1	--	1	--	1
26	5	4	5	4	1
27	3	3	3	3	--
28	1	1	1	1	--
29	1	1	--	--	1
Total	29	15(75%)	15(75%)	14(65%)	6(35%)

[1]Indicates number of planned pregnancies

[2]Indicates number of breast feeding mothers

The first three purposes of this study were to determine:

1. State anxiety levels of pregnant women during the second trimester

2. Trait anxiety levels of pregnant women during the second trimester

3. State anxiety levels of this same group during the second postpartum week

The anxiety scores are listed for all subjects in Table 2. Each row represents one subject's set of scores.

TABLE 2

NUMERICAL ANXIETY SCORES

Subject	State Anxiety (Pregnancy)	Trait Anxiety	State Anxiety (Postpartum)
1	52	47	51
2	50	47	45
3	47	44	39
4	48	40	50
5	43	45	51
6	37	47	50
7	49	53	50
8	51	49	47
9	50	48	48

TABLE 2 (continued)

Subject	State Anxiety (Pregnancy)	Trait Anxiety	State Anxiety (Postpartum)
10	46	40	50
11	42	52	44
12	51	44	43
13	56	45	52
14	51	49	53
15	45	43	44
16	38	36	29
17	40	42	56
18	50	47	45
19	40	39	49
20	54	50	50

The final three purposes of this study were to determine if a relationship existed between:

4. State anxiety levels of pregnant women during the second trimester and state anxiety levels during the second postpartum week

5. Trait anxiety levels and state anxiety levels of pregnant women during the second trimester

6. Trait anxiety levels and state anxiety levels during the second postpartum week

In order to compute the Spearman Rank Order Coefficient of Correlation, the data in Table 2 were ranked and are presented in Table 3.

TABLE 3

RANKS OF STATE ANXIETY DURING THE SECOND TRIMESTER OF PREGNANCY, TRAIT ANXIETY, AND STATE ANXIETY DURING THE SECOND POSTPARTUM WEEK

Subject	Rank		
	State Anxiety (Pregnancy)	Trait Anxiety	State Anxiety (Postpartum)
1	18	12.5	16.5
2	13	12.5	6.5
3	9	7.5	2.0
4	10	3.0	13.0
5	6	9.5	16.5
6	1	12.5	13.0
7	11	20.0	13.0
8	16	16.5	8.0
9	13	15.0	9.0
10	8	3.0	13.0
11	5	19.0	4.5
12	16	7.5	3.0
13	20	9.5	18.0
14	16	16.5	19.0
15	7	6.0	4.5

Table 3 (Continued)

Subject	Rank		
	State Anxiety (Pregnancy)	Trait Anxiety	State Anxiety (Postpartum)
16	2	1.0	1.0
17	4	5.0	20.0
18	13	12.5	6.5
19	3	3.0	10.0
20	19	18.0	13.0

The coefficients of correlation for the three sets of data were computed and are illustrated in Table 4.

TABLE 4

RANK ORDER COEFFICIENTS OF CORRELATION

	State Anxiety (Postpartum)
State Anxiety (Pregnancy)	-.36

	State Anxiety (Pregnancy)	State Anxiety (Postpartum)
Trait Anxiety	.15	-.41

1. A negative rank order coefficient of correlation of -.36 was measured between state anxiety during the second trimester of pregnancy and state anxiety during the second postpartum week

2. A positive rank order coefficient of correlation of .15 was measured between trait anxiety and state anxiety during the second trimester of pregnancy

3. A negative rank order coefficient of correlation of -.41 was measured between trait anxiety and state anxiety during the postpartum period

To determine to what extent the variability of one anxiety score was associated with the variability of another anxiety score, the coefficient of determination was calculated based upon the final three purposes and are illustrated in Table 5.

TABLE 5

RANK ORDER COEFFICIENTS OF CORRELATION AND COEFFICIENTS OF DETERMINATION

	State Anxiety (Pregnancy)			
	Ψ	r^2		
State Anxiety (Postpartum)	-.36	13%		
	State Anxiety (Pregnancy)		State Anxiety (Postpartum)	
	Ψ	r^2	Ψ	r^2
Trait Anxiety	.15	1%	-.41	16%

4. The coefficient of correlation of state anxiety levels during the second trimester of pregnancy and state anxiety levels during the second postpartum

week was -.36, yielding a corresponding coefficient of determination of 13 percent. This is not a strong negative correlation and would not be useful in predicting a relationship between these variables.

5. The coefficient of correlation of trait anxiety and state anxiety during the second trimester of pregnancy was .15 yielding a corresponding coefficient of determination of less than 1 percent. This indicates that as the score for trait anxiety increases, the respective state anxiety score increases. If the intrinsic, relatively stable individual proneness to experiencing anxiety (trait anxiety) is high, pregnancy may be experienced as a crisis with increased state anxiety scores.

6. The coefficient of correlation of trait anxiety levels and state anxiety levels during the second postpartum week was -.41 yielding a corresponding coefficient of determination of 16 percent. This is not a strong negative correlation and would not be useful in predicting a relationship between these variables.

The following discussion was based upon reported anxiety scores and demographic data:

1. State anxiety during the second postpartum week increased for 45 percent of the subjects when compared with the same group's state anxiety during the

second trimester of pregnancy. Seventy-eight percent of these subjects were breast feeding, 78 percent of these subjects planned their pregnancy, and 78 percent were classified in Socioeconomic Class II. It appears that planning a pregnancy and occupying a higher socioeconomic class does not decrease anxiety during the second postpartum week. This is substantiated by a number of authors who recognize the maturational crisis of parenthood and refer to the realities of child care and parenthood as being romantizied in our culture (Caplan 1959; Rappaport 1962; LeMasters 1965; Dyer 1965; Griffin 1976; Hrobsky 1977). Problems associated with breast feeding may also be responsible for increased anxiety during the second postpartum week (Melchior 1975).

2. State anxiety during the second trimester of pregnancy increased for 70 percent of the subjects when compared with their trait anxiety scores; 30 percent reported a decrease in anxiety scores during this time. Seventy-one percent of these subjects with increased anxiety levels had reported their pregnancy to have been planned and 64 percent were classified in Socioeconomic Class II. It appears that planning a pregnancy and occupying a higher socioeconomic class does not decrease anxiety during the second trimester of pregnancy. This is

substantiated by those authors who believe pregnancy to be a potential maturational crisis experienced with increased levels of anxiety (Bibring 1959; LeMasters 1965; Dyer 1965; Lidz 1968; Deutscher 1970). Those individuals who recorded a decreased level of anxiety during the second trimester of pregnancy are consistent with those authors who recognize this as a relatively calm period (Deutscher 1970; Shereshefsky and Yarrow 1973; Coleman and Coleman 1977).

3. State anxiety during the postpartum period increased for 50 percent of the subjects when compared with their trait anxiety scores; 30 percent reported a decrease in state anxiety during the postpartum period while 20 percent of the subjects' scores were the same for both tests. Ninety percent of the subjects with increased anxiety were breast feeding, 70 percent had reported their pregnancy to have been planned and were classified in Socioeconomic Class II. It appears that planning a pregnancy and occupying a higher socioeconomic class does not decrease anxiety during the second postpartum week. This is substantiated by a number of authors who recognize parenthood as a maturational crisis (Caplan 1959; Rappaport 1962; LeMasters 1965; Dyer 1965; Griffin 1976; Hrobsky 1977). Problems associated with

breast feeding may also be responsible for increased anxiety during the second postpartum week (Melchior 1975).

Table 6 illustrates the comparison of anxiety scores and demographic data.

TABLE 6

COMPARISON BETWEEN INCREASED ANXIETY LEVELS AND SELECTED DEMOGRAPHIC VARIABLES

	State Anxiety (Postpartum) higher than State Anxiety (Pregnancy)		State Anxiety (Pregnancy) higher than Trait Anxiety		State Anxiety (Postpartum) higher than Trait Anxiety	
	45%	(9)*	70%	(14)*	50%	(10)*
Breast Fed	78%[1]	(7)*	--	--	90%	(9)*
Planned Pregnancy	78%	(7)*	71%	(10)*	70%	(7)*
Socioeconomic Class	78%	(7)*	64%	(9)*	70%	(7)*

[1]Indicates 78% of the 45%.
*Indicates number of subjects.

Summary

The purpose of this study was to identify a relationship among three measures of anxiety. Reporting of the information in this chapter was done didactically and through the use of illustrations. The tool used to measure anxiety was the State-Trait Anxiety Inventory. Each subject received three separate anxiety

scores (Table 2). These scores were ranked (Table 3) and analyzed using the Spearman Rank Coefficient of Correlation (Table 4) and computing the Coefficients of Determination (Table 5). Demographic data were collected (Table 1) and analyzed using simple percentages (Table 6) in an attempt to relate this data to the reported anxiety scores.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

There is little doubt that pregnancy and the addition of a new family member creates stress within the existing couple. A review of the literature revealed that many authors viewed pregnancy and the acquisition of the parental role as constituting a potential maturational crisis (Cry and Wattenberg 1957; Bibring 1959; Caplan 1959; Rappaport 1962; Dyer 1965; LeMasters 1965; Deutscher 1970; Melchior 1975; Griffin 1976).

A person who perceives any aspect of a situation as dangerous or threatening will experience an increased level of anxiety. Anxiety, a fundamental human emotion has evolved as an adaptive mechanism for coping with the unknown (Caplan 1964). The concept of anxiety reflects both individual personality states and personality traits. Anxiety as an emotional reaction may be viewed as a personality state; an empirical reaction or process taking place here and now at a given level of intensity. Personality traits may be conceptualized as relatively enduring individual differences among dispositions to

react or behave in a specified manner with a certain amount of predictability (Thorne 1966; Spielberger 1972).

Summary

The problem investigated in this study was the relationship between anxiety levels during the second trimester of pregnancy and anxiety levels during the second postpartum week. The purposes of this study were to determine: (1) state anxiety levels of pregnant women during the second trimester, (2) trait anxiety levels of pregnant women during the second trimester, (3) the state anxiety levels of this same group during the second postpartum week, (4) the relationship between state anxiety levels of pregnant women during the second trimester and state anxiety levels during the second postpartum week, (5) the relationship between trait anxiety levels and state anxiety levels of pregnant women during the second trimester, and (6) the relationship between trait anxiety levels and state anxiety levels during the second postpartum week.

A convenience sample of thirty primigravidae in their second trimester of pregnancy receiving prenatal care from a single physician was asked to participate in the study. Data were based on only the twenty subjects

who completed the study. Data collection took place in the individual residence of all subjects. Socioeconomic status was measured for this group using Hollingshead and Redlich's (1959) Two Factor Index of Social Position; all subjects fell within Class II and III.

In collecting the data, an initial phone contact was made with potential study subjects to provide them with an explanation of the study. If the individual agreed to participate in the study, a meeting occurred in the subject's home. The instrument used in this descriptive study was the State-Trait Anxiety Inventory (Spielberger, Gorsuch, and Lushene 1970).

Results based on the data collected were analyzed by the use of the Spearman Rank Correlation Coefficient and the Coefficient of Determination. Comparisons were made between anxiety scores and demographic variables.

Conclusions

The conclusions for this study were based upon the stated limitations and delimitations:

The coefficient of correlation did not yield a statistically significant positive correlation between the following variables: (1) state anxiety levels of pregnant women during the second trimester and state

anxiety during the second postpartum week, (2) trait anxiety levels and state anxiety levels of pregnant women during the second trimester, and (3) trait anxiety levels and state anxiety levels during the second postpartum week. In fact, two of the correlations indicated negative relationships, but negative correlations do not seem to be clinically meaningful.

The absence of a significant correlation between anxiety levels could be due to extraneous variables such as small sample size, or testing too early in the postpartum period. It could also be that anxiety is not lowest during the second trimester although this is not proven to be true in the review of the literature. A possible explanation for the results was made by Spielberger (1970). He describes an experimental study in which he found negative anxiety level correlations for those subjects who were less educated. This cannot actually be transferred as a conclusion to the present study because data on the subjects' educational level were not collected.

It could also be questioned when reviewing the subjects' three anxiety scores if a difference of one or two units is of any significance. A different tool might have provided more significant data.

Implications

As nurses we must continue to recognize pregnancy and postpartum as potential periods of crisis for all family members if we are going to be able to help families grow and mature. Further research needs to be done within the clinical setting to discover new ways of recognizing those families potentially at risk. Nurses in clinics, doctors' offices and hospitals are in an excellent position to provide effective intervention when an individual's or a family's problem-solving skills are inadequate to cope with the changes of both pregnancy and postpartum. Emphasis should be placed, in addition to actual childbirth preparation, on presenting the realities of postpartum and teaching skills necessary for parenthood (i.e., child care, communication).

Recommendations

In light of the findings presented above, the following recommendations for further study are presented:

1. This study should be replicated with a larger number of subjects

2. This study should be replicated controlling variables such as whether or not the pregnancy was planned,

the method of feeding chosen, and the educational levels of the subjects

3. This study should be expanded using a longitudinal research design which would include all three trimesters of pregnancy and additional time during the postpartum period

4. There needs to be continued search for relevant and reliable instruments which adeaquately measure anxiety states and traits

5. More research needs to be done to evaluate which nursing interventions are effective in recognizing anxiety

APPENDIX A

SELF-EVALUATION QUESTIONNAIRE

Code Number:_____ Date:_____

Directions: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you feel right now, that is at this time during your pregnancy. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

		Not at all	Somewhat	Moderately so	Very much so
1.	I feel calm	o	o	o	o
2.	I feel secure	o	o	o	o
3.	I am tense	o	o	o	o
4.	I am regretful	o	o	o	o
5.	I feel at ease	o	o	o	o
6.	I feel upset	o	o	o	o
7.	I am presently worrying over possible misfortunes	o	o	o	o
8.	I feel rested	o	o	o	o
9.	I feel anxious	o	o	o	o
10.	I feel comfortable	o	o	o	o
11.	I feel self-confident	o	o	o	o
12.	I feel nervous	o	o	o	o
13.	I am jittery	o	o	o	o
14.	I feel "high strung"	o	o	o	o

		Not at all	Somewhat	Moderately so	Very much so
15.	I am relaxed	o	o	o	o
16.	I feel content	o	o	o	o
17.	I am worried	o	o	o	o
18.	I feel over-excited and "rattled"	o	o	o	o
19.	I feel joyful	o	o	o	o
20.	I feel pleasant	o	o	o	o

Source: Spielberger, C. D.; Gorsuch, R. L.; and Lushene, R. 1970. STAI manual for the State-Trait Anxiety Inventory. Palo Alto: Consulting Psychologists Press, Inc.

APPENDIX B

SELF-EVALUATION QUESTIONNAIRE

Code Number:_____ Date:_____

Directions: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you generally feel. There are no right or wrong answers. Do not spend too much time on any one statement, but give the answer which seems to describe how you generally feel.

		Almost Never	Sometimes	Often	Almost Always
21.	I feel pleasant	o	o	o	o
22.	I tire quickly	o	o	o	o
23.	I feel like crying	o	o	o	o
24.	I wish I could be as happy as others seem to be	o	o	o	o
25.	I am losing out on things because I can't make up my mind soon enough	o	o	o	o
26.	I feel rested	o	o	o	o
27.	I am "calm, cool, and collected"	o	o	o	o
28.	I feel that difficulties are piling up so that I cannot overcome them	o	o	o	o
29.	I worry too much over something that really doesn't matter	o	o	o	o
30.	I am happy	o	o	o	o
31.	I am inclined to take things hard	o	o	o	o
32.	I lack self-confidence	o	o	o	o
33.	I feel secure	o	o	o	o

		Almost Never	Sometimes	Often	Almost Always
34.	I try to avoid facing a crisis or difficulty	o	o	o	o
35.	I feel blue	o	o	o	o
36.	I am content	o	o	o	o
37.	Some unimportant thought runs through my mind and bothers me	o	o	o	o
38.	I take disappointments so keenly that I can't put them out of my mind	o	o	o	o
39.	I am a steady person	o	o	o	o
40.	I get in a state of tension or turmoil as I think over my recent concerns and interests	o	o	o	o

---

Source: Spielberger, C. D.; Gorsuch, R. L.; and Lushene, R. 1970. STAI manual for the State-Trait Anxiety Inventory. Palo Alto: Consulting Psychologists Press, Inc.

APPENDIX C

SELF-EVALUATION QUESTIONNAIRE

Code Number:_____ Date:_____

Directions: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you feel right now, that is at this time during your postpartum period. There are no right or wrong answers. Do not spend too much time on any one statement, but give the answer which seems to describe your present feelings best.

		Not at all	Somewhat	Moderately so	Very much so
1.	I feel calm	o	o	o	o
2.	I feel secure	o	o	o	o
3.	I am tense	o	o	o	o
4.	I am regretful	o	o	o	o
5.	I feel at ease	o	o	o	o
6.	I feel upset	o	o	o	o
7.	I am presently worrying over possible misfortunes	o	o	o	o
8.	I feel rested	o	o	o	o
9.	I feel anxious	o	o	o	o
10.	I feel comfortable	o	o	o	o
11.	I feel self-confident	o	o	o	o
12.	I feel nervous	o	o	o	o
13.	I am jittery	o	o	o	o
14.	I feel "high strung"	o	o	o	o
15.	I am relaxed	o	o	o	o

	Not at all	Somewhat	Moderately so	Very much so
16. I feel content	o	o	o	o
17. I am worried	o	o	o	o
18. I feel over-excited and "rattled"	o	o	o	o
19. I feel joyful	o	o	o	o
20. I feel pleasant	o	o	o	o

Source: Spielberger, C. D.; Gorsuch, R. L.; and Lushene, R. 1970. STAI manual for the State-Trait Anxiety Inventory. Palo Alto: Consulting Psychologists Press, Inc.

APPENDIX D

DEMOGRAPHIC DATA

Code Number:_____

Age:_____

Was this a planned or unplanned pregnancy:_____

Husband's Occupation:_____

Highest grade completed (husband):_____

Baby's birth date:_____

Breast feeding or bottle feeding:_____

APPENDIX E

EXPLANATION OF STUDY TO SUBJECTS

I am Patricia Creehan, a graduate nursing student at Texas Woman's University, who is conducting a research study for my Master's Degree. I received your name from your Obstetrician who has given her approval of your participation in this study, should you choose to do so. The study attempts to correlate feelings experienced during the second trimester of pregnancy with feelings experienced during the postpartum period. Your participation in my study would assist nurses and other medical professionals to improve their care of patients during pregnancy and the period after delivery.

The study would involve filling out a questionnaire which takes about fifteen minutes to complete. The questionnaire would be filled out now during pregnancy and again within two weeks after you have delivered. The study involves no physical risk and your name will not appear in any report of the data. Agreeing or not agreeing to participate will in no way influence the medical care you will receive, and you may withdraw from the study at any time. If you agree to participate in the study, I would like to meet with you in your home. Should you wish a copy of the study, the results will be made available to you at the completion of my thesis.

APPENDIX F

TEXAS WOMAN'S UNIVERSITY

Consent to Act as a Subject for Research and Investigation:

I have received an oral description of this study, including a fair explanation of the procedures and their purpose, any associated discomforts or risks, and a description of the possible benefits. An offer has been made to me to answer all questions about the study. I understand that my name will not be used in any release of the data and that I am free to withdraw at any time.

Signature _____ Date _____

Witness _____ Date _____

Certification by Person Explaining the Study:

This is to certify that I have fully informed and explained to the above named person a description of the listed elements of informed consent.

Signature _____ Date _____

Position _____

Witness _____ Date _____

APPENDIX G

TEXAS WOMAN'S UNIVERSITY

Human Research Committee

Name of Investigator: Patricia A. Creehan Center: Dallas

Address: 1144-11 bibbs Road

Voorhees, New Jersey 08043

Dear Ms. Creehan:

Your study entitled A Comparison of Anxiety Levels During the Second Trimester of Pregnancy with Anxiety Levels During the Postpartum Period has been reviewed by a committee of the Human Research Review Committee and it appears to meet our requirements in regard to protection of the individual's rights.

Please be reminded that both the University and the Department of Health, Education and Welfare regulations require that written consents must be obtained from all human subjects in your studies. These forms must be kept on file by you.

Furthermore, should your project change, another review by the Committee is required, according to DHEW regulations.

Sincerely,

Geraldine M. Jansen

Chairman, Human Research Review Committee at Dallas.

APPENDIX H

UNIVERSITY OF SOUTH FLORIDA
TAMPA • ST. PETERSBURG • FORT MYERS • SARASOTA

COLLEGE OF SOCIAL AND BEHAVIORAL SCIENCES
DEPARTMENT OF PSYCHOLOGY
TAMPA, FLORIDA 33620

813: 974-2492

September 13, 1978

Ms. Patricia A. Creehan
Texas Woman's University
College of Nursing
1144-11 Bibbs Road
Voorhees, N.J. 08043

Dear Ms. Creehan:

In response to your recent request, I am very pleased to give you permission to reproduce the STATE-TRAIT ANXIETY INVENTORY for your M.A. thesis research entitled "A Comparison of Anxiety Levels During the Second Trimester of Pregnancy with Anxiety Levels During the Postpartum Period".

It is my understanding that your research will be carried out at Texas Woman's University, College of Nursing, Voorhees, N.J.

I will look forward to receiving further details on your procedures and your results as these become available. Best wishes on your research project.

Sincerely,

Charles D. Spielberger

Charles D. Spielberger, Ph.D.
Professor of Psychology and
Director, Center for Research
in Community Psychology

CDS/jag

REFERENCE LIST

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