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THE UNIVERSITY OF ARIZONA

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WOMEN'S PERCEPTION OF THEIR STATE OF HEALTH
DURING THE THIRD TRIMESTER OF PREGNANCY

by

Cynthia Anne Irwin

A Thesis Submitted to the Faculty of the
COLLEGE OF NURSING
In Partial Fulfillment of the Requirements
For the Degree of
MASTER OF SCIENCE
In the Graduate College
THE UNIVERSITY OF ARIZONA

1983
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This thesis has been approved on the date shown below:

DYANNE D. AFFONSO
Associate Professor of Nursing

July 21, 1983
This thesis is lovingly dedicated to my parents, George and Carolyn Irwin, whose support allowed me to pursue the career of my choice—and whose belief and faith in my abilities encouraged me to do so.
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ABSTRACT

This exploratory-descriptive study explored what women's perception of their state of health was during the third trimester of pregnancy, the indices by which these women evaluated their health, and whether a relationship existed between self-reported number of discomforts during the third trimester of pregnancy, and perception of state of health. The sample consisted of twenty primigravidas who participated in an interview and completed three questionnaires.

The data obtained indicated that women perceived their health in a positive direction and attributed such health to: improved nutritional intake, increased amounts of daily exercise, and the absence of nausea and/or vomiting. The major index against which the women evaluated their health was identified as their fatigue level. Finally, there was a relationship between number of discomforts and self-rating of health; as the number of discomforts increased, the women's self-rating of health decreased from excellent to good.
CHAPTER 1

INTRODUCTION

In today's Western society pregnancy places a woman in a paradoxical situation. She is told that pregnancy is a "natural function" or a "perfectly normal event" during which she is to enjoy the "best of health." She is subsequently instructed to visit the doctor or clinic regularly, pay particular attention to medical advice and follow the doctor's orders, with the implied message that only within the prescribed medical regimen can the "natural" function of childbirth be accomplished (Graham 1977). Oakley (1980) views this situation as a paralleling of careers of a woman: her pregnancy career and her career as a patient.

A tendency to consider pregnancy as a form of illness remains even with the recent trends in maternity nursing, such as family-centered nursing, the "natural" childbirth movement, and a resurgence in the popularity of midwives. Such an attitude can be attributed partially to three features of pregnancy which are also associated with illness: regular visits to a doctor, the socially condoned practice of relinquishing responsibility for the management of the condition (pregnancy) to health care professionals, and the occurrence of unpleasant symptoms or discomforts.
which in other circumstances may be a sign of illness, e.g., vomiting, frequent urination, and change in bowel habits (Oakley 1979).

Lumley and Astbury (1980) view the "medicalisation" of pregnancy as contributing to the association of pregnancy as a form of illness. The medicalisation of pregnancy is the acceptance of tests once restricted to special uses (e.g., ultrasound) as a usual component of prenatal care. Similarly, Oakley (1980) recognizes the "medicalisation of reproduction" as a contributing factor in the association of pregnancy with illness. The medicalisation of reproduction refers to the exposure of normal, healthy pregnant women to a barrage of pharmaceutical, medical and surgical techniques during the gestational period.

Unknowingly, and unintentionally, the behavior and/or underlying assumptions of health team members may serve to reinforce the belief that pregnancy is a form of illness. During the course of prenatal care, health team members regularly administer medications, e.g., iron, vitamins; conduct routine tests, e.g., blood type, Rh factor, ultrasound; and proffer medical advice, e.g., weight gain, daily activities, personal hygiene. These routine components of prenatal visits, which are similar in form to those during the treatment of a disease, reinforce the similarities between pregnancy and illness.
Breen (1975) draws attention to two contrasting assumptions about pregnancy held by individuals in the health care profession. These two assumptions are the hurdle assumption and the development assumption. Hurdle thinkers consider pregnancy as a period of deviation for normalcy, with a return to some former state when the pregnancy is completed. In contrast, development thinkers view pregnancy as a phase of maturation and growth which results in a new and more elaborate organization of the personality. Nurses and physicians who are hurdle thinkers convey the belief that pregnancy is an abnormal state through their verbal and nonverbal behavior and strengthen the association between pregnancy and illness.

As a consequence of the interplay of these factors, the pregnant woman experiences at one time or another a state of confusion concerning her health identity. Certainly, she must ask herself, "Am I healthy?" or "Am I ill?"

Statement of the Problem

This study will address the following questions: 1) What perception does a woman have of her state of health during the third trimester of pregnancy? 2) What indices of health does a pregnant woman employ during the third trimester of pregnancy to evaluate her state of health? 3) Explore whether a relationship exist between a woman's perception of her state of health during the third trimester of
pregnancy and the reported number of discomforts currently experienced by the woman.

**Statement of the Purpose**

The purpose of this study was to discover what perception women have of their state of health during the third trimester of pregnancy, to ascertain the indices of health utilized by women in the third trimester of pregnancy to evaluate their state of health, and to discover if a relationship exists between self-reported number of discomforts during the third trimester of pregnancy and perception of state of health. This study was also designed to generate hypotheses for future research endeavors to increase the understanding of the relationships between pregnancy and perceived state of health.

**Significance of the Problem**

Nurses working in maternal-health care settings often have early, frequent and continuing contact with the pregnant woman and are in an ideal position to assess the woman's perception of her state of health. The importance of assessing an individual's perception regarding their state of health is reflected in the following statement: "The subjective belief that one is healthy or ill may be more important than actual medical status in predicting an individual's general emotional state and behavior" (Maddox and Douglas 1973:87). A pregnant woman's perception of her
state of health will therefore affect her antepartal, intra-partal, and postpartal health beliefs and practices.

Assessment of a woman's perception of health is important during the prenatal period. This assessment is of critical importance when the woman's health beliefs and behaviors are inconsistent with her objectively assessed state of health. An example of this situation is the woman diagnosed as mildly preeclamptic who refuses to follow medical advice concerning her diet and activity level. Friedsam and Martin (1963:183) offer an explanation for the discrepancy between objective and perceived state of health by stating that "certain kinds of data are available to the individual as he 'measures' his health which are inaccessible to his physician, just as certain 'data' are available to the physician with his instruments which are not available to the patient." A mildly preeclamptic woman may not feel ill. She may have no physical symptoms of a slightly elevated blood pressure or protein-urea. She may identify and recognize the swelling of her hands and feet as edema, but "brush off" this symptom as a common occurrence during pregnancy. The criteria recognized as significant by the physician are not even identified by the pregnant woman.

Unfortunately, the opposite may also be true. Symptoms recognized as significant by the pregnant woman may not be identified as such by the physician or nurse. The "minor
discomforts" of pregnancy are experienced by many women and are so frequently reported to health team members that a tendency by the physician or nurse to decrease the importance of the symptoms may occur. Also, as previously stated, the minor discomforts of pregnancy in other circumstances are symptoms of illness. Therefore, the possibility exists that the woman will identify the normal physiological discomforts of pregnancy as a symptom of illness. In these instances, the indices by which women evaluated their state of health were different from those utilized by the health care team members. Unless the indices employed by women to evaluate their state of health during pregnancy are also recognized and accorded significance by health care providers, nurses will be unable to gain an understanding of why women perceive their state of health as such during pregnancy.

The literature indicates that a woman's perception of her state of health during pregnancy may be a strong determinant of her health behaviors during this period (Maddox and Douglas 1973). During pregnancy a women is exposed to numerous health-oriented behaviors which can be incorporated into her repertoire of health practices and extend beyond the period of gestation. Nurses are in the ideal position to assess a woman's perception of health, realign any incongruencies between the objective assessment of her
health and her perception of health, and influence a pregnant woman's health behaviors.

**Conceptual Orientation**

The conceptual orientation upon which this study is based includes the major concepts perception and pregnancy and the subconcepts health and physical discomforts of pregnancy.

**Perception**

Perception is the active process of "organizing, interpreting and transforming information from sense data and memory to produce an awareness of objects, persons, and situations" (King 1971:93). Perception is each individual's representation or image of reality.

Modern theories of perception first arose as a reaction to the structuralist view which claimed that an individual's experiences were described in terms of discrete, unorganized, separate sensory experiences which are later compounded into perceptions. In contrast is the Gestalt conception with its emphasis on the immediacy of perception based on the total stimulus pattern and especially on the relations among its various parts. The information-processing approach suggests that perception is made up of a series of stages by means of which sensory-based information is received, transformed, stored, and sometimes lost. The
constructionist approach to perception is offered within an information-processing framework, but puts special emphasis on the role of memory and the resulting active processes of the individual in determining what will be perceived. The adaptation-level theory states that perception depends on the relationship of the physical stimulus to an internal frame of reference, which is a function of the individual's other exposure to stimuli of the same class. The ecological approach describes perception as a "triggered" response to particular aspects of the stimulus selected by the individual (Krech et al. 1982).

The selectivity of perception is reflected in the statement, "What is perceived depends as much on the perceiver as on that which is to be perceived" (Sartain et al. 1967:269). Stimulus characteristics which are more likely to attract an individual's attention are intensity, novelty, contrast and repetition (Smith et al. 1982).

Internal factors also serve to determine which of the many stimuli in a person's environment will be perceived. Individuals perceive stimuli in accordance with their own particular motives, attitudes, expectations, interests, previous learning experiences, and self concepts (Boring et al. 1962; Wu 1973; Wylie 1978; Smith et al. 1982).
The experience of pregnancy activates the process of perception in many ways. This study focuses on the perception of health during pregnancy. A pregnant woman's perception of her state of health is "a summary statement about the way numerous aspects of health, both subjective and objective, are combined within the perceptual framework of the individual" (Tissue 1972:93).

In order for a pregnant woman to develop a perception of her state of health, she requires incoming stimuli and a frame of reference to direct perceptual activity. During pregnancy, incoming stimuli are presented in the form of verbal reports and behavioral cues from members of the health care team and significant others, visual cues from books and pamphlets, and changes in physical form and function.

According to Bower (1978), perception of such incoming stimuli is accomplished through the two distinct processes of recognition and classification. During the recognition process, the pregnant woman evaluates the stimulus for certain attributes. This evaluative process is directed by a pre-existing frame of reference which functions as a general filtering schema by which the woman determines the characteristics of the stimulus. If the pregnant woman does not possess a frame of reference to direct recognition of a particular stimulus, Neisser (1976) states that she will
then compare the stimulus to some other pre-existing frame of reference. The comparison is performed by associating the characteristics of the stimulus with the criteria of the frame of reference. The stimulus is then assigned to this other pre-existing frame of reference. Misperception of the stimulus may thus possibly occur.

Upon completion of the evaluation and recognition process, the pregnant woman then classifies the stimulus by assigning it to a cognitive category, e.g., normal or abnormal, aversive or non-aversive, healthy or ill. Wyer (1974:19) defines a cognitive category as "a symbol that is used to represent one or more internal or external stimuli... in memory. A stimulus is a member of a category if it is referred to by such a symbol."

The attributes which serve as criteria for membership in a given cognitive category may differ from one pregnant woman to another. Moreover, if the stimulus to be classified possesses a large number of attributes, different pregnant women may attend to different characteristics of these attributes. Thus, two pregnant women may assign the same stimulus to different categories.

Conversely, if a stimulus lacks some attributes or appears ambiguous, the pregnant woman may assign the stimulus to a category other than the one it would be assigned to
if all the attributes were present. As a result, the pregnant woman may misperceive the stimulus (Wyer 1974).

Once a stimulus is assigned to a cognitive category, a modification in the frame of reference occurs. Thus modified, the frame of reference continues to direct perceptual activity. Thus, the process of perception is one that is active and cyclical.

The perceptual processes of a woman may influence her attitude development and strategies implemented in health care. A woman who perceives herself as healthy will probably be more active in her health care and put into motion self-care activities. A woman who perceives herself as less healthy will probably take a more passive role in her health care and allow health care providers to assume a more active role.

Health

Each scholarly discipline offers its own definition of the concept health. For instance, the medical profession defines health as the absence of disease, whereas sociologists equate health with conformity to norms of physical and mental capacity for adequate participation in social activities (Twaddle and Hessler 1977). Studies have begun to emerge in the literature which propose that lay people define health differently.
Baumann (1961) studied hospital outpatients and classified their conceptions of being healthy as (1) a feeling of well-being; (2) an absence of symptoms; and (3) the capacity to engage in whatever activities they regard as normal.

Twaddle (1969) studied older, married men and found that they defined themselves as healthy when (1) they had no identifiable medical conditions, (2) they had had experience with a disease they defined as serious but had recovered, (3) they were told by a physician that their health was good, or (4) they had no expectation of becoming sick.

Research studies which support the findings of Baumann and Twaddle are present in the literature. Maddox and Douglas (1973) conducted a longitudinal study of non-institutionalized persons 60 years of age and over which demonstrated that individuals define their state of health in terms of a feeling-state orientation and that a positive congruence between self and physicians' rating of health exists. Similar findings are also reported by Friedsam and Martin (1963). Maddox and Douglas (1973:87) continue, "In common sense terms, good health generally implies the absence of debilitating illness that significantly interferes with personal and social functioning, not necessarily the absence of morbid conditions."

Several studies (DiCicco and Apple 1960; Sweetzer 1966; Irelan 1967) have indicated the most common perception
of ill health was in terms of inability to perform daily activities. Only when the person became incapacitated was illness admitted. Sweetzer (1966) noted in a study of middle class Americans that this orientation to ill health served as a basis upon which to decide if medical care was necessary or not.

It is noted that the subjects for the majority of the studies described above were elderly. As pregnant women are also members of the lay population, it was assumed that they would define their state of health similarly.

Several factors are associated with perception of health. Examples are, the presence or absence of unusual or unexpected symptoms, various demographic variables, culture and socioeconomic status. The process of redefining health identities from a healthy state to illness usually begins with the discovery of a symptom. A symptom is defined as "any subjective evidence of disease or of a patient's condition, i.e., such evidence as perceived by the patient (Dorland's Medical Dictionary 1974:1512). A pregnant woman experiencing a change in the way she generally feels in her normal day-to-day functioning or who acknowledges the presence of a specific symptom may redefine herself as ill.

Demographic variables such as sex, age, and marital status are associated with an individual's perception of health. Sex and age are held constant in this study.
Twaddle (1977:105) writes, "Although there is little ques-
tion that being married is associated with having good
health, it is not clear why this is so." There is some
opinion that the married population tends to be selective of
healthy people and that the relatively unhealthy are less
likely to get married. The most likely explanation is that
living intimately with others leads to more rational health
care practices. People who live with others are more likely
to notice symptoms and to seek medical attention early in
the course of disease, resulting in lower mortality rates.
Nathanson (1977) and Verbruggae (1976) have reported that
married persons (men and women) experience lower mortality
rates, lesser general morbidity, and less frequent use of
health services than unmarried persons.

Health is culturally defined. Each cultural group
has its own system of norms and values with which to define
health and to identify individuals as healthy (Mechanic
1978). Twaddle (1969) studied the first symptom of illness
reported by a sample of 29 older married males. Twaddle
discovered that feeling-state changes, predominantly pain
and weakness, were the most important for all ethnic groups
studied. Significant differences were discovered among the
Italian Catholics, Protestants and Jews. Feeling-state
changes were the only sign of illness reported by the Ital-
ians. When the first sign of illness was not a feeling-
state change, the Protestants reported changes in capacities
while the Jews reported the appearance of specific symptoms, e.g., bleeding.

Zborowski (1952) investigated the responses of hospitalized patients, all with the same diagnosis and presumed levels of objective pain, to pain. Significant differences in response were discovered among the "Old American," Italian, Irish and Jewish patients.

Zola (1966) examined the manner in which patients of an outpatient clinic in Boston presented their symptoms to medical personnel. Zola found significant differences between the Italian and Irish patients, with the Italians presenting a much more elaborate description of their symptoms than did the Irish patients.

Koos (1954) discusses the relationship of socio-economic status to attitudes toward health and illness and reports that an attitude of indifference to symptoms is expressed more frequently as one descends the socioeconomic scale. DiCicco and Apple (1960), in a study of persons 65 years of age of low socioeconomic status, report that health was important only as it became poor health and interfered with daily activity and maintenance of independence.

Wilson (1970, p. 7) states, "In general, education and affluence tend to encourage a stricter definition of health and decreased tolerance for the discomforts of illness." A person with a higher educational level which has
enabled him to achieve affluence through his occupation will probably have had enough money to practice good health habits throughout his adult life. This includes the means for better nutrition, early remedial care for symptoms of illness, and preventive medical care. Because of his education, he probably also realizes the importance of good health habits. Shea, Spitz, and Zeller (1970), Wan (1976), and Feld (1963) report a higher proportion of employed women rate their health as excellent or good compared to housewives. Also, Gove (1977) has found that married employed women exhibited fewer psychiatric symptoms than married non-employed women.

Physical Discomforts of Pregnancy

Physiologically, pregnancy imposes awesome adaptations on a woman's body to accommodate and nurture the growing fetus. As a result of these changes, the pregnant woman experiences the discomforts of pregnancy.

As previously stated, these discomforts are among the innumerable health-related incoming stimuli utilized by the woman to develop her perception of her state of health. Of these stimuli, the woman directs her attention to a selected few. Both Mechanic (1978) and Twaddle (1969) have identified aspects of symptoms which determine the extent to which they are noticed. Combining these lists to eliminate duplications, the following items are important:
- The extent to which the symptom interferes with normal activities or characteristics. The more a symptom inconveniences the individual, the more likely that it will be recognized and interpreted as significant.

- The clarity of the symptom. The more obvious the symptom is to the individual, the more likely that the symptom will be recognized and interpreted as significant.

- The familiarity and seriousness of the symptom. The more unfamiliar the symptom and the more threatening it seems, the more likely it that it will be recognized and interpreted as significant.

- Assumptions about cause. The more insignificant the cause of a symptom is thought to be, the less likely the symptom will be recognized and interpreted as significant.

- Assumptions about prognosis. The longer the symptom is expected to last and the more incapacity is thought to be associated with it, the more likely the symptom will be recognized and interpreted as significant.

**Summary**

A pregnant woman's perception of her state of health is valuable to the understanding of a woman's health beliefs
and practices. Nurses have frequent and ongoing contact with pregnant women in various prenatal settings and are in an ideal position to assess a woman's perception of her state of health.

This study is designed to explore what perception pregnant women have of their state of health, to assess if a relationship exists between self reported number of discomforts and perception of state of health, and to identify the indices of health utilized by women in the third trimester of pregnancy to evaluate their health.
CHAPTER 2

REVIEW OF LITERATURE

This chapter presents a summary of pertinent scholarly writings and research studies concerning the following topics:

a) Perceived state of health during pregnancy;
b) The cognitive style of pregnancy; and
c) The physical discomforts during pregnancy and their relationship to perceived state of health.

Perceived State of Health During Pregnancy

The scarcity of reported studies which examine a woman's perception of her state of health during pregnancy indicates a need for this type of research. A small number of studies address a peripheral issue: pregnancy in relation to the sick role conceptualized by Parsons (1951). Parsons believes that a person who defines himself as ill, or is defined by others as sick, occupies a special role and position in society with clearly defined expectations and obligations for behavior. The expectations of the sick role are: a) the sick person is allowed exemption from the performance of normal social-role obligations; b) the sick person is allowed exemption from responsibility for his own state. The two obligations are: a) the sick person must be
motivated to get well as soon as possible; and b) the sick person should seek technically competent help and cooperate with medical experts.

McKinlay (1972) questioned whether the social position occupied by pregnant women was the same as that occupied by the sick in Western society. McKinlay concluded that although pregnant women occupy a special position in society and in certain situations fulfill unique expectations, pregnancy is a normal state of health not to be considered an illness, and therefore cannot ordinarily be viewed in terms of Parsons' paradigm.

Rosengren (1962) investigated the sociocultural attributes of 76 lower to middle class women residing in a large metropolitan area who expressed sick role expectations during pregnancy. Rosengren also researched the existence of a relationship between sick role expectations and the presence of physical or psychosomatic difficulties during pregnancy and delivery. Sick role expectations refers to the kinds of attitudes and behaviors which the subject thought were appropriate for a pregnant woman. These were outlined from Parsons' sick role expectations and obligations and include three behavioral dimensions: 1) exemption from normal social responsibilities during pregnancy, 2) extent and kinds of changes anticipated in the round of life as a consequence of childbirth, and 3) extent of acceptance of the subordinate role vis-a-vis the attending doctor. The
two attitudinal dimensions examined were: 1) extent of concern over the organic and morphological processes of childbirth, and 2) extent of acceptance of pain and suffering during pregnancy. The variables Rosengren examined included cultural values, social aspirations, social attributes, socioeconomic status, doctors' definition of the pregnant state, and delivery room data. Rosengren noted statistically significant positive relationships between the sick role score and the subject's sick role expectations, labor time, month of pregnancy at the time of interview, the number of expressed conflicting cultural values of private patients, social status change, and higher income private patients.

Kay (1982) addresses perception of health during pregnancy by focusing on the concept of culture during the childbearing process. Kay has introduced a framework for cultural assessment during pregnancy which utilizes the 1800-year-old Galenic model of dietetics. This model focuses on the management of factors external to the body. These factors include six categories for assessment: air and water; food and drink; sleep and wakefulness; movement, exercise and rest; evacuation and retention; and passions of the spirit or emotions. By asking questions designed to give detailed descriptions of a group's health beliefs and behaviors and by interpreting the answers within the social context of the group, the interviewer is able to gain
insight as to how culture has shaped a woman's perception of health. Similarly, Clark and Anderson (1967) believe that self perception is shaped by social expectations. "The social expectations reflect the value systems of the culture, and these cultural definitions come to be perceived as reality" (Clark and Anderson 1967:176). People's behavior toward another person depends a great deal on who they think that person is. Who they think a person is often depends on who they or others have labeled him. Lemert (1951) describes the labeling process as being capable of altering individuals' behavior, often producing deviance. Societies which label normal, healthy pregnant women as ill will treat them as such, and are therefore capable of altering their behavior from health-oriented to illness-oriented. The effect on the pregnant woman's perception of health also must be similarly altered.

**Cognitive Style of Pregnancy**

A cognitive style unique to pregnancy has been described in the literature by Rubin (1970). Rubin (1970:502) articulates the style to be one of questioning and uncertainty as the woman becomes concerned with her personal sense of identity and with "time within the life space." Rubin believed the questions posed, "why me" and "why now," are answered at the time of childbirth. In her later writing, Rubin (1976:367) stated, "The pregnant woman's
heightened sensory awareness of the child's presence and behavior within her causes a 'turning inwards' (Deutsch 1944), a centripetal pulling in of attention energy. The centration of attention energy causes a partial reduction in attention energies available for the world around her. . ."

Rubin (1976) further states that during this period of centered attention, the pregnant woman assesses, explores, reviews, and studies the qualities of human relationships by utilizing interpersonal exchanges in her environment for extracting the substance and significance of human interpersonal relationships. As a result of a pregnant woman's increased perceptiveness of interpersonal interaction, the woman becomes more aware of intent or meaning of verbal and nonverbal communicative methods.

Similarly, Colman and Colman (1974:7) identify pregnancy as an "altered state of consciousness." An altered state of consciousness is defined as a "qualitative alteration in the overall patterning of mental functioning such that the experiencer feels his consciousness is radically different from the 'normal' way it functions" (Tart 1971:93). The Colmans continue (1974:9), "pregnancy is an altered state of consciousness largely because it plunges the individual's awareness from its usual secular pursuits into profound involvement in universal processes."
As part of a large study entitled, "Psychological State During First Pregnancy," Colman (1969) studied the altered field of consciousness of 14 randomly selected primigravidas attending a large university prenatal clinic. The women were all married, Caucasian, lower middle class, high school graduate, with no history of medical or mental illness. Altered field of consciousness was defined as "changed subjective awareness toward internal and external stimuli." Colman reports the most frequent alteration of the women's mental state was an overreaction to things that would not ordinarily affect them. Colman writes that this peculiar sensitivity of pregnant women suggests an acute openness to their environment in which even language may take on a new symbolic meaning. The other characteristic of the mental state of the pregnant women was an increased importance assigned to obsessions, phobias, and dreams which lasted throughout the pregnancy.

The cognitive style unique to pregnancy has also been described in the literature as vulnerable to alterations. A psychodynamic perspective by Caplan (1964) describes the shifting of the id-ego relationship as responsible for the disequilibrium of intrapersonal forces during pregnancy. The physiologic perspective describes the psychological changes occurring during pregnancy to be the result of major hormonal and general metabolic changes (Bibring 1959; Benedek 1970).
Physical Discomforts During Pregnancy and Their Relationship to Perceived State of Health

During the third trimester of pregnancy, a great number of women experience one or more of the questionably-labeled "minor discomforts" of pregnancy. These discomforts are usually the result of normal physiologic changes imposed on the maternal body by the pregnancy and are to be expected. Despite this, the experience of these discomforts may alter a woman's perception of her health.

The following discomforts of pregnancy are grouped into medically-oriented health systems. The explanation of their physiologic basis is taken from a number of sources: Ziegel and Cranley (1978), Clark and Affonso (1979), Jensen, Bensen and Bobak (1981), Pritchard and MacDonald (1980), and Guyton (1981).

Common complaints of the gastrointestinal system include: pyrosis, constipation, hemorrhoids, and flatulence. The elevated progesterone level during pregnancy acts to suppress smooth muscle motility. Pyrosis, constipation and flatulence are commonly experienced due to the decreased smooth muscle activity of the gastrointestinal system. Upward displacement of the stomach and compression and displacement of the intestines by the enlarging uterus also contribute to the development of these discomforts. The
development of hemorrhoids during pregnancy is related to increased pressure in the hemorrhoidal veins caused by obstruction of venous return by the large pregnant uterus.

Discomforts of the neuromuscular system include complaints of: low backache, varicose veins of the legs, pain in the calf, thigh or buttock, swelling of the ankles and/or feet, pain in the groin, and faintness or dizziness. Low backache is usually the result of muscular fatigue and strain due to changes in body balance and posture caused by the growing uterus, pressure on nerve roots causing muscle spasm and pain, and relaxation of the pelvic joint due to hormonal influences. Varicosities are generally the result of the occlusion of some venous return to the inferior vena cava by the enlarging uterus. Sudden spasms of the muscles of the calf, thigh or buttock are believed to result from an imbalance of the calcium/phosphorus ratio in the body and from the pressure of the gravid uterus on the nerves supplying the lower extremities. Edema of the ankles and/or feet is the result of increased blood volume and decreased circulation due to pressure on vessels from the gravid uterus and sodium and water retention due to the influence of ovarian, placental and adrenal steroid hormones. Pain in the groin is usually caused by tension on the round ligaments resulting from the dextrorotation and displacement of the uterus. Faintness or dizziness during the third trimester is commonly due to the supine hypotension syndrome.
The most common discomfort of the respiratory system is shortness of breath. This is generally caused by the growing uterus rising in the abdomen to the point where it encroaches upon the excursions of the diaphragm. A sense of overall discomfort and a constant sense of pressure under the ribs results.

Leukorrhea, breast tenderness and contractions of the uterus are the common discomforts of the reproductive system. Leukorrhea normally results from increased vascularity of the cervix and increased cervical mucus production due to hyperestrogenemia. Breast tenderness usually occurs due to the effects of estrogen, progesterone and somatomammotropin upon the breasts resulting in structural and functional changes. Braxton-Hicks contractions are rhythmic tightenings of the uterus that occur as part of the preparatory changes for labor.

The common discomforts of the urinary system include urinary frequency and nocturnia. Urinary frequency is generally the result of a smaller volume capacity of the bladder due to the imposition of the gravid uterus upon the bladder. Also, the increased metabolic rate, increased circulating blood volume, and increased glomerular filtration rate create more waste to be excreted. Nocturia is due to increased renal filtration brought about by increased renal
perusion and mobilization of dependent edema as a result of the supine position.

The scarcity of reported studies in the literature which examine the relationship between discomfort during pregnancy and perceived state of health indicates a need for this type of research. The studies described below examine the relationship between symptom experience and perception of health of general population.

Rosencranz and Pihlblad (1970) assessed the degree of correspondence between the number of symptoms reported by 1700 noninstitutionalized persons 65 years old or older and their reported self-evaluation of their state of health. The symptoms assessed were given scores according to the duration and severity of confinement caused by the symptom. Three fourths of the 231 males who evaluated their health as good also reported no symptoms had confined them to their homes or beds during the four weeks preceding the interview. Four fifths of the 359 females also had no symptoms and evaluated their health as good. As the number of symptoms increased, the respondent's self-assessment of health decreased from good to fair to poor.

Mechanic (1974) reported that in a sample of 151 women in London, perception of health was inversely related to the presence of a variety of psychophysiological symptoms such as tiredness, poor appetite and difficulty sleeping. Respondents who rate their health as poor also had a history
of chronic illness, emotional difficulties, life change and stress.

Murray, Dunn and Tarnopolsky (1982) utilized the data collected in a large-scale survey of 5904 residents of West London to explore the effects of age, sex, reported symptoms and long-standing illness on self-rated health status. The results of their analysis showed men more likely than women to rate their health as good or very good: 1659 (66 percent) compared with 1759 (54 percent). This sex difference persisted across all age groups. In both sexes the effect of age was to increase the proportion of people who rate their health negatively. In all age groups women consistently reported more symptoms than men, and the rate of symptom reporting varied little with age for both groups. In both sexes, the effect of increasing number of reported symptoms was to increase the proportion of people who rated their health negatively. The presence of a long-standing illness also negatively affected both sexes' perceptions of health.

Tissue (1972) researched identifying factors associated with self-assessment of health in old age. The study included 256 welfare recipients whose median age was 68 years. Similar findings between number of symptoms and self-assessment of health was found. That is, as the number of symptoms increased, self-assessment of health decreased from good to fair to poor.
Summary

This chapter presented a review of literature concerning pregnancy and perceived state of health. Little attention has been directed toward this topic, which further supports the need for a study such as this.
CHAPTER 3
RESEARCH METHODOLOGY

This chapter describes the following topic areas: research design, definition of terms, the setting, the sample, the method of data collection, and the method of data analysis.

Research Design
An exploratory-descriptive design was chosen to answer the research questions: 1) What perception does a woman have of her state of health during the third trimester of pregnancy? 2) What indices of health does a pregnant woman employ during the third trimester of pregnancy to evaluate her state of health? 3) Explore whether a relationship exists between a woman's perception of her state of health during the third trimester of pregnancy and the reported number of discomforts currently experienced by the woman. An exploratory-descriptive design was selected to generate qualitative data on this topic which has been largely unexplored and to describe the relationship between pregnancy and perceived state of health. Open-ended questions, a semantic differential rating scale, a discomfort checklist and a simple question to self-rate perceived state of health were utilized to elicit information from women concerning
their perceptions of health during the third trimester of pregnancy.

**Definition of Terms**

Perceived state of health - a woman's response to selected items of the open-ended questions during the interview as well as a self-rating in terms of four criteria--excellent, good, fair or poor.

Indices of health - responses by pregnant women to open-ended questions that assess the criteria by which she judges her state of health.

Discomforts of pregnancy - normal physiologic changes which accompany pregnancy and can cause a lack of ease, distress or embarrassment for the woman.

**Setting**

Subjects for the study were recruited from the population of clients receiving prenatal care from two obstetricians who operate a private outpatient obstetrical and gynecological clinic. The obstetrical and gynecological clinic is one component of a larger multi-specialized clinic whose clients are all members of a health maintenance organization.

The maternity population was predominantly a low risk population comprised of women of varying socioeconomic, ethnic and educational backgrounds. Permission for access
to clients of the clinic was obtained from the two obstetricians and from the Coordinator of Patient Care Services.

The setting for data collection was the subject's home, as agreed upon during the recruitment phase.

Sample

Selection Criteria

A convenience sample of twenty subjects was recruited in accordance with the following criteria:

1. Women who were pregnant for the first time;
2. Women who were 18 to 35 years of age;
3. Women who were 28 to 40 weeks gestation;
4. Women who had no written or verbal medical or nursing diagnosis of health deviations from the norm during pregnancy; and
5. Women who were able to read, write and speak English.

Rationale for Criteria

Primigravida were chosen specifically because they have never been pregnant before. An individual's frame of reference, i.e., the set of related categories used as a standard to evaluate and judge stimuli, is acquired by experience and modified by learning (Sartain et al. 1967). Any change in the frame of reference will change the way in which a stimulus is perceived. A primigravida has had no prior experience evaluating incoming stimuli concerning her state of health during pregnancy; therefore, her frame of
reference is still in the acquisition phase with modifications due to intermittent informative measures.

The age range of 18 to 35 years was selected because women younger than 18 years or older than 35 years are at a higher risk to develop complications of pregnancy (Jensen, Bensen and Bobak 1981). Any complication would interfere with a pregnant woman's perception of her health status.

The third trimester of pregnancy (28 to 40 weeks gestation) is generally the period when women experience the greatest discomfort due to the encroachment of the uterus upon the surrounding anatomical structures. For this reason women in the third trimester of pregnancy were selected to assess the relationship between the discomforts of pregnancy and perceived state of health.

The research study excluded women who were diagnosed with a pathophysiologic condition occurring during or prior to the pregnancy. Any deviation from the health norm of pregnancy was expected to alter a woman's perception of health because of physical and not cognitive forces.

All of the women were required to read, write and speak English. The interview was conducted in English and the consent form, rating scale and checklist were written in English; therefore, in order to communicate, the women had to be able to read, write and speak English.
Protection of Human Subjects

The study was submitted to the Human Subjects Committee of the University of Arizona for approval (see Appendix A). Participation in the study was on a voluntary basis. Prior to participation in the study, each subject received a subject disclaimer (see Appendix B), a guarantee of anonymity, and the verbal assurance that her care at the clinic would not be affected by her decision to participate, or not to participate, in the study.

Research Procedure

The research procedure includes descriptions of the method of data collection, the four instruments utilized in the study, and the method of data analysis. The data collection procedure was one of approach for informed consent. The instruments used in the study consist of a single question to rate perceived state of health, a rating scale utilizing the semantic differential technique, a discomfort checklist, and selected open-ended questions. Descriptive statistics, content analysis and inferential statistics were employed to analyze the data obtained from the various instruments.

Data Collection

Data were collected from 20 pregnant women who received prenatal care at a private, outpatient obstetrical and gynecological clinic. The chart for each woman who was
scheduled for an appointment was routinely pulled and collected in a separate file organizer on the previous day. This allowed the researcher to review the charts 24 hours in advance and to identify women who were eligible to participate in the study by approach for informed consent.

As the pregnant woman arrived at the clinic, she initially checked in with the receptionist-secretary. The woman's chart was then pulled by the receptionist and given to one of the clinic nurses who conducted the routine prenatal screening procedures. The pregnant woman then returned to the waiting room until she was called by the nurse to be examined by the physician. This lag time varied with an average of 10 minutes.

During this waiting period the client identified as a potential subject was called by name by the researcher for personal identification. The researcher then identified herself and gave a brief verbal description of the study. When the client elected to take part in the study, an interview was scheduled to occur in her home. The subject was informed that during the home interview she would be asked to complete a demographic information sheet (see Appendix C), to answer selected open-ended questions concerning perceptions of her health, and to complete two scales—a rating scale of her health and a checklist of discomforts during pregnancy. She was also informed that the interview would
be tape recorded to facilitate recall of her responses by the researcher. Although the taped interviews conducted by the investigator took approximately 45 minutes, contact time with each subject was much longer. (A small pilot study consisting of three women was conducted to facilitate selection of open-ended questions and to demonstrate the feasibility of the interview.)

Instrumentation

The instruments used in this study consisted of: a single question to rate perceived state of health, a rating scale utilizing the semantic differential technique, a discomfort checklist, and selected open-ended questions.

The first instrument presented to the subject was a single fixed alternative question which allowed the woman to self-rate her perceived state of health. The question is as follows:

Please place a check next to the option listed below which best describes your state of health.

   ___ excellent
   ___ good
   ___ fair
   ___ poor

The second instrument, entitled Rating of Health, was a rating scale used to compare the woman's perception of "My Health During Pregnancy" to "My Health Prior to
Pregnancy" (see Appendix D). One of the latter steps in the perceptual process is the assignment of the stimulus to a cognitive category, i.e., meaning is attached to the stimulus. The semantic differential is a technique used to measure the difference between two different groups in the meaning of the same concept, the difference between the meanings of two concepts for the same group, the difference between the meanings of two concepts for the same individual, and the difference between two individuals in the meaning of the same concept (Osgood, Suci and Tannebaum 1964). The underlying principle of the semantic differential is described as follows: "The essential operation of measurement is the successive allocation of a concept to a series of descriptive scales defined by polar adjectives, these scales selected so as to be representative of the major dimension along which meaningful processes vary" (Osgood, Suci and Tannebaum 1964:31).

The Rating of Health scale utilized ten seven-point bipolar adjective pairs to tap three dimensions of meaning. The ten adjective pairs were: the evaluative factor (good-bad, comfortable-uncomfortable, important-unimportant, increasing-decreasing), the activity factor (active-passive, excitable-calm, fast-slow), and the potency factor (strong-weak, heavy-light, hard-soft). These adjective pairs were selected from Osgood, Suci and Tannebaum (1964) due to their
factorial composition, (i.e., maximal loading on one factor and minimal loading on others); relevance to the two selected concepts regarding state of health; and their semantic stability. The two concepts assessed in the following order were: "My Health During Pregnancy" and "My Health Prior to Pregnancy." The rating scales were administered independently to prevent the subject from referring to the first scale while completing the second scale.

The third instrument was a 17-item checklist entitled "Discomfort Checklist," developed by the researcher to assess the number of physical discomforts the pregnant woman was currently experiencing (see Appendix E). The checklist was designed to assess any relationship between the number of discomforts experienced and how a woman reports her perceived state of health. The checklist was designed also to provide information about whether a particular discomfort altered a woman's perception of health. Content validity was preliminarily demonstrated by requesting three experts to evaluate the instrument. These experts included a practicing midwife, a non-practicing midwife working on a Master of Science degree in maternal-newborn nursing, and a practicing obstetrical-gynecological practitioner working on a Master of Science degree in maternal-newborn nursing. Out of this process the Discomfort Checklist in the present form was validated by consensus.
The last instrument presented to the subject contains open-ended questions selected to encourage descriptive answers relating to the woman's perception of her health, as well as to assess the indices by which a woman judges her health status. Open-ended questions give the respondent the opportunity to answer in her own frame of reference and also allow the subject freedom of response (Selltiz, Wrightsman and Cook 1976). Following are the questions asked of the subjects:

1. Tell me how you see your health during pregnancy.
2. In what way has pregnancy affected your state of health?
3. When during your pregnancy is/was your health at its best?
4. Compare your health when you're not pregnant to when you are pregnant.
5. What does it mean when you say you are in 'good health'?
6. What does it mean when you say you are in 'poor health'?
7. What specific factors are occurring in your day-to-day functioning that help you decide if you are in good health?
8. Tell me how you feel when you are in good health.
9. Do you think you are experiencing more or less discomfort than a normal healthy pregnant woman?
10. Explain why a particular discomfort changes how healthy you think you are.

Data Analysis

The data were analyzed according to the type of question utilized. Fixed-alternative questions were tabulated for frequency and percentages. These questions assessed the demographic characteristics of the sample, the rating of perceived health, and information relating to the discomforts of pregnancy.

Correlational analyses were performed on several items: the self-rating question of perceived health with the demographic information and the self-rating question of perceived health with the discomfort checklist score. The following demographic data were selected for correlational analysis: age, weeks gestation, marital status, religious affiliation, ethnic background, yearly income, educational background, and employment status. To describe the degree and magnitude of relationships between these variables, Pearson's product-moment correlation (r) was calculated. Significant correlations were set at the .05 level.

Open-ended questions constituted the majority and were analyzed by the method of content analysis. Content analysis is defined as "a method for the objective,
systematic, and quantitative description of communications and documentary evidence" (Polit and Hungler 1978:379). The subjects' responses were coded for categories and tabulated for frequency count and percentages. This method of analysis was considered appropriate because "Coding is the process whereby raw data are systematically transformed and aggregated into units which permit precise description of relevant content characteristics" (Holsti 1969:94). The recording unit utilized to develop categories into which the content data were classified was a word, whereas the contextual unit utilized was a sentence or a paragraph, depending on the length of the subject's response.

Data from the semantic differential were analyzed to provide a profile of the mean and mode responses for the two concepts, "My Health During Pregnancy" and "My Health Prior to Pregnancy." A profile of the modal responses provides a visual representation of the "similarity between various concepts on all factors simultaneously in terms of their closeness in the semantic space" (Osgood, Suci, and Tannenbaum 1964). Analyses of t-tests were done to assess differences in mean scores between the ratings of health during pregnancy and health prior to pregnancy.

**Summary**

This investigation used an exploratory-descriptive design to generate data and to describe the relationships
between pregnancy and perceived state of health. The data collection procedure was one of approach for informed consent. Interviews were conducted in the subjects' homes. Open-ended questions, a rating scale utilizing the semantic differential technique, a discomfort checklist, and a single question to self-rate perceived state of health were used to elicit information from the pregnant women.
CHAPTER 4

PRESENTATION OF THE DATA

The results of this study are described in this chapter relative to the characteristics of the sample and analysis of the obtained data. The research questions stated in the previous chapter were used to organize the discussion of the obtained findings.

Characteristics of the Sample

The sample was composed of twenty women (n=20) who received prenatal care at a private obstetrical-gynecological clinic in Tucson and met the criteria identified for recruitment of subjects. The women ranged in age from 19 to 34 with a mean age of 25.20 years. Their weeks of gestation ranged from 29 to 40 weeks. Anglo-American women comprised 75 percent of the sample; 20 percent were Mexican-American and 5 percent were American Indian. Self-reported religious affiliations varied widely, the most frequent being Catholic (45%). Sixty percent (60%) of the women reported a family income of less than $20,500 per year. All 20 women were high school graduates; 65 percent had an educational background which extended beyond the high school level. The majority of the women were married (85 percent) and employed.
(75 percent). These characteristics are summarized in Appendix F.

First Research Question

What perception does a woman have of her state of health during the third trimester of pregnancy?

Single Self-Rating Question

When women were asked to rate their health as excellent, good, fair or poor, 60 percent rated it as good, 40 percent rated their health as excellent, and no woman rated her health as fair or poor.

A Pearson product-moment correlation (r) was calculated to describe the relationship between the demographic variables and the rating of health. One relationship that reached statistical significance (at the .003 level) was that between religion and health; more Catholic women rated their health as excellent than did women of other religious faiths (r=.63).

Analysis of Semantic Differential

Ratings. One question utilizing the semantic differential technique required the woman to rate her perception of her health during pregnancy and prior to pregnancy. Frequencies of response for each of the ten variables in the ratings of health during pregnancy and health prior to pregnancy are presented in Table 1. These
<table>
<thead>
<tr>
<th>Positive Adjectives</th>
<th>HDP/ HPTP</th>
<th>HDP/ HPTP</th>
<th>HDP/ HPTP</th>
<th>HDP/ HPTP</th>
<th>HDP/ HPTP</th>
<th>HDP/ HPTP</th>
<th>HDP/ HPTP</th>
<th>Negative Adjectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft</td>
<td>0/0</td>
<td>4/1</td>
<td>1/4</td>
<td>10/2</td>
<td>4/1</td>
<td>4/4</td>
<td>0/5</td>
<td>Hard</td>
</tr>
<tr>
<td>Good</td>
<td>9/13</td>
<td>10/4</td>
<td>0/3</td>
<td>0/0</td>
<td>1/0</td>
<td>0/0</td>
<td>0/0</td>
<td>Bad</td>
</tr>
<tr>
<td>Active</td>
<td>3/12</td>
<td>12/7</td>
<td>1/1</td>
<td>1/0</td>
<td>3/0</td>
<td>0/0</td>
<td>0/0</td>
<td>Passive</td>
</tr>
<tr>
<td>Comfortable</td>
<td>2/15</td>
<td>7/5</td>
<td>4/0</td>
<td>0/0</td>
<td>3/0</td>
<td>4/0</td>
<td>0/0</td>
<td>Uncomfortable</td>
</tr>
<tr>
<td>Light</td>
<td>0/1</td>
<td>0/8</td>
<td>2/3</td>
<td>4/3</td>
<td>4/3</td>
<td>7/1</td>
<td>3/1</td>
<td>Heavy</td>
</tr>
<tr>
<td>Calm</td>
<td>2/1</td>
<td>0/5</td>
<td>0/2</td>
<td>3/7</td>
<td>6/2</td>
<td>4/2</td>
<td>5/2</td>
<td>Excitable</td>
</tr>
<tr>
<td>Important</td>
<td>12/6</td>
<td>5/5</td>
<td>2/7</td>
<td>1/0</td>
<td>0/1</td>
<td>0/1</td>
<td>0/0</td>
<td>Unimportant</td>
</tr>
<tr>
<td>Strong</td>
<td>3/8</td>
<td>10/9</td>
<td>3/2</td>
<td>3/1</td>
<td>1/0</td>
<td>0/0</td>
<td>0/0</td>
<td>Weak</td>
</tr>
<tr>
<td>Fast</td>
<td>1/5</td>
<td>4/8</td>
<td>3/5</td>
<td>5/2</td>
<td>3/0</td>
<td>4/0</td>
<td>0/0</td>
<td>Slow</td>
</tr>
<tr>
<td>Increasing</td>
<td>5/1</td>
<td>8/9</td>
<td>5/3</td>
<td>1/5</td>
<td>1/1</td>
<td>0/0</td>
<td>0/1</td>
<td>Decreasing</td>
</tr>
</tbody>
</table>
frequencies were used to provide the mean and modal profiles of the women's responses. The general direction of the responses was assessed in terms of being positive, neutral or negative in the evaluation of the variable by recoding the frequencies into a 3-point rating. This was done by summing the responses for numbers 5, 6 and 7 to obtain a frequency for responses in a positive direction; summation of responses for numbers 1, 2 and 3 to obtain a frequency for a negative direction response. These recorded frequencies are found in Table 2 and were used to examine the general direction of the ratings obtained from the women.

**Pattern in Modal Responses.** Modal responses allow a descriptive profile of the general direction of the ratings obtained for health during and prior to pregnancy. The modal responses for rating health during pregnancy were in a positive direction for seven of the ten variables. Two of the remaining variables were rated in a negative direction for such evaluations as heavy instead of light and excitable instead of calm. The remaining variable, soft-hard, was rated in a neutral position (see Figure 1).

The modal responses in rating health prior to pregnancy were in a positive direction for nine of the ten variables. The remaining variable was rated in a negative direction for evaluating health prior to pregnancy as more hard than soft.
Table 2. Recorded Frequencies for Ratings of Health During Pregnancy (Numerator) and Health Prior to Pregnancy (Denominator).

<table>
<thead>
<tr>
<th>Bipolar Adjectives</th>
<th>Positive Direction (sum of 5,6,7)</th>
<th>Neutral Direction (response 4)</th>
<th>Negative Direction (sum of 1,2,3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft-Hard</td>
<td>5/5</td>
<td>10/2</td>
<td>5/13</td>
</tr>
<tr>
<td>Good-Bad</td>
<td>19/20</td>
<td>0/0</td>
<td>1/0</td>
</tr>
<tr>
<td>Active-Passive</td>
<td>16/20</td>
<td>1/0</td>
<td>3/0</td>
</tr>
<tr>
<td>Comfortable-Uncomfortable</td>
<td>13/20</td>
<td>0/0</td>
<td>7/0</td>
</tr>
<tr>
<td>Light-Heavy</td>
<td>2/12</td>
<td>4/3</td>
<td>14/5</td>
</tr>
<tr>
<td>Calm-Excitable</td>
<td>2/8</td>
<td>3/7</td>
<td>15/5</td>
</tr>
<tr>
<td>Important-Unimportant</td>
<td>19/18</td>
<td>1/0</td>
<td>0/2</td>
</tr>
<tr>
<td>Strong-Weak</td>
<td>16/19</td>
<td>3/1</td>
<td>1/0</td>
</tr>
<tr>
<td>Fast-Slow</td>
<td>8/18</td>
<td>5/2</td>
<td>7/0</td>
</tr>
<tr>
<td>Increasing-Decreasing</td>
<td>18/13</td>
<td>1/5</td>
<td>1/2</td>
</tr>
</tbody>
</table>
Figure 1. Profile of modal responses in rating health during pregnancy and health prior to pregnancy.
Several differences in the pattern of modal responses were obtained in the rating of selected variables for the two states of health. Review of Figure 1 provides a profile of the differences in the frequency distribution related to the modal responses. Women in the sample rated their health as hard prior to pregnancy but were unsure as to the direction of the variable during pregnancy. The modal responses were in the neutral position for health during pregnancy. In terms of evaluation for light versus heavy, health prior to pregnancy was overwhelmingly rated as light, whereas the modal response of health during pregnancy was definitely in the direction of heavy. The women overwhelmingly rated their health during pregnancy as more excitable. There was, however, ambivalence in rating health prior to pregnancy with approximately equal responses (±2) in all directions of being calm, neutral, as well as excitable. The modal responses were in the calm direction.

Patterns of health during pregnancy and health prior to pregnancy having the same direction for modal responses emerged. However, more responses in the opposite direction for rating either health during pregnancy or health prior to pregnancy also emerged. Such a pattern was obtained for the following variables:
Health during pregnancy and health prior to pregnancy were both rated to be good with only one response in the bad direction prior to pregnancy.

Health during pregnancy and health prior to pregnancy were rated as active but more instances exist of health during pregnancy being rated in the passive direction.

Health prior to pregnancy and during pregnancy were rated as comfortable but health prior to pregnancy had a higher frequency for the comfortable rating whereas more instances of health during pregnancy were rated as uncomfortable.

Health during pregnancy and health prior to pregnancy were both rated with a modal response in the important direction but more instances exist of health prior to pregnancy being rated as unimportant.

The modal response was in the strong direction for both, but health prior to pregnancy had a higher frequency in the strong direction and health during pregnancy had more instances in the neutral to weak direction.

Similarly, health prior to pregnancy was rated to be more fast in contrast to health during pregnancy, which had higher ratings in the neutral to slow direction.
- Health during and prior to pregnancy were both rated as increasing; however, health prior to pregnancy had higher ratings in the neutral to decreasing direction.

Significance in Mean Differences. Table 3 gives a profile of the means obtained for each bipolar adjective by the semantic differential in the evaluation of health during pregnancy and health prior to pregnancy. The t-test was utilized to determine significant differences in the means obtained for the rating of each state of health. The t-values were obtained by analysis procedures utilized in the Statistical Package for the Social Sciences (Nie et al. 1970) as listed in Table 3. Two-tailed probability tests were used in the Statistical Package for the Social Sciences (SPSS) program, thereby providing t-values indicative only of whether a difference existed without any specification of the expected direction of such differences. Significant t-test values in mean differences at the .001 level were obtained for the following bipolar adjectives: active-passive, comfortable-uncomfortable, light-heavy. Significant t-test values in mean differences at the .001 level were obtained for the following bipolar adjectives: active-passive, comfortable-uncomfortable, light-heavy. Significant t-test values at the .01 level were obtained for ratings of important-unimportant and fast-slow. Significant t-test
Table 3. Mean, Standard Deviation, and t-Test Value for Rating of Health During Pregnancy (HDP) and Health Prior to Pregnancy (HPTP).

<table>
<thead>
<tr>
<th>Bipolar Adjectives</th>
<th>HDP</th>
<th>S.D.</th>
<th>HPTP</th>
<th>S.D.</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft-Hard</td>
<td>4.00</td>
<td>1.34</td>
<td>2.95</td>
<td>1.64</td>
<td>2.50*</td>
</tr>
<tr>
<td>Good-Bad</td>
<td>6.20</td>
<td>1.00</td>
<td>6.50</td>
<td>0.76</td>
<td>1.14</td>
</tr>
<tr>
<td>Active-Passive</td>
<td>5.60</td>
<td>1.34</td>
<td>6.55</td>
<td>0.61</td>
<td>3.71***</td>
</tr>
<tr>
<td>Comfortable-Uncomfortable</td>
<td>4.65</td>
<td>1.79</td>
<td>6.75</td>
<td>0.44</td>
<td>5.58***</td>
</tr>
<tr>
<td>Light-Heavy</td>
<td>2.75</td>
<td>1.25</td>
<td>4.70</td>
<td>1.63</td>
<td>4.65***</td>
</tr>
<tr>
<td>Calm-Excitable</td>
<td>2.85</td>
<td>1.76</td>
<td>4.10</td>
<td>1.74</td>
<td>2.84*</td>
</tr>
<tr>
<td>Important-Unimportant</td>
<td>6.40</td>
<td>0.88</td>
<td>5.60</td>
<td>1.35</td>
<td>3.24**</td>
</tr>
<tr>
<td>Strong-Weak</td>
<td>5.55</td>
<td>1.10</td>
<td>6.20</td>
<td>0.83</td>
<td>2.10*</td>
</tr>
<tr>
<td>Fast-Slow</td>
<td>4.15</td>
<td>1.57</td>
<td>5.80</td>
<td>0.95</td>
<td>3.58**</td>
</tr>
<tr>
<td>Increasing-Decreasing</td>
<td>5.75</td>
<td>1.07</td>
<td>4.95</td>
<td>1.43</td>
<td>1.99</td>
</tr>
</tbody>
</table>

* p < .05  
** p < .01  
*** p < .001
values at the .05 level were obtained for ratings of soft-hard, calm-exciteable and strong-weak.

Responses to Interview Questions

Categories which reflect the dimensions and specifics of the actual content of the data were developed from the subjects' responses. The subjects' responses were coded for categories and tabulated for frequency count and percentages. These results are summarized in Table 4.

When women were asked to describe their views of their health during pregnancy, three categories emerged. The first category is the "great" category. Sixty percent (60%) of the women used words such as "really good," "very good," "excellent," "great," or "super good" to describe their health. Interestingly, one woman in this group who described her health as "very good" also stated, "I feel almost normal, like before I was pregnant." The second category is known as the "good" category where 35 percent of the women employed words such as "good," "fairly good," or "O.K." to describe their health. The "good, but" category was the third to appear. Fifteen percent (15%) of the women used the words "My health is good, but..." followed by the following phrases to describe their health: "not as good as I'd like it to be," or "it could be better."
Table 4. Responses to Interview Questions, Categories and Frequency Count.

<table>
<thead>
<tr>
<th>Interview Question</th>
<th>Categories</th>
<th>f</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tell me how you see your health during pregnancy.</td>
<td>a) Great</td>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>b) Good</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>c) Good, but</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>2. In what way has pregnancy affected your state of health?</td>
<td>a) increased awareness</td>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>b) decreased energy level</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>c) fatter, bigger</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>3. When during pregnancy is/was your health at its best?</td>
<td>a) second trimester</td>
<td>14</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>b) first trimester</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>c) third trimester</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>4. Compare your health when you're not pregnant to when you are pregnant.</td>
<td>a) better during pregnancy</td>
<td>9</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>b) better prior to pregnancy</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>c) undecided</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>d) unchanged</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>5. What does it mean when you say you are in good health?*</td>
<td>a) energy level</td>
<td>15</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>b) not sick</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>c) lack of disease</td>
<td>4</td>
<td>20</td>
</tr>
</tbody>
</table>
Table 4 (Continued).

<table>
<thead>
<tr>
<th>Interview Question</th>
<th>Categories</th>
<th>f</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>d) degree of comfort</td>
<td></td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>e) fetal well-being</td>
<td></td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>6. What does it mean when you say you are in poor health?*</td>
<td>a) energy level</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>b) be sick</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>c) presence of an illness</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>d) degree of comfort</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>e) fetal well-being</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>f) activity level</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>7. What specific factors are occurring in your day-to-day functioning that help you to decide if you are in good health?*</td>
<td>a) level of fatigue</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>b) degree of comfort</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>8. Tell me how you feel when you are in good health.</td>
<td>a) cognitive level</td>
<td>16</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>b) physical level</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>9. Do you think you are experiencing more or less discomforts than an average pregnant woman?</td>
<td>a) less than average</td>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>b) same amount</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>c) more than average</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>d) unknown</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>
Table 4 (Continued).

<table>
<thead>
<tr>
<th>Interview Question</th>
<th>Categories</th>
<th>f</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Explain why a particular discomfort changes how healthy you think you are.*</td>
<td>a) degree of discomfort</td>
<td>14</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>b) unfamiliar</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>c) limits activity</td>
<td>3</td>
<td>15</td>
</tr>
</tbody>
</table>

* Multiple responses elicited.
Three categories emerged from the women's descriptions of the ways in which pregnancy affected their state of health. The first category is labeled "increased awareness." Sixty percent (60%) of the women stated that pregnancy made them "more aware" of their health. One woman stated, "I never really paid much attention to it before. Now, I'm conscious of every little thing." Linked with the heightened awareness of the women were descriptions of avoidance behaviors and/or positive behaviors performed to improve their state of health. Avoidance behaviors included: "I stopped drinking alcohol and before I got pregnant I was quite a party-er," and "I love coffee but I've stopped drinking it because of the caffeine." The majority of positive behaviors were concerned with nutrition: "I try to make sure I eat all the right things," "I make a concerted effort to eat three balanced meals a day," and "I've improved my eating habits." The other positive health behaviors related to exercise: "I make sure I get enough exercise, which I never did before," and "Now, I make myself either swim or take a walk every day."

Thirty percent (30%) of the women described pregnancy as affecting their health by "decreasing (my) energy level," the second category. A direct result of "not having the energy I used to" is: "I've had to decrease my activity level. I just can't do as much," "It's made my health worse," and "It's slowed me down a lot. I feel tired a lot
and just can't keep going." One subject stated, "The most important way is making it so I can't do as much. It's like an overall burden that is sapping my energy, making me tired, slowing me down."

The third category has a weight orientation and is titled "fatter-bigger." Ten percent (10%) of the women stated pregnancy affected their health by "making me fatter" and "...changed it. I'm getting bigger and bigger." Both of these women stated that they thought weight was associated with health and that "fat people are not as healthy as skinny people."

Women were asked to state the period in the pregnancy during which their health was at its best. Three categories emerged. The first category, labeled "the second trimester," emerged from responses such as "the middle months," "the fourth and fifth month," and "towards the middle." Seventy percent (70%) of the women stated their health to be best during this period for the following reasons: decreased level of discomfort (55%), no longer experiencing nausea and/or vomiting (50%), and an increased energy level (25%). The second category, "the first trimester," was developed from responses such as "the first two or three months," "in the beginning," and "the first three months." Twenty percent (20%) of the women were classified into this category. Explanations obtained from the subjects
as to why this period was their healthiest included: undetected pregnancy (5%), health behaviors at best (5%), decreased level of discomfort (15%), and increased energy level (5%). The third category is labeled "the third trimester," appeared. Responses such as "now" and "these last three months" were coded into this category. Ten percent (10%) of the women identified the third trimester of pregnancy as their most healthful period because they no longer experienced nausea and/or vomiting.

Four categories emerged from the responses comparing health during pregnancy to health prior to pregnancy. The first category of "better during pregnancy" was developed from responses such as "better now," "I feel healthier now," and "better when I'm pregnant." Forty-five percent (45%) of the women responded in this manner. Each of these women stated that better nutritional practices contributed to better health during pregnancy. Examples of these responses are: "I watch what I eat. I drink milk now which I didn't do before," "I'm eating vegetables and fresh fruit instead of snacks, and believe it or not, I eat liver once in a while," and "I'm eating better and taking those prenatal vitamins." Two of these women also used the words "take better care of myself now" to explain why their health was better during pregnancy. "Take better care of myself" was further explained as "trying to eat balanced meals three times a day, and I exercise more, and go to the doctor
regularly," and "I'm more aware of things that I eat, of things that I do, and how much rest I get." The second category, "better prior to pregnancy," evolved from responses such as "better when I'm not pregnant" and "I was healthier before pregnancy." Forty percent (40%) of the subjects' responses were classified in this category. The most frequently occurring explanation given for being less healthy during pregnancy was decreased energy level (35%). The other explanation related to the degree of discomfort experienced during pregnancy (5%). Ten percent (10%) of women were classified into the third category, "undecided." This category is best described by the responses of one subject: "My health habits are better now while I'm pregnant so I must be healthier, but my health isn't necessarily better because I've gained all this weight. I felt a lot better about myself before I was pregnant because I felt skinny, not because I was healthier. You think you're healthier when you're skinny." Only one subject (5%) was classified in the fourth category, "unchanged." She stated, "It's the same. I'm basically a real healthy person and I don't think being pregnant has changed it in any way."

Women were asked to describe what good health during pregnancy meant to them. Each woman responded with two or more explanations reflecting the multidimensional meanings of the concept "health." Seventy-five percent (75%) of the
women described health in terms of "energy level." "I still have a lot of energy," "It means I have energy to do just about anything I want to do," and "It means I'm not tired all the time" are responses coded into this first category. Twenty percent (20%) of the women described good health during pregnancy as meaning "not sick," referring specifically to the occurrence of nausea and/or vomiting. Statements such as "I don't feel sick to my stomach any more," "It means I'm not throwing up all day long," and "It means I'm not nauseous or vomiting any more" were included in this category. Twenty percent (20%) of the women described good health as the "lack of disease," a third category. Responses which developed this category included: "I don't have toxemia," "My blood pressure is normal. I'm not spilling any glucose in my urine. I don't have chronic UTI's," and "It means I'm not diabetic or have heart disease. I'm free of illness." Responses from fifteen percent (15%) of the women relating to the "degree of comfort" formed the fourth category. These women described good health during pregnancy as "not real uncomfortable with aches and pains," and "It means I don't feel uncomfortable--no backache, no aches in the lower abdomen, no pain anywhere." One woman (5%) described good health during pregnancy in terms of the fetus. This fifth category, "fetal well-being," was developed from the response, "Good health means the baby is progressing well and is active and has a strong heartbeat."
The same five categories which emerged when the women described what good health during pregnancy meant also appeared in their explanations of what poor health during pregnancy means. Thirty-five percent (35%) of women who described poor health in terms of their "energy level" used phrases such as, "I'd feel run down and tired all the time," "Not having energy to do anything," and "...to feel weak or lack energy to do anything," to describe this meaning of poor health. Responses such as, "I'd be sick again--throwing up and nauseous all day," and "It means I'd feel like I did in the first few months--nauseous and vomiting," were coded into the category, "be sick." Twenty percent (20%) of the subjects responded in such a manner.

Twenty percent (20%) of the subjects stated the "presence of an illness" would qualify their health as poor. Responses such as "being diagnosed with toxemia or diabetes so that I would have to be on a special diet, take medicine and constantly go to the doctor means poor health," were coded into this category. In contrast to the 15 percent of women describing good health in terms of the "degree of comfort," 40 percent of the subjects described poor health in this respect. Responses included in this category were: "It means my feet are real swollen and hurt," and "It means I've got all these aches and pains that make me uncomfortable." Again, one subject (5%) described poor health in
terms of "fetal well-being" by stating, "The baby would be in poor health. It would probably be smaller." In addition to these five categories, a sixth labeled "activity level" emerged. Thirty-five percent (35%) of the women spoke of poor health in the following manner: "...have problems carrying out my daily activities," "...being unable to go to work, having to stay home and be bedridden," "I wouldn't be able to do the things I normally do on a day-to-day basis," and "...having my activities limited or restricted in some way."

Two categories were developed from the women's descriptions of how they felt when in good health. The majority of women (80%) responded at the cognitive level. Responses such as, "I feel like a million dollars," "Happy. Content. Satisfied," "Thrilled. Excited. Happy," and "Less anxious" were coded into this first category. One subject's response was unique and is presented here. "... I don't feel pregnant when I feel good. That sounds awful, but I think what I mean is that I'm not worrying about being pregnant every minute. When I feel good I don't have to worry about my health or the baby's as much. It's not a constant in the back of my mind waiting to spring on me."

The remaining 20 percent of the subjects described feeling good at the physical level. Responses such as, "I have a lot of energy" and "Energetic" were coded into this second category.
Second Research Question

What indices of health does a pregnant woman employ during the third trimester of pregnancy to evaluate her state of health?

Responses to Interview Questions

Women were asked to identify factors examined on a daily basis that helped them to judge their state of health. Every woman (100%) identified her "level of fatigue" as an indicator of her state of health. The more fatigue present, the more negative the woman's perception of health. Fatigue level seemed to be evaluated at two points during the day: in the morning upon arising and again in the late afternoon. Responses such as, "...just how energetic I feel when I wake up in the morning," "Do I feel really, really fatigued? Do I just want to sleep when I get home from work?" "... how much I can still do at the end of a day. Is it too much for me to fix dinner and wash the dishes or can I handle stuff like that?" and "I can tell just by how much energy I have to do what I want to accomplish for the day," were coded into this category. A second category, "degree of comfort," was developed from responses such as, "...how swollen and painful my feet are," "...the degree of discomfort I'm experiencing especially with heartburn and swelling of my feet," and "... how much my aches and pains are bothering
me." Twenty-five percent (25%) of the subjects responded in such a manner. As with the fatigue category, an inverse relationship was described.

**Third Research Question**

Does a relationship exist between a woman's perception of her state of health during the third trimester of pregnancy and the reported number of discomforts currently experienced by the woman?

**Analysis of the Discomfort Checklist**

Frequencies of response for each discomfort are presented in Table 5. The discomforts "fatigue" and "joint stiffness" were contributed by the subjects. A Pearson product-moment correlation (r) was calculated to describe the relationship between each subject's total number of discomforts and her rating of her state of health as excellent, good, fair or poor. The correlation was significant at the .003 level, indicating an inverse relationship between number of discomforts and rating of health (r = -.6351). Figure 2 graphically illustrates this relationship.

Frequencies of responses for each discomfort which altered a woman's perception of her state of health are also presented in Table 5. Table 6 presents a rank ordering of the discomforts which altered the women's perception of their state of health.
Table 5. Recorded Frequencies of Each Discomfort, Recorded Frequencies of Each Discomfort Which Altered a Subject's Perception of Health.

<table>
<thead>
<tr>
<th>Each Discomfort</th>
<th>F</th>
<th>%</th>
<th>Each Discomfort Which Altered Perception of Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low backache</td>
<td>15</td>
<td>75</td>
<td>2</td>
</tr>
<tr>
<td>Heartburn</td>
<td>9</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>Constipation</td>
<td>7</td>
<td>35</td>
<td>2</td>
</tr>
<tr>
<td>Hemorrhoids</td>
<td>1</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Varicose Veins/Legs</td>
<td>4</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Gas</td>
<td>10</td>
<td>50</td>
<td>2</td>
</tr>
<tr>
<td>Shortness of Breath</td>
<td>10</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td>Pain in Calf, Thigh or Buttock</td>
<td>9</td>
<td>45</td>
<td>4</td>
</tr>
<tr>
<td>Vaginal Discharge</td>
<td>15</td>
<td>75</td>
<td>2</td>
</tr>
<tr>
<td>Swelling of Ankles and/or Feet</td>
<td>17</td>
<td>85</td>
<td>10</td>
</tr>
<tr>
<td>Urinary Frequency</td>
<td>19</td>
<td>95</td>
<td>1</td>
</tr>
<tr>
<td>Waking Up at Night To Urinate</td>
<td>19</td>
<td>95</td>
<td>2</td>
</tr>
<tr>
<td>Faintness or Dizziness</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Breast Tenderness</td>
<td>6</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>Pain in the Groin</td>
<td>3</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Contractions</td>
<td>14</td>
<td>70</td>
<td>0</td>
</tr>
<tr>
<td>Other - Fatigue</td>
<td>2</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Joint Stiffness</td>
<td>2</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>
*Key:  
1 = poor  
2 = fair  
3 = good  
4 = excellent

Figure 2. Scatter Plot of Relationship Between Rating of Health (x axis) and Focal Number of Discomforts (y axis).
Table 6. Rank Ordering of Discomforts Which Altered a Subject's Perception of Her State of Health.

<table>
<thead>
<tr>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fatigue</td>
<td>100.0</td>
</tr>
<tr>
<td>2. Pain in the groin</td>
<td>66.7</td>
</tr>
<tr>
<td>3. Swelling of the ankles and/or feet</td>
<td>58.8</td>
</tr>
<tr>
<td>4. Varicose veins of legs</td>
<td>50.0 ≥ 50%</td>
</tr>
<tr>
<td>5. Pain in calf, thigh or buttock</td>
<td>44.4 ≤ 44.4%</td>
</tr>
<tr>
<td>6. Heartburn</td>
<td>33.3</td>
</tr>
<tr>
<td>7. Shortness of breath</td>
<td>30.0</td>
</tr>
<tr>
<td>8. Constipation</td>
<td>28.6</td>
</tr>
<tr>
<td>9. Gas</td>
<td>20.0 ≥ 20%</td>
</tr>
<tr>
<td>10. Low backache</td>
<td>13.3 ≤ 13.3%</td>
</tr>
<tr>
<td>11. Vaginal discharge</td>
<td>13.3</td>
</tr>
<tr>
<td>12. Waking up at night to urinate</td>
<td>10.5</td>
</tr>
<tr>
<td>13. Urinary frequency</td>
<td>5.3</td>
</tr>
</tbody>
</table>
Responses to Interview Questions

Women were asked if they were experiencing more or less discomfort than a normal pregnant woman. Four categories emerged. The first category, "less than average," was composed of the responses from 60 percent of the subjects. Responses such as, "I'd say less. From the way the women in my Lamaze class express the way they feel, I'm not as uncomfortable as they are," and "Probably less. I compare notes with a friend who is pregnant and due two weeks before I am. I'm just not as bothered by the discomforts as she is," were coded into this category. The second category, "the same," was developed from the responses of 30 percent of the subjects. Responses included in this category are: "I'm average—the same amount. The reason I say this is because I've talked to my doctor and he says I'm normal. I figure he knows more than I do because this is my first pregnancy," and "The same amount. Since I talk to other people and know that they're going through the same thing, I think I'm in the normal range." One subject's response (5%) comprises the third category, "more than average." She stated, "I'm so uncomfortable that I've got to be having more." The fourth category, "unknown," was developed from the response of one subject (5%). She stated, "I don't know. I don't know any pregnant women."
Another question asked women to explain why specific discomforts changed their perception of health. The most frequently recurring response (70%) related to the "degree of discomfort" caused by the symptom. Responses such as, "The heartburn I've never experienced before to such a degree that I am right now. It's really bad," and "... because my legs hurt from the varicose veins" were coded into this category. Fifteen percent (15%) of the subjects stated that a particular discomfort changed their perception of their health because they had never before experienced it. This second category, "unfamiliarity," is composed of responses such as: "I've never had swollen ankles before and didn't know what to think," and "I've never had some of these things before I was pregnant, that's why." Fifteen percent (15%) of the subjects' responses were classified into the third category, "limits activity." This category evolved from responses such as, "The swelling, because that one slows me down. If my fingers swell too much, they don't fit into my scissors and then I can't cut hair," and "If I see my ankles and feet are swollen, I'll sit down and elevate them, which stops me from doing other things I need or want to do."

Summary

The sample for this study was composed of 20 pregnant women with a mean age of 25.20 years whose weeks
gestation ranged from 29 to 40 weeks. The majority of women were Anglo-American, Catholic, married, employed, with a family income of less than $20,500 per year. The minimal educational level of the subjects was the high school graduate level.

The majority of women self-rated their state of health as good. A Pearson product-moment correlation (r) was calculated to describe the relationships between the demographic variables and the self-rating of health. One statistically significant correlation was obtained for the relationship between religious affiliation and rating of health.

Analysis of the data obtained from the semantic differential instrument revealed significant differences in the means for the rating of health during pregnancy and health prior to pregnancy for eight of the ten adjective pairs: soft-hard, active-passive, comfortable-uncomfortable, light-heavy, calm-excitable, important-unimportant, strong-weak, and fast-slow.

Categorization and frequency count of the subjects' responses to the interview questions was done. The following are the highlights of the data obtained:

- The majority of women's responses were classified in the "great" category when asked to describe their view of their health during pregnancy.
- "Increased awareness" of health matters was the most frequently occurring response describing the effect of pregnancy on a woman's state of health.
- The "second trimester" is the period of pregnancy in which the majority of women described their health at its best.
- The majority of women described their health as "better during pregnancy" as compared to when they are not pregnant.
- The "second trimester" is the period of pregnancy in which the majority of women described their health at its best.
- Most of the women's responses related to their "energy level" when describing what good and poor health meant to them;
- Every woman evaluated her state of health by the "level of fatigue" experienced;
- Responses from the "cognitive level" most frequently described how women feel when in good health;
- Most women described their discomfort as "less than average"; and
- The most frequently occurring response describing why a specific discomfort altered a woman's perception of health related to her "degree of discomfort."
A Pearson product-moment correlation (r) was calculated to describe the relationship between the total number of discomforts experienced and the self-rating of health. A significant correlation describing an inverse relationship exists.

Rank ordering of the discomforts revealed those relating to fatigue and pain were the most frequent to affect a woman's perception of health.
CHAPTER 5

DISCUSSION OF THE FINDINGS

This exploratory-descriptive study designed to assess and describe women's perceptions of health during the third trimester of pregnancy revealed several implications for clinical nursing practice which will be discussed in this chapter.

Perception of State of Health

The results of this study indicate that women perceived their health as positive during the third trimester of pregnancy. When women were asked to rate their state of health, 60 percent rated it as good and 40 percent rated their health as excellent. Responses to the interview questions revealed several factors contributing to the positive ratings. Pregnancy stimulated the women toward the realization that responsibility of health extended beyond the self to the fetus. The women described being in control of behaviors which foster health as important. For example, women began to drink milk and eat liver, eliminate caffeine and alcohol from their diets, and make a deliberate effort to eat three nutritionally balanced meals a day. One of the most common reasons women described their health as better
during pregnancy versus prior to pregnancy was their improved nutritional intake.

Another health-related behavior of the women perceived as within their control was the amount of daily exercise performed. The women in this sample expressed conscious efforts to exercise daily in order to "take care of myself" and in hopes of regaining their pre-pregnancy figures soon after delivery. Society's preoccupation with physical fitness and "looking good" was evidenced by the women in this sample. Women perceived exercise as beneficial to their health status.

Nausea and/or vomiting is a common discomfort of pregnancy occurring in some degree in about 50 percent of all pregnant women (Clark and Affonso 1979). Nausea and vomiting usually disappear by the fourth month of pregnancy; however, this discomfort may extend into the second and third trimesters of pregnancy. The sample of women strongly communicated that the unpleasantness and discomfort of the nausea and/or vomiting contributed to a negative perception of their health. A small number of women (10%) commented to the effect that if this study had been conducted earlier, when they were experiencing the nausea and/or vomiting, that they would have rated their health as poor. Noteworthy is the fact that 20 percent of the sample described good health as the absence of nausea and/or vomiting. Ironically, 20 percent of the women described poor health as the presence
of nausea and/or vomiting. These women defined themselves as "being sick" when they experienced this discomfort. Such a finding is congruent with Twaddle and Hessler's (1977) statement that people frequently define themselves as unhealthy because of subjective feelings (e.g., nausea, pain, weakness). The findings of this study reveal that a discomfort of pregnancy usually regarded by health care professionals as minor greatly impacts on a woman's perception of health. This finding is worthy of greater exploration.

Many of the women expressed the importance of feedback from the health care providers to reinforce their own perceptions of their health. The probable influence of health care providers to shape a woman's perception of her health must not be underestimated. The impact as to the manner in which information is provided to pregnant women about their health should be explored more fully.

Frequent responses were obtained in which the women described themselves as feeling "happy" during the third trimester of pregnancy. Is the woman happy because she perceives her health as good, or does the woman perceive her health as good because she is happy? This relationship between a happy feeling-state and perception of health is yet to be explored and is worthy of further investigation.

A result of the study indicates a positive relationship between self-rating of health and religious affiliation.
for this sample. This finding can be attributed to the large percentage of Catholic women (45%) in the sample. A woman's religious affiliation is one aspect of her cultural background. This is an exciting finding because health, illness and religion are culturally defined. The question to be asked in the future is: "Does this relationship between religious affiliation and perception of health during pregnancy exist, or is this an artifact of the sample?"

The data obtained indicate that women have several orientations to the concept health. Baumann (1961) described the lay person's conception of health in terms of three general orientations: a feeling-state orientation, symptom orientation, and a performance orientation. The majority of women defined both good and poor health in terms of a feeling-state orientation. Typical responses classified as expressing this orientation were: "It means I'm not tired all the time," and "...to feel weak or lack energy to do anything." These responses were classified into the "energy level" category. Women whose responses were classified in the "degree of comfort" category exemplify those with a symptom orientation. The degree of comfort and/or pain were the symptoms referred to be the subjects when defining poor health. Such a finding is consistent with the literature, indicating that the presence of symptoms usually begins the process of redefining health identities from a health state to illness (Twaddle and Hessler 1977). While
none of the women defined good health in terms of capacity changes or inability to perform normal tasks, a large number of women defined poor health in terms of a performance orientation. This finding is congruent with those of DiCicco and Apple (1960), Sweetzer (1966) and Irelan (1967), which indicate that lay people commonly perceive poor health in terms of the inability to perform daily activities.

The findings of this study indicate that the orientations described by Baumann (1961) can be expanded. There was evidence of consistent references to weight and perception of health to develop a weight orientation. Women described the effect of pregnancy on their health as "making me fatter." One subject was unable to decide if she was healthier during pregnancy or prior to pregnancy because she had "gained all this weight." She went on to explain, "You think you're healthier when you're skinny." The women in this sample described the following relationship:

if pregnant, then you are fat (a → b)
if fat, then you are unhealthy (b → c)
if pregnant, then you are unhealthy (a → c).

Psychologically, the gravid uterus is linked into the domain of overweightness. This departure from logical thinking indicates the functioning of a unique cognitive style during pregnancy. The literature describes the gravid uterus in terms of an unattractive orientation (Clark and Affonso
1979; Jensen, Bensen and Robak 1981; Ziegel and Cronley 1978). Changes in the shape of the woman's physique are what is interpreted as significant. The weight orientation is a new interpretation to this data and needs to be explored more fully, to examine the relationships between pregnancy, overweightness, and perception of health.

New perspectives as to how women perceive their health during pregnancy and prior to pregnancy were manifested through the responses to the semantic differential tool. The data indicated there were differences between these two states of health for the rating of three bipolar adjectives: soft-hard, light-heavy, and calm-excitable. Each woman questioned the meaning of the bipolar adjective pair soft-hard while completing the rating scales. The uncertainty of meaning was reflected in the unexpected modal responses of hard health prior to pregnancy, and the neutral health position during pregnancy. A cognitive style of pregnancy described by Rubin (1970;1976) and Colman and Colman (1974) was evidenced in the ratings of the semantic differential. Colman (1969) states that language may acquire new symbolic meanings to the pregnant woman. The words soft and hard in relation to health may have acquired different meanings for these pregnant women. For example, did the women associate soft-hard with the meaning fragile-tough instead of easy-difficult as construed by the investigator. Such a finding needs to be more fully explored. The
modal response was in the light direction for health prior to pregnancy versus the heavy direction for health during pregnancy. This finding is attributed to the difference in weight and size prior to pregnancy and during pregnancy. The data show a modal response in the calm direction for health prior to pregnancy versus a modal response in the excitable direction for health during pregnancy. This finding is consistent with the literature which describes women as emotionally labile during pregnancy (Clark and Affonso 1979; Jensen, Bensen and Bobak 1981). The meanings attributed to words are different when a woman is gravid. This can alter communication between the pregnant woman and health care providers unless meanings are congruent between the individuals.

Indices of Health During the Third Trimester of Pregnancy

The major themes which emerged when women were asked to identify indices of health utilized to evaluate their health focused on level of fatigue and degree of comfort. Every subject (100%) reported her level of fatigue as the factor against which she evaluated her state of health. When women reported fatigue as an evaluative index, they described their health as altered. This sample indicated an inverse relationship between their level of fatigue and the perception of their state of health. Analysis of the
content obtained from the interview questions revealed responses relating to "energy level" or "fatigue level" for six of the ten questions.

This finding of a decreased energy level is physiologically supported by what is commonly referred to as the physiologic anemia of pregnancy. During pregnancy, the total blood volume increases by approximately 40 percent. The increased blood volume is more reflective of an increase in the plasma portion than the red blood cell portion of the blood. The resultant decreased hematocrit and hemoglobin is described as the physiologic anemia of pregnancy.

Fatigue is generally accepted as a natural consequence of pregnancy. Complaints of fatigue by pregnant women are expected. When a woman complains of fatigue, health care providers evaluate her hematocrit, administer iron supplements and encourage the woman to rest frequently. Health care providers with this physiologic focus of fatigue cannot appreciate the cognitive alterations occurring in the pregnant woman. Data from this study indicate fatigue is associated with negative cognitions. Affonso's (1982) study reinforces this finding. Affonso's results indicate that the decreased energy level of postpartal women altered their self-constructs in a negative direction and interfered with their social support systems. These findings indicate that fatigue affects a woman's cognitive and physical
functioning. The relationship between fatigue and perception of health during pregnancy is not yet fully appreciated and is worthy of future investigation.

One other factor described by 25 percent of the women in this sample as an index against which they evaluated their health was their degree of comfort. These women indicated an inverse relationship between their level of comfort and their perception of health. This result is consistent with the finding of an inverse relationship between the total number of discomforts experienced and self-rating of health.

**Discomforts of Pregnancy and Their Relationship to Perceived State of Health**

A finding of this study indicating a negative correlation between the total number of discomforts experienced and the self-rating of health was obtained; as the number of discomforts increased, women's self-rating of health decreased from excellent to good. The major themes which emerged when women were asked to explain why a particular discomfort altered their perception of health focused on: amount of pain produced, unfamiliarity, and limitation of activities.

Responses of the women indicated that a pregnant woman in excellent health was defined as one who did not experience any discomfort, did not complain of nausea and/or vomiting, did not lack energy, and did not have a medically
diagnosed complication. Women who identify a large number of symptoms experience more discomfort with subsequent perception of their health as good and not excellent. This is consistent with the finding that the second trimester of pregnancy was the period of best health for the majority (70%) of women in this study. The following reasons were given by the women to explain this finding: energy level peaked, nausea and/or vomiting was no longer experienced, and discomfort level was decreased. These explanations are consistent with the women's criteria for excellent health during pregnancy.

Women were asked to describe their amount of discomfort in relation to a normal pregnant woman. Responses were categorized as less than average (60%), the same or average (30%), more than average (5%), and unknown (5%). Upon elaboration, the women described "comparing notes" with friends, mother and sisters about the discomforts experienced during pregnancy. The pregnant women utilized their significant others as a referential group against which to evaluate their own level of discomfort.

The results of this study indicate that selected discomforts of pregnancy are more likely to alter a woman's perception of health than others. A noteworthy fact is the emergence of fatigue as the highest ranking discomfort which altered women's perception of their health.
Discomforts which were pain-producing frequently altered a woman's perception of her health. Pain is not normal for the generally healthy population and is construed as abnormal. Women construe pain as abnormal prior to pregnancy, and continue to do so during pregnancy.

When the women were asked to explain why a discomfort altered their perception of health, 15 percent described the lack of experience, or unfamiliarity, of a symptom as the reason. This finding is consistent with those of Twaddle (1969) and Mechanic (1978) who stated that the more unfamiliar the symptom, the more likely it would be to be interpreted as significant. Of interest is the fact that none of the women in the study reported contractions, a discomfort never before experienced, altered their perceptions of their health. This contradicts Twaddle (1969) and Mechanic's (1978) findings. Many of the women commented that the "contractions were different"; they were welcomed by the women as a sign of approaching labor and delivery. The women's unique cognitive processes attached a new and different meaning to this discomfort of pregnancy from the one construed by the investigator.

Discomforts which restricted activities altered a woman's perception of her state of health. This finding is consistent with the definition of poor health during pregnancy as limitations on daily activities.
Outline of Findings

The data obtained from the sample in this study are outlined as follows:

1. The women perceived their health during the third trimester of pregnancy as positive. Factors which contributed to the positive ratings include: improved nutritional intake, increased amount of daily exercise, the absence of the discomfort from nausea and/or vomiting, and the absence of a medically diagnosed condition.

2. The women had four orientations toward the concept health: feeling-state, symptom, performance, and weight. The majority of women had a feeling-state orientation.

3. The unique cognitive style of pregnancy was exhibited by these women. The literature describes a different style of thinking while pregnancy (Rubin 1970, 1976). This study indicates that women think differently about common everyday terms.

4. The level of fatigue is the index utilized by the women to evaluate their state of health. Women who experienced a decreased energy level were more likely to perceive their health as negative. The findings of this study indicate that fatigue can no longer be considered a "minor" discomfort of pregnancy.
5. Women who experienced more discomfort were more likely to rate their health as good versus excellent. Discomforts of pregnancy which were most likely to alter a woman's perception of health were: fatigue, nausea and/or vomiting, pain-producing discomfort, those which were unfamiliar to the woman, and those which limit a woman's activities.

Clinical Implications for Nursing

The results obtained from this study provide direction for nurses caring for pregnant women. The following are selected implications to be discussed.

For years the focus of nurses in prenatal settings has been the monitoring of physiologic status of the gravid woman. This medical-illness orientation is reinforced by medical and nursing colleagues. For example, nurses employed in prenatal settings are rewarded for case finding abnormalities in the parameters of health, e.g., an elevated blood pressure, proteinuria, or a decreased blood-glucose level. This study presented data that women in the third trimester of pregnancy perceive their health as positive. These women indicated a health orientation during pregnancy. Nurses working prenatal settings must acquire a balance between the illness and health orientations. Women in this study were motivated to do all they could to improve their health during pregnancy. Nurses can utilize this knowledge
to introduce and reinforce health-promoting behaviors of women. If strengthened enough, these health promoting behaviors may extend beyond the prenatal period and be incorporated into the woman's repertoire of health-related behaviors.

The women in this study indicated that the discomfort associated with nausea and/or vomiting greatly influenced their perception of health and altered it in a negative direction. For many years health care providers have viewed nausea and/or vomiting as an expected, normal congruence of pregnancy. A casual attitude toward this discomfort is evidenced in the responses of doctors and nurses to women when they complain of nausea and/or vomiting. Responses such as "Don't worry, it's normal," "Almost every woman complains of this at some time," and "It will go away soon" are frequently given. Women were conditioned to regard nausea and/or vomiting as a minor discomfort. However, health care providers failed to realize that this discomfort is not minor to women. Indeed, this study indicates that the discomfort of nausea and/or vomiting, perceived as minor by health care professionals, is in reality a major discomfort to women. To reiterate a statement by Maddox and Douglas (1973:87), "The subjective belief that one is healthy or ill may be more important than actual medical status in predicting an individual's general emotional state and behavior." A woman's perception of her health as negative
during the prenatal period will affect her health beliefs and practices. Women with negative perceptions of health during pregnancy must be identified by nurses and encouraged to continue health-promoting behaviors.

This study indicates that content presented to women and the style of presentation contribute to a woman's perception of her health during pregnancy. Nurses caring for pregnant women need to be cognizant of this fact. During the prenatal period, nurses and women are involved in many teaching-learning situations which range from the informal (spontaneous during prenatal visits) to the formal (childbirth education classes). Often during these encounters, content is presented for the sake of content. Rarely if ever have nurses taken the time to note the impact of this content on a woman's perception of health. Data from this study indicate that what nurses say and how they say it contributes to the woman's perception of her health. To facilitate development of a positive perception of health during pregnancy, the nurse needs to provide the woman with positive feedback about her health.

This study presents evidence that a cognitive style of pregnancy, as theoretically proposed by Rubin (1970), does indeed operate during the prenatal period. Interesting to note were the differences in meaning attached to common everyday adjectives between the pregnant women in this
sample and the investigator. A nurse working in the pre- natal setting needs to be aware that the meaning she assigns to a word is not necessarily the same meaning given to the word by a pregnant woman. To prevent misunderstandings in communication, the nurse must verify that words, phases, and statements have the same meaning for both her and the preg- nant woman.

Women in this study supported the three orientations of health described in the literature (Baumann 1961). However, a new health orientation emerged which focuses on weight. A major event of the prenatal visit is the "weigh- in." A woman's amount of weight gain and pattern of weight gain is one of the physiologic parameters of her health. The findings of this study indicate that weight gain goes beyond this basic, physiologic meaning for pregnant women; it is associated with their perception of health. In dealing with pregnant women, the nurse needs to be aware that this group has a weight orientation which contributes to their perception of health. Nurses working in prenatal set- tings need to assess a woman's perception of health and its relationship to her weight gain. If the pregnant woman per- ceives her health in a negative direction, the nurse can ex- plain and reinforce the importance of the increased caloric, nutritionally balanced diet during pregnancy, explain the weight gain in terms of the products of conception, encourage the woman not to diet, and review a weekly diet
diary of the woman to identify and resolve any problem areas.

Generally, fatigue has been regarded as a consequence of childbirth. The results of this study indicate that fatigue is present during the prenatal period and contributes to a woman's perception of her health. Fatigue is another discomfort of pregnancy that can no longer be regarded as minor by health care providers. Providing pregnant women with iron supplements and suggestions as to how their energy level can be increased is no longer adequate. Nurses working in antepartal, intrapartal and postpartal settings need to assess not only a woman's level of fatigue but also its contribution to her perception of health. If a woman's fatigue level is great, her cognitive and physical functioning are altered. If her perception of health is in a negative direction, her health beliefs and practices may be affected in a similar direction.

Recommendations for Further Study

This study is a beginning exploration of women's perception of health during pregnancy. The findings obtained in the study suggest these further explorations:

1. Determine the validity and generalizability of the findings by repeating the study with a larger sample receiving prenatal care from a variety of health care providers, e.g., midwife versus physician.
This would also permit an assessment of the impact of the health care provider on a woman's perception of health.

2. Development of a tool to explore more fully the relationship between the discomforts of pregnancy and perception of health.

3. Conduct a study utilizing the semantic differential technique as the data gathering tool to determine its reliability and validity as an instrument for assessing women's perception of health during and prior to pregnancy. This would also permit further exploration of the unique cognitive style of pregnancy.

4. Assess if there is a relationship between perception of health during pregnancy and each of the following variables: a woman's emotional status, a woman's cultural background, the presence of a medically diagnosed condition, and a recognized weight problems (e.g., underweight, overweight).

5. Conduct a longitudinal study to assess differences in a woman's perception of health at selected time periods in the pregnancy. Such a study would also permit an assessment of whether the indices of health changed during the course of the pregnancy.
6. Replicate this study with a sample of multigravidas to assess if differences in perception of health exist between women pregnant for the first time, and women repeating pregnancy.

7. Investigate the impact of a pregnant woman's health locus of control on her perception of her state of health.

8. Assess if there is a relationship between various perceptions of health and duration of labor.
APPENDIX A

UNIVERSITY HUMAN SUBJECTS COMMITTEE
APPROVAL

THE UNIVERSITY OF ARIZONA COLLEGE OF NURSING

MEMORANDUM

TO: Cynthia Anne Irwin, R.N., B.S.N.
2401 East Glenn
Apt. 18
Tucson, Arizona 85719

FROM: Ada Sue Hinshaw, R.N., Ph.D. Jan R. Atwood, R.N., Ph.D.
Director of Research Chairman, Research Committee

DATE: May 13, 1983

RE: Human Subjects Review: Women's Perception of Their State of Health During

the Third Trimester of Pregnancy

Your project has been reviewed and approved as exempt from University review by
the College of Nursing Ethical Review Sub-committee of the Research Committee,
and the Director of Research. A consent form with subject signature is not re­
quired for projects exempt from full University review. Please use only a dis­
claimer format for subjects to read before giving their oral consent to the
research. The Human Subjects Project Approval Form is filed in the office of
the Director of Research, if you need access to it.

We wish you a valuable and stimulating experience with your research.

ASH:des
4/83
APPENDIX B

SUBJECT DISCLAIMER

Women's Perception of Health During the Third Trimester of Pregnancy

Cynthia Irwin is a registered nurse and a student in the graduate program at the University of Arizona. She is working on a Master's Degree in Maternal-Newborn Nursing. Dr. _______________ has given her/his permission to contact you regarding a study she will be conducting as part of her thesis requirements.

Miss Irwin is conducting a study involving women who are pregnant for the first time. The purpose of the study is to explore women's impressions of their health during pregnancy. All women will be asked to participate in one, 45 minute tape recorded interview and to respond to two questionnaires about health.

If you choose to participate, there will be no cost to you, nor will there be any monetary payment. There are no known risks to you.

If you consent to participate in the study, all identifying information, such as your name, will be kept strictly confidential. Such information will not be given to any third party. You will not be identified in the taped interview or on the questionnaire by name or descriptive information, and analysis of the results will refer only to the group, not to an individual. The information gained will be used only for research and educational purposes, but may be published in professional literature at a later date.

Participation is voluntary; you are free to not participate, and are free to withdraw at any time. You have the right to not answer questions. Your choice to participate, not participate, or to withdraw will not affect the care given you. If you participate, any questions you have about the study will be answered.

By responding to the questions, you will be giving your consent to participate in the study.

Cynthia A. Irwin, R.N., B.S.N.
Principal Investigator
2401 East Glenn, Apt. 18
881-6167
APPENDIX C

BACKGROUND INFORMATION

1. Age as of last birthday: ________ years.

2. Including this week, gestational age of your pregnancy: ________ weeks.

3. Ethnic background: ________________________________.

4. Religious affiliation: ________________________________.

5. Yearly family income:
   □ $0 - $14,000
   □ $14,500 - $20,000
   □ $20,500 - $30,000
   □ Greater than $30,000

6. Education:
   □ Less than 12th grade
   □ High school graduate
   □ Trade-business school
   □ 1 - 3 years of college
   □ College graduate
   □ Some graduate education
   □ Graduate or professional degree


The purpose of this questionnaire is to measure the meanings of certain things to various people by having them judge them against a series of descriptive scales. In taking this test, please make your judgments on the basis of what these things mean to you. On the following pages you will find a different concept to be judged and beneath it a set of scales. You are to rate the concept on each of these scales in order. Here is how to use these scales:

If you feel that the concept at the top of the page is very closely related to one end of the scale, you should place your check-mark as follows:

Fair: X:___:___:___:___:___:___:___:___: Unfair

OR

Fair: ___:___:___:___:___:___:___:___:___: X Unfair

If you feel that the concept is quite closely related to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

Fair: ___:X:___:___:___:___:___:___:___: Unfair

OR

Fair: ___:___:___:___:___:___:___:___:___: X Unfair

If the concept seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

Active: ___:___:X:___:___:___:___:___: Passive

OR

Active: ___:___:___:___:X:___:___:___: Passive

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the thing you're judging.

If you consider the concept to be neutral on the scale, both sides of the scale equally associated with the concept, or if the scale is completely irrelevant, unrelated to the concept, then you should place your check-mark in the middle space.

Safe: ___:___:___:X:___:___:___:___: Dangerous
IMPORTANT: (1) Place your check-marks in the middle of spaces, not on the boundaries.

\[ \text{THIS: } \_\_ \_\_ X \_\_ \_\_ \text{ NOT THIS } \_\_ \_\_ X \_\_ \_\] 

(2) Be sure you check every scale for every concept - do not omit any.

(3) Never put more than one check-mark on a single scale.

Sometimes you may feel as though you've had the same item before on the test. This will not be the case, so do not look back and forth through the items. Do not try to remember how you checked similar items earlier in the test -- make each item a separate and independent judgment. Work fairly fast. Do not worry or puzzle over individual items. It is your first impression we want. On the other hand, do not be careless, because we want your true impressions.
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MY HEALTH PRIOR TO PREGNANCY

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<th>heavy</th>
<th>light</th>
<th>excitable</th>
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</table>
APPENDIX E

DISCOMFORT CHECKLIST

Please place a check next to each item(s) listed below that you are now experiencing.

____ low backache
____ heartburn
____ constipation
____ hemorrhoids
____ varicose veins of the legs
____ gas
____ shortness of breath
____ pain in calf, thigh, or buttock
____ vaginal discharge
____ swelling of ankles and/or feet
____ urinary frequency
____ waking up at night to urinate
____ faintness or dizziness
____ breast tenderness
____ pain in the groin
____ contractions, painless or not
____ other. Please list.
Does the item(s) you have checked change your state of health?

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<tr>
<th>Item</th>
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<th>NO</th>
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<td>low backache</td>
<td></td>
<td></td>
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<tr>
<td>hearburn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>constipation</td>
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<td>hemorrhoids</td>
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<tr>
<td>varicose veins of the legs</td>
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<tr>
<td>gas</td>
<td></td>
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<tr>
<td>shortness of breath</td>
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<tr>
<td>pain in calf, thigh, or buttock</td>
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<tr>
<td>vaginal discharge</td>
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<tr>
<td>swelling of ankles and/or feet</td>
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<tr>
<td>urinary frequency</td>
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<tr>
<td>waking up at night to urinate</td>
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<td></td>
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<tr>
<td>faintness or dizziness</td>
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<td>breast tenderness</td>
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<tr>
<td>pain in the groin</td>
<td></td>
<td></td>
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<tr>
<td>contractions, painless or not</td>
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<tr>
<td>other. Please list:</td>
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APPENDIX F

CHARACTERISTICS OF THE SAMPLE (N=20)

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<th>Characteristics</th>
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<td>29-34</td>
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<td><strong>Gestational Week</strong></td>
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<tr>
<td>Not married</td>
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REFERENCES


