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A comparison of maternal prenatal attachment between Anglo and Mexican-American primigravidae

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A COMPARISON OF MATERNAL PRENATAL ATTACHMENT BETWEEN ANGLO AND MEXICAN AMERICAN PRIMIGRAVIDAE

by

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ABSTRACT

To compare maternal prenatal attachment between Anglo and Mexican American women, 68 low-risk primigravidae at 23 to 41 weeks gestation were recruited from childbirth classes, prenatal clinics, and a private obstetrician's office. The respondents completed a questionnaire that included the Muller Prenatal Attachment Inventory as well as provided information on ethnic identity and demographic variables. The questionnaires were available in both English and Spanish.

There were no significant differences on maternal prenatal attachment scores between Anglo and Mexican American mothers in this sample. One of the most significant findings was that the women in this sample who were taking prenatal classes tended to be younger and have lower educational and income levels.

CHAPTER 1

INTRODUCTION

The purpose of this study was to compare the experience of maternal prenatal attachment between Anglo and Mexican American primigravidae. It a further intent to elucidate the common features of this experience across cultural groups as well as those aspects that are unique to each cultural group.

The process of becoming a mother, especially for the first time, is critical in the course of human development (Leifer, 1977). A woman's pregnancy occupies the major portion of the childbearing year. It is a time of continual and momentous change for her. One essential task during this period is the binding-in or attaching to the fetus (Rubin, 1976, 1984). The relationship of a woman to her unborn child is one that is continually evolving during the childbearing year. The formation of attachment and the elaboration of this relationship provide the matrix for the process of maternal role attainment and transition into parenthood.

As a maternity nurse and childbirth/parent educator, I have been witness to and teacher of women in the beginning of their relationship with their infant. My experiences have led me to speculate over the internal process involved. An ethnographic study of the process

of becoming a mother was done that identified some of the elements common to the culture of becoming a mother for the first time and insights into the relationship woman has to her unborn child (Wilson, 1988). Within the category of Becoming a Mother many statements emerged revolving around the growing awareness of the existence of the fetus as an individual with whom she had a dynamic relationship.

The connection of a woman to the developing embryo is, at first, a purely biological one--usually a missed menstrual period--that soon gives way to the realm of the psychological and then the social as pregnancy progresses. The emotional and social relationship of a woman to her child begins during her pregnancy, as does the biological relationship. As the pregnancy progresses her perception of the fetus changes from the realm of idea to a more concrete conception of a developing, dynamic individual (Rothman, 1989). The timing and nature of these aspects of the maternal-fetal relationship are embedded within a culture.

For Mexican American women, traditionally there is a presumption of pregnancy when a menstrual period is missed (Kay, 1977). The emotions and behavior of the woman during the pregnancy are thought to influence the formation of the fetus so that care is taken by the mother to avoid quarrels, rage or other strong emotional states

as well as promote a calm, pleasant ambience by thinking positive thoughts, listening to nice music and having her whims and cravings indulged in--especially for a primigravida (Kay, 1977). In Mexico a woman's concept of maternity is gleaned mostly from her mother and other older women (Trevathan, 1988). Among Mexican American women in Tucson, Kay (1978, 1980) found that the life of a pregnant woman is under the direction of her mother or mother-in-law who will teach her the rules of childbearing. During pregnancy these rules are directed towards the protection of the fetus and assuring an easy delivery for the mother.

Prior to the perception of quickening a woman's sense or experience of her pregnancy is based on certain signs or symptoms, used for diagnosing pregnancy either by the woman or her practitioner, classified as presumptive, probable or positive (Auvenshine & Enriquez, 1990) according to the medical model adhered to by most Anglo women. The earliest of these include the cessation of menses, breast changes, discoloration of vaginal mucosa and increased skin pigmentation and possibly nausea and vomiting. For many centuries quickening was the first physical connection a mother had to her fetus. These early stirrings served as a guidepost for the establishment of the relationship betweeen mother and fetus. Fetal fluttering becomes perceived as definite movement, and the

mother's sense of embodiment of the growing fetus expands. Diagnostic confirmation of the existence of the fetus may be accomplished by auscultation of fetal heart tones with either a fetoscope or ultrasonic Doppler unit, as well as by X-ray or ultrasound examination (Auvenshine & Enriquez, 1990). One or a combination of these may provide a tangible link to the fetus and reinforce the maternal-fetal relationship.

The progress of pregnancy has been divided up into three stages or trimesters of approximately 12 weeks each. Used as markers of time throughout a pregnancy, it is mainly fetal development that is measured and evaluated. Reva Rubin has applied this temporal concept to the psychological and emotional experience of pregnancy (1970, 1976, 1984). She describes a variety of changes that occur within a woman during her pregnancy. These include not only feelings, but also behaviors and attitudes that are directed towards the unborn infant and serve to strengthen identification with the role of mother and her relationship to her fetus.

The four maternal tasks of pregnancy described by Rubin (1976, 1984) are: seeking safe passage for self and for child during pregnancy, labor, and delivery; ensuring that the child is accepted by significant persons in her social world; binding-in (attaching) to the child; and learning to give of herself.

While these may apply to the majority of Anglo women, for Mexican American women these themes may not be as relevant. Inasmuch as their culture continues to place a high and unambiguous value on motherhood as fulfillment of womanhood (Melville, 1980), and as such is large part of the socialization process for young women, perhaps the tasks outlined by Rubin have less meaning for Mexican American women. As a first-time mother, a Mexican American woman is expected to begin a series of new relationships and behave in a way befitting a mother (Melville, 1980).

Indeed, it is difficult to distinguish between the experience of a pregnancy from the experience and relationship a mother has to her fetus. Pregnancy is a time of psychological as well as physiological development. Adaptation or adjustment to the changes wrought by the embodiment and nurturing of a growing fetus are accompanied by the joys and stresses of shifting role and self-image as well as the fantasies and anxieties of pregnancy.

The emotional adjustment to pregnancy affects not only the woman but also her relationships with those in her life. Not the least significant of these are her relationships with her own mother and with the father of the baby. The effects of the mother-daughter relationship contribute to the sense of self as mother (Ballou, 1978a &

b; Benedek, 1970; Bibring, Dwyer, Huntington & Valenstein, 1961; Briggs 1979; Deutsch, 1945; Leifer, 1980a). Pregnancy may also emphasize conflicts, old and new, in the relationship of a daughter to her mother as she prepares herself to become a mother. Whether it brings on consolidation, resolution, or separation of a woman to her own mother, pregnancy and the intrauterine bond to the fetus are often the impetus for the changes in the relationship between a woman and her mother.

For Mexican Americans, however, there may be other influences arising from their cultural milieu to be taken into account. The concept of familism within the Mexican and Mexican American culture is a most salient one that has been consistently cited in the literature on Mexican Americans. It is a basic cultural pattern that while the actual organization of kin is similar between Mexican Americans and Anglos, Mexican Americans are more likely to have a greater number of family members living locally and are accustomed to having more frequent contact with them on a day-to-day or week-to-week basis (Keefe & Padilla, 1987).

Lederman (1984) has outlined four dimensions of the mother-daughter relationship during pregnancy. These are: the availability of the woman's mother as grandmother; the grandmother's reactions to the pregnancy; the grandmother's respect for her daughter's autonomy; and the

grandmother's willingness to reminisce about her own childbearing and childrearing experiences (p. 64). These aspects are the underpinnings of the process of identification of oneself as mother.

Given the essential character of the dimensions outlined by Lederman above, these would seem to apply to both Anglo and Mexican American pregnant women, as they describe the almost universal ways that the role of mother and rules of pregnancy are to be communicated. One difference for the two cultural groups under consideration might be the grandmother's respect for her daughter's autonomy. Again, the issue of familism among Mexican Americans comes into consideration, as the family, not the individual, is the center of life for them (Tamez, 1981). This stands in contrast to Anglos value of the individual over the group, and the importance of autonomy for the mother-to-be.

An expectant father is, presumably, also experiencing flux during the course of pregnancy as the partner of a pregnant woman. This is a situation that can be measured in terms of its empathy and mutuality (Lederman, 1984), particularly as regards each partner's concern for the other's needs as an expectant parent and the effects of the pregnancy on the marital bond. The quality and strength of the relationship between the expectant parents has the ability to enhance or inhibit the maternal

experience of pregnancy and attachment to the fetus.

Two aspects of the influence of Mexican American culture on an expectant father and his relationship to the mother-to-be are familism and machismo. The more central concept is that of familism and the way traditional gender roles for men and women within the family are elaborated. The accepted pattern was that of separation of the sexes into their own domains with a dominant role assigned to the male (Montiel, 1970; Tamez, 1981) as the wage earner (Kay, 1978). For the woman her status was defined through her marriage and children (Becerra & de Anda, 1984; Kay, 1978; Melville, 1980; Tamez, 1981).

Contrary to the stereotypical protrait of Mexican American men and women and their roles within the family, there is growing evidence that the case was overstated in the past (Amaro, 1988; Tamez, 1981). This is especially true of the emphasis and characterization that has been given to the concept of machismo. Montiel (1970) analyzed the misconceptions that have arisen as regards machismo--misconceptions that were given light by such emminent Mexican writers as Octavio Paz.

It is this stereotypical paradigm that incorporates the image of the passive and submissive wife, ignoring her role in the socialization and care of her children, providing strength and support to her husband, and managing the family as a whole (Arcineiga, Casaus &

Castillo, 1978). By the same token the husband, instead of being relegated to the role of the "insensitive macho", is seen as the protector and provider for the family (Arcineiga, Casaus & Castillo, 1978). Perhaps the Spanish saying, "Engendrar niños no es trabajo, manternerlos es" (Begetting children is not hard, rearing them is), better sums up the value Mexican American men place on their role as father.

In attempting to compare two disparate cultures as regards their presumably distinct ways of bonding to an unborn child, the question of ethnicity must be addressed. Keefe & Padilla (1987) point out that there is little agreement on a definition of the term ethnicity or the dimensions involved in sociocultural change.

In sorting out the effects of acculturation, assimilation and ethnic identity Keefe & Padilla (1987) reached the conclusion that while certain cultural traits do seem to decline within a generation, one cannot "infer that Mexicans become more American from generation to generation. Many Mexican cultural patterns are held fast across generation and ethnic type" (p. 117). They found that the most enduring factors were "ethnically enclosed friendships and kinship groups" (p. 118).

In general, investigations of maternal fetal attachment and the pregnancy experience in Anglos have demonstrated the importance of not only the mother-fetus

relationship but the impact of close affinal ties and social context (Cranley, 1981b; Leifer, 1980b; Mercer, 1986; Rubin, 1984). Research into how this process is elaborated in another cultural context is needed to expand our understanding of this process and what the areas of overlap and contrast may be.

Conceptual Framework

In this study the Roy Adaptation Model was used as the conceptual orientation to the comparison of prenatal attachment between Anglo and Mexican-American women.

Roy Adaptation Model

The Roy Adaptation Model is based on assumptions derived from systems theory and Helson's adaptation level theory, as well as humanistic assumptions. Adaptation is the central and unifying concept of the model and is defined as the process of promoting integrity in the client or patient (Roy, 1987).

According to Roy, a person is a bio-psycho-social being who, in coping or adapting to a changing environment, uses both innate and acquired mechanisms that are biologic, psychologic and social in origin (Roy, 1980, 1984).

The person is viewed mainly as a living adaptive system. As such the person receives input or stimuli externally, from the environment, or internally from the self. The control processes of the person as adaptive

system are considered to be the coping mechanisms of the person. As a person receives the input or stimuli from the internal or external environment he or she processes the stimuli by way of subsystems that constitute a person's coping mechanisms. The outputs from the regulator and cognator subsystems are effected through the output or adaptive modes, i.e. the ways that a person adapts to changes in the environment (Roy 1984, 1987).

Pregnancy is a stimulus that involves all three aspects of the woman--biological, psychological and social. It is through her coping mechanisms that a woman adapts to her pregnancy and lays the foundation for her relationship with her unborn child.

Operational Definitions of the Roy Adaptation Model

The three categories of stimuli or stressors that have input to the person from the environment are:

Focal stimuli--stimuli that immediately confront the person (Roy, 1980). A focal stimulus may also represent environmental change in a given situation, (Galbreath, 1985), eg: conception, pregnancy, quickening or enlarging abdomen.

Contextual stimuli--any other stimuli that affect the situation. A contextual stimulus may be internal or external, physical or emotional (Roy, 1984), eg: the gravida's relationships with her mother, the father of the baby, or other familial or social ties.

Residual stimuli--include values, beliefs, attitudes, traits, or socio-cultural influences that make up the characteristics of the person (Roy, 1980, 1984), eg: cultural role definitions, childbearing trends.

A person receives stimuli (input) from the environment, both internal and external, and processes them by way of the two functional subsystems that comprise the coping mechanisms of the person. These are:

Regulator--relates predominantly to physiologic processes, i.e., neural, endocrine, and chemical activity, or physical experience of pregnancy (Galbreath, 1985).

Cognator--uses both conscious and unconscious, cognitive and emotive processes, to respond to the complex mechanisms of perceptual information processing, learning, judgment and emotion (Roy, 1987).

There are four adaptive (effector) modes, or ways of coping, that manifest regulator-cognator activity. They are:

Physiological function--focuses on five basic needs of oxygenation, nutrition, elimination, activity and rest, and protection as well as four regulator processes of the senses, fluid and electrolytes, neurological and endocrine functions (Roy, 1987). Physiological function reflects the many physical changes that accompany the response to conception, implantation and pregnancy such as increased blood flow, cardiac output, and the many hormonal changes.

Self-concept--the composite of beliefs and feelings that one has towards one's self at a point in time, which direct a person's behavior (Roy, 1987). Self-concept encompasses both the physical and the personal self. A woman's body image undergoes radical changes during pregnancy, especially after quickening, as does her perception of herself as she accepts the reality of the pregnancy and the developing fetus within her.

Role function--the behavior of one person relating to another, with each occupying a position in society (Roy, 1987). Role function reflects the maternal role transition that accompanies pregnancy and motherhood.

Interdependence--the way of maintaining integrity that involves the willingness and capacity to love, respect and value others and to accept the same in return. Influences on interdependence are the presence of significant others and knowing how to express feeling (Roy, 1987). Interdependence is manifested by the relationship a woman has with her unborn child and her ability to care for it as she does the other significant persons in her life.

For the purpose of this study the effects of the three classes of stimuli, focal, contextual and residual, were examined as they relate to the pregnant woman and her attachment to her fetus. The effector or adaptive mode most relevant to the theme of prenatal attachment is the

interdependence mode as it is processed via the cognator subsystem.

Attachment Theory

John Bowlby first introduced his attachment theory in the 1950's, incorporating many ideas from his background as a psychoanalyst and combining them with instinct theory from ethology and control theory from neurophysiology (Bowlby, 1969, 1977). The contribution of control theory to Bowlby's construction of attachment theory is the concept of adaptation within the behavioral systems of the organism.

Bowlby based his theory on a series of observations of the behavior of infants and young children upon being separated from their mother. He theorized that, as an instinctive behavior, attachment is both adaptive and goal-directed. The goal of attachment behavior is "seeking and maintaining proximity to another individual" (Bowlby, 1969, p. 194).

Important additions to Bowlby's landmark writings were made by a former student and colleague, Mary Ainsworth. She built up a conceptual framework for attachment theory based on her research to assess the quality of attachment using the Ainsworth Strange Situation. Ainsworth and her colleagues found correlations between the security of infant attachment observed in the laboratory setting and the warmth and

responsiveness observed later in the home (Skolnick, 1985).

Attachment behavior in adult life is seen as a "straightforward continuation of attachment behavior in childhood" (Bowlby, 1969, p. 207) and includes such maternal behavior as caretaking, nursing, nestbuilding and retrieving or bringing young closer (p. 239).

The influence of relationships in our lives is pre-eminent and intricately intertwined in a person's perception of self and who that person is becoming. The first relationship that human beings have is with their primary caretaker--usually the mother. Attachment theory does not imply that the quality of this original infant-mother attachment sets a continuing pattern for an individual's life. Many other events of childhood and adulthood can profoundly affect the "anxiety versus security" of the relationships that an individual engages in (Ainsworth, 1982)--including a mother's relationship to her unborn child.

Ainsworth (1982) noted that a key variable to maternal attachment behavior is her sensitivity to infant cues. The same can be said of prenatal attachment in that it examines maternal response to fetal stimuli or stimuli of the pregnancy. Prenatal attachment can measure maternal sensitivity to the unborn baby's cues as a dimension of her relationship with the baby. Her

behaviors are directed not so much at seeking proximity since this is, in effect, forced upon her--but rather on the maintaining mental and tactile contact with the mostly unseen passenger.

It is not an assumption of this study that men do not attach to their infants before they are born. There are numerous studies that have documented this phenomenon, among them Condon, 1985; Entwisle & Doering, 1981; Mercer, Ferketich, May, DeJoseph & Sollid, 1988; Weaver & Cranley, 1983. Because of the obvious difference in paternal access to the fetus as compared to the maternal proximity, in this study the focus will be on the maternal prenatal attachment and its complexities.

The Roy Adaptation Model and attachment theory provided the constructs for the conceptual framework. The study focused on the relationships among the concepts of pregnancy, ethnic identity and prenatal attachment. The conceptual model is illustrated in Figure 1 to demonstrate the theorized relationships among the concepts under study.

Statement of the Problem

As noted above, each culture has unique features in the way pregnancy is viewed and the safeguards that are prescribed for a positive outcome for mother and baby. Women who are becoming mothers for the first time experience many physical and emotional changes within

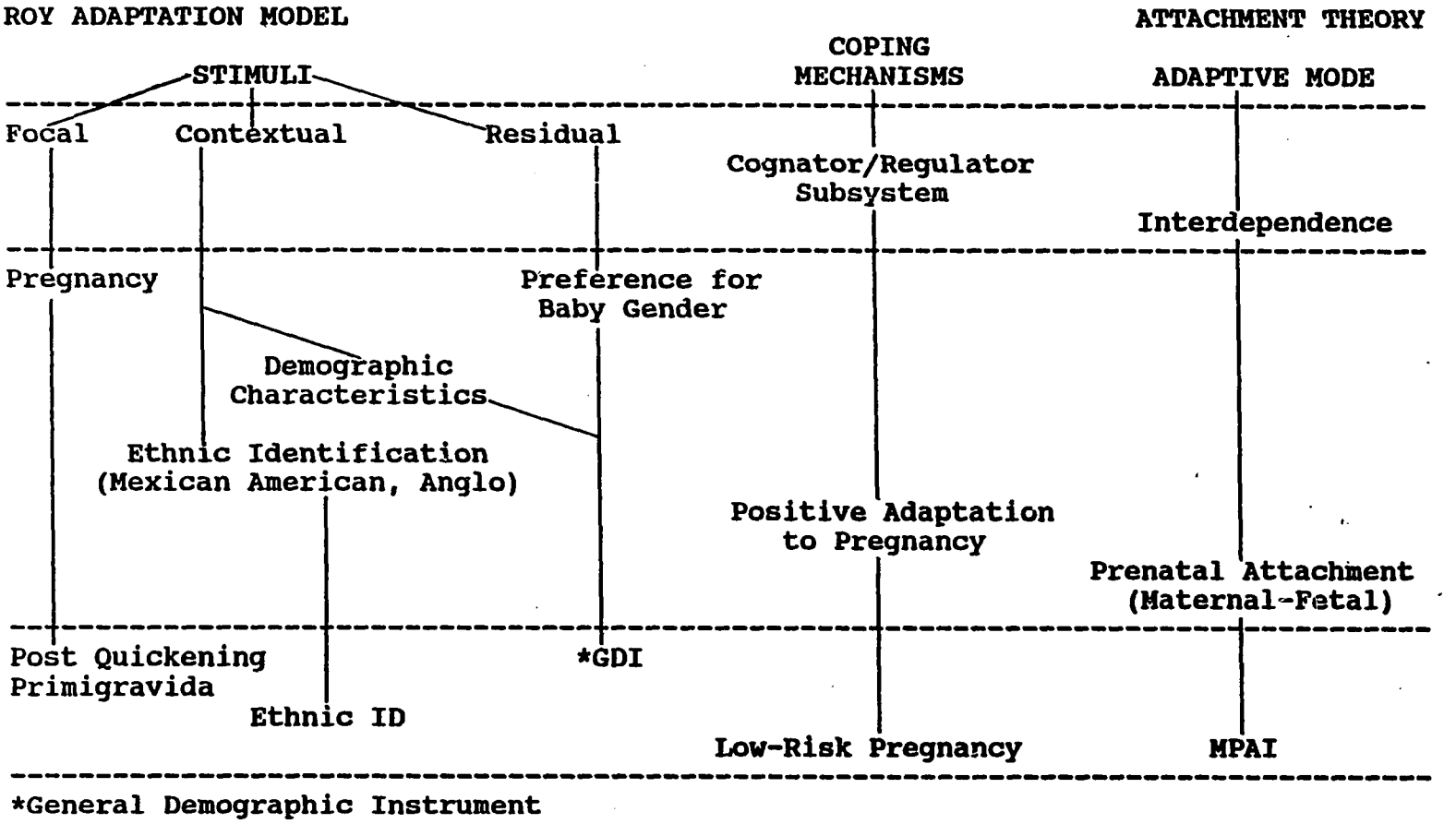

Figure 1. Conceptual Framework Relating Ethnic Identification and Prenatal Attachment

themselves that affect the relationship they have with their unborn child. A woman's interpretation and response to these changes may vary from one culture to another, just as her perception of and interaction with the fetus may also vary. To study the differences between two cultures along the dimension of the relationship a mother has with her unborn child would help to determine if significant variations exist. The research question to be asked is: Is there a measurable difference in prenatal attachment reported by Mexican American versus Anglo women?

Definition of Terms

The following conceptual definitions are presented to provide clarity and uniformity.

Maternal Prenatal Attachment. The unique and positive affectional relationship between a mother and her fetus.

Anglo. Euro-Americans of various national origins.

Mexican American. Individuals of Mexican descent residing in the United States. The terms Mexican American, Chicano, and Hispanic are used synonymously in this study.

Ethnic Identity. A set of self-ideas about oneself as they relate to identification with a particular country of origin. These ideas vary along several dimensions including; self identification, knowledge of the ethnic

culture, language preference, social relationships, feelings of pride and contact with a country of origin.

Focal Stimulus. The stimulus most immediately confronting a woman to which she must make a response. Eg: conception, various stages of pregnancy, quickening, enlarging abdomen.

Contextual Stimulus Those stimuli contributing to the behavior precipitated by the focal stimulus. Eg: age, work outside the home, household composition, prenatal classes, education, marital status, income, ultrasound, ethnic identity.

Residual Stimulus Other stimuli present whose influence is difficult to assess; past experiences which may be relevant to the present situation. Eg: cultural belief system, preference for sex of baby.

Coping Mechanism. Innate and acquired ways of responding to the changing environment.

Interdependence Mode. A woman's way of experiencing and expressing her positive relationship with her unborn child.

Purpose of the Study

The purpose of this study was to compare the experience of maternal prenatal attachment between Anglo and Mexican American women. This was accomplished by administering a questionnaire in Spanish or English to primigravidae in the last half of pregnancy. The

questionnaire focused on the mother's interaction with her fetus. Demographic information and data on ethnic identification were also elicited by the questionnaire.

Research Questions

The following research questions were generated to compare the experiences of maternal prenatal attachment between Anglo and Mexican American women.

1. Are there differences in the reports of maternal prenatal attachment between Anglo and Mexican American primigravidae?

2. Which contextual stimuli are related to maternal prenatal attachment?

3. Which residual stimuli are related to maternal prenatal attachment?

Significance of the Problem

According to Margaret Mead and Niles Newton (1967), "In no known culture is pregnancy ignored or treated with total indifference; instead it elicits a gamut of emotions and feelings" (p. 164). These emotions and feelings are experienced by the parturient woman as well as those around her. The status given to the woman and her developing fetus and the rules appropriate to her status are encoded within the culture. The experience of pregnancy is shared not just between the woman and her child, but her kin and the society in which she lives.

Nurses who provide care and teaching to women and

their families throughout the childbearing year are in a pivotal position to optimize maternal prenatal attachment as an adaptation to pregnancy. Given the diversity of cultural backgrounds that many nurses encounter in their clinical practice, there needs to be an awareness of the stimuli acting upon a given situation. This can be translated into a greater understanding of what the client is experiencing and, thus, a more sensitive and individualized approach to nursing interventions. This can be extended to include the relationship of a woman to her unborn child and how it is defined and valued.

In her study of maternal infant attachment behaviors of six Mexican American women in the immediate newborn period, Enriquez (1982) noted that the retention of cultural beliefs "can be shown not only in the interaction the mother has with her newborn infant but also during her pregnancy, delivery, or postpartum" (p. 63). She emphasized the importance for health care providers to understand the cultural rules that underlie the behavior they see in their clients.

While there has been a good deal of work done to learn more about the nature of prenatal attachment (Cranley, 1981a & b; Grace, 1989; Mercer, Ferketich, May, DeJoseph & Sollid, 1988; Muller, 1989; Rees, 1980; Vito, 1986; and Zachariah, 1985), these efforts, by and large, reflect the mainstream Anglo experience. Very little has

been written about this process that focuses on other ethnic groups such as Mexican Americans.

What information we do have about the residual stimuli, such as her cultural background, that are acting during childbearing year of the Mexican American woman comes from the ethnographic literature. The reader comes away without a report of her internalized experience in relation to the fetus--her emotions, fantasies, ambivalence or anxieties during pregnancy.

In the face of such a paucity of research into the prenatal attachment of Mexican American women, there is clearly a need to begin exploring a previously uncharted region. This would increase nurses' awareness and understanding of some critical but subtle differences between Anglos and Mexican American women and their relationship to their fetuses. Such an awareness can produce a more sensitive approach when caring for Mexican American women during their pregnancy, as well as labor and delivery, to produce a higher level of adaptation for Mexican American childbearing families.

A measure of prenatal attachment may provide clues about the frequency and character of this relationship in two groups of women. From this we may glean a measure of her own regard for herself during her pregnancy, as well as that of the fetus. It may also reflect the level of external stressors or contextual stimuli, such as economic

status, working outside the home, living relationships.

This study was an attempt to fill the void and to measure the process of maternal prenatal attachment in Mexican American women and compare that to the experiences of Anglo women. In order to assess maternal prenatal attachment between the two groups a questionnaire that combines three instruments was administered: a demographic information questionnaire, the Muller Prenatal Attachment Inventory (Muller, 1989) and an Ethnic Identity questionnaire designed by Phillips (1990). The questionnaire was offered in both Spanish and English to Mexican American and Anglo primigravidae in the last half of pregnancy.

Summary

The problem of measuring maternal prenatal attachment in different cultural groups is one that needs to be addressed. The body of nursing knowledge and practice continues to expand as the diversity of its clientele grows. This expansion challenges nurses to use a more knowledgeable approach while providing care to childbearing families. Integrating knowledge about the cultural background of a group of clients with nursing interventions will foster appropriate and individualized care.

This chapter outlined the background of this study as it pertains to two groups, Anglos and Mexican Americans.

A statement of the problem and the research questions generated by it were provided. Definitions of appropriate terms were supplied to aid the reader's understanding.

The conceptual framework for the study was illustrated, using Roy's Adaptation Model to organize the facets of the phenomenon under study. The need for such research and its significance to nursing were delineated.

CHAPTER 2

REVIEW OF LITERATURE

This chapter presents the review of literature, focusing briefly on the psychological experience of pregnancy before reviewing the literature on attachment theory and maternal prenatal attachment itself. The studies and theory regarding the residual stimulus of ethnic identification will follow, before the review of the literature on Mexican Americans and childbearing.

Psychological Experience of Pregnancy

Earlier studies of the subjective experience of pregnancy often originated within the psychoanalytic literature, focusing on object relations themes (Ballou, 1978a & b; Bibring, 1959; Bibring, Dwyer, Huntington & Valenstein, 1961; Bibring & Valenstein, 1976; Chodorow, 1978), and ego development (Deutsch, 1945, Shereshefsky & Yarrow, 1974), often with aspects of a developmental or maturational crisis or phase involving adjustment and/or the working-through of certain adaptive tasks (Ballou, 1978a & b; Bibring, Dwyer, Huntington & Valenstein, 1961; Breen, 1975; Cohen, 1966; Colman & Colman, 1973; Rubin, 1976, 1984; and Tilden, 1980).

One of the first to examine the psychological aspects of pregnancy was Helene Deutsch (1945) working from the perspective of ego development. Benedek's (1970) and

Chodorow's (1978) writings built upon her work. Breen (1975) and Oakley (1979) wrote in a similar vein, depicting the increased sense of her own femininity that pregnancy can bring forth in a woman, blending the physiological with the self-concept mode.

These writings, as well as those emphasizing the developmental crisis that pregnancy represents for some women, illuminate the maturation of a woman's self-concept mode.

The role function mode is expressed by the maternal role attainment process that is an integral part of the pregnancy experience and sets the path for a woman's transition into parenthood. Rubin's pioneering work (1967 a & b) traced this process. Mercer's comprehensive study of first-time motherhood (1986) built on a framework of role and developmental theories. Shereshefsky & Yarrow (1974) found that ego strength and the ability to visualize oneself in the mothering role as predictive of a positive pregnancy adaptation, as did Lederman's study of psychosocial adaptation in pregnancy (1984).

Contextual stimuli, i.e. family relationships, have been demonstrated to play an important part of the psychological work of pregnancy. The themes of a woman's relationship to her own parents--especially her mother--as she moves into motherhood involve consolidation, separation and reconciliation (Ballou, 1978a & b;

Bibring, Dwyer, Huntington & Valenstein, 1961; Breen, 1975; Briggs, 1979; Chodorow, 1978; Deutsch, 1945; Galinsky, 1989; Lederman, 1984; Leifer, 1977; Richardson, 1981; Shereshefsky & Yarrow, 1974).

The reworking of the marital relationship is a major factor during a woman's pregnancy. Lederman's study explored the qualities in a woman's partner of empathy, cooperativeness, availability and trustworthiness (1984). Other studies documenting the importance of the marital relationship include Ballou, 1978a & b; Colman & Colman, 1973; Galinsky, 1989; Kumar, Robson & Smith, 1984; Richardson, 1981; and Rubin, 1976.

The tasks of pregnancy constitute a significant portion of the literature on pregnancy. This provides a varied but also unified field in that there emerges a central theme, that of adaptation. From these litanies of the tasks involved in the internal work of pregnancy, the most salient are those relating to the acceptance and development of an affiliative response to the fetus, representing work within the interdependence mode of adaptation (Bibring, Dwer, Huntington & Valenstein, 1961; Cohen, 1966; Galinsky, 1989; Leifer, 1977; Rees, 1980; Rubin, 1976).

In a phenomenological study of a first pregnancy, Bergum (1989) described the transformative experience as a woman progresses to motherhood. The experience of being

"with child" harkens to Neumann's archetypal imagery of woman as vessel (1955). Bergum describes the dimensions of the presence of the child--of "giving the body" to the child--as it transforms space within the woman. This relationship implied a sense of responsibility on the part of the mother in the nurturing of the child.

Attachment Theory

The original and definitive work on attachment theory was done by John Bowlby, a child psychiatrist who developed it as an alternative to psychoanalytic theories of object relations (Bretherton, 1985). It was further elaborated by Ainsworth and her colleagues, who began their Baltimore study using the Strange Situation technique to assess infant attachment (Karen, 1990). Traditionally, attachment has been conceptualized from the infant side of the relationship (Ainsworth, Blehar, Waters & Wall, 1978; Bowlby, 1969). Maternal attachment or 'bonding' was thought to begin after the birth of the infant and strongly influenced by the quality of the interaction between mother and baby during the 'sensitive period' shortly after birth (Klaus & Kennel, 1976).

Closer examination of the bonding model has revealed many deficiencies (Chess & Thomas, 1982), and has led some authors to label it as a "misleading metaphor" for an ongoing process that cannot be consolidated by any single event (Svejda, Pannabecker & Emde, 1980, p. 88). Others

have begun to expand the focus to the time before birth, i.e. pregnancy, in their investigation of parent-infant attachment (Condon, 1985; Cranley, 1981b; Davis & Akridge, 1987; Grace, 1989; Mercer, Ferketich, May, DeJoseph & Sollid, 1988; Muller, 1989; and Vito, 1986).

Bowlby's work brought him to define attachment as "any form of behavior that results in a person attaining or retaining proximity to some other differentiated individual, who is usually conceived as strong and/or wiser" (p. 203, 1977). Ainsworth et al's definition of "a stable propensity over time to seek proximity and contact with a specific figure" (p. 303, 1978), broadens the scope of attachment to include the relationship between peers or outside of the infant-caretaker dyad.

The theoretical bases for attachment theory lie in ethology, cognitive psychology and control theory, and draw heavily from systems theory for the behavior systems model that Bowlby constructed (Bowlby, 1977). Assessment of attachment behavior emphasizes the organization of behaviors rather than their frequency (Sroufe & Waters, 1977). There is an interplay between attachment as an emotional system and attachment behaviors that form the behavioral system (Weiss, 1982)

Maternal Prenatal Attachment

As seen from the literature on the adaptive tasks of pregnancy, one theme recurs again and again--that of the

relationship of a woman to her unborn child. The binding-in to the fetus, the term coined by Rubin (1976, 1984), one of the first nurse researchers to examine the psychology of pregnancy, has been broken down further into more discrete tasks. First the mother must accept the pregnancy (Breen, 1975; Cohen, 1966; Lederman, 1984b); then the presence of the fetus into her body (Bibring, Dwyer, Huntington & Valenstein, 1961; Leifer, 1977; Rubin, 1976); give the fetus a separate identification as a person (Rees, 1980; Rubin, 1970, 1984); develop the capacity to give to the growth within herself (Bibring, Dwyer, Huntington & Valenstein, 1961; Rubin, 1976); develop an emotional attachment to the fetus (Cohen, 1966; Leifer, 1977); and finally prepare for delivery when the anatomical separation will occur (Bibring, Dwyer, Huntington & Valenstein, 1961; Leifer, 1977).

Binding-in is the term coined by Rubin. She noted, as have those who have written before and since her seminal work, that quickening, or the perception of earliest fetal movements, is a critical period. It provides a peak experience and impetus for the woman to begin focusing inward to the burgeoning life inside her (Rubin, 1984). This cognitive shift, occuring in the second trimester of pregnancy, reinforces the affective ties the mother has to her unborn child, finding its expression in the interdependence mode.

Prenatal attachment, prenatal bonding, and maternal-fetal attachment have replaced Rubin's term binding-in as technological advances in antenatal care have permitted much closer inspection and visualization of the fetus (Muller, 1990). These developments coincided with the notion that prenatal attachment may affect how a woman cares for herself during pregnancy and the infant after delivery.

Some of the earliest attempts at describing maternal prenatal attachment drew from observations of maternal attachment in the neonatal period. Robson & Moss (1970) defined maternal attachment as "the extent to which a mother feels that her infant occupies an essential position in her life." Using their observations from a sample of 54 primiparous mothers over the first three months of life they described the normal components of attachment behavior, as well as atypical patterns.

Klaus & Kennel, also working from within the attachment paradigm of Bowlby and Ainsworth, published their observations on the attachment process between a mother and her infant, using 'bonding' as their metaphor (Klaus & Kennel, 1976, 1983), basing their conclusions on the effects of early separation of the dyad. They differentiated 'bonding' as the process of forming a tie from parent to infant, from attachment as flowing from infant to parent. Their description of the attachment

behaviors of the mother towards her newborn and the importance of the 'sensitive period' became the standard, and indeed almost a mandatory prescription, for new parents. They extended their writings to include the antenatal period, noting an attachment process parallel to the one noted earlier.

In 1978 Peterson & Mehl published their observations on determinants of maternal attachment, formulating stages in the development of attachment in pregnant women over the course of their life span including pregnancy, delivery and the first year postpartum in 46 families, but working from the neonatal and postpartum period. They noted the effect of prenatal attitudes on women's expectations toward the infant. They viewed labor and delivery experiences as the crucial transition point in the development of maternal attachment.

Efforts at arriving at a process for measurement of the many facets of the phenomenon have been on-going since Leifer's study of the psychological changes accompanying pregnancy and motherhood (1977). She interviewed 19 white, middle-class primigravid women at each trimester of pregnancy, then at various intervals during postpartum with a follow-up questionnaire at seven months. Leifer developed a scale, Feelings About the Baby (FAB), to trace patterns of involvement with the fetus. She identified three styles of attachment. In a small group of the

women, attachment to the fetus was minimal throughout the entire course of the pregnancy. For a second group, no closeness to the fetus was felt until after quickening, whereupon feelings deepened and continued to do so until the end of pregnancy. The third pattern noted by Leifer was emotional attachment to the fetus from very early in the pregnancy which continued to instensify throughout its course.

Leifer also described activities undertaken by the women which "served to heighten the reality of the baby and to increase their psychological preparation for motherhood" (p. 76). Leifer found a correlation between the activities, feelings and preparations for the baby and the degree of emotional attachment toward it.

Rees (1980) developed two scales as part of a larger parental attitude instrument that assessed 'conception of the fetus as a person' and 'appropriateness of the fantasies about the baby-to-be', after collecting data on 169 women in their third trimester who classified themselves as Anglo. While some support was found for 'conception of the fetus as a person', little was discovered for 'appropriateness of the fantasies about the baby-to-be'. She concluded that the concepts were multi-faceted and bore further research.

Cranley (1981a & b) developed a tool that has been widely used in various settings to assess for maternal

fetal attachment. She collected data from a sample that consisted of 71 women, both primigravidae and multigravidae in their third trimester of pregnancy. Her 24-item scale, the Maternal Fetal Attachment Scale (MFAS), was divided into five subscales: differentiation of self from the fetus; interaction with the fetus; attributing characteristics and intentions to the fetus; giving of self; and roletaking . She defined maternal fetal attachment as "the extent to which women engage in behaviors which represent an affiliation and interaction with their unborn child." (1981b, p. 65). Scores on the intial testing of the instrument found positive relationships between available social support reported by women and their perceptions of their babies three days after birth. Additionally, she found negative relationship between perceived stress on the part of the women and MFAS scores.

Many subsequent studies were done using the MFAS. Lobiondo-Wood (1985) investigated the relationship of maternal fetal attachment and physical symptoms, primarily quickening, during pregnancy. From a sample of 100 married women, she compared maternal-fetal attachment scores before and after quickening and found a positive association between maternal fetal attachment and quickening over the pregnancy.

For Gaffney (1986) there was no demonstrated strong

association between anxiety, self-concept and maternal fetal attachment in her study of 100 women in their third trimester of pregnancy. She used the MFAS, the Tennesee Self-Concept Scale and the State-Trait Anxiety Instrument. In a study of 90 adolescents between the ages of 14 and 19, Koniak-Griffin (1988) found significant predictors of prenatal attachment were total functional support and size of network, planning of the pregnancy, and intent to keep the baby. She used Coopersmith's Self-Esteem Inventory and Norbeck's Social Support Questionnaire in addition to the MFAS, finding no significant correlations between self-esteem and social support.

Zachariah (1985) examined the effects of an expectant woman's relationship with her mother, the father of the baby and maternal fetal attachment and found strong positive relationships with the psychological well-being of the women during pregnancy. She combined the MFAS with Lederman's Prenatal Self-Evaluation Questionnaire, Norbeck's Social Support Scale and Dupuy's General Well-Being Scale to explore these relationships among 115 married, low-risk women.

In 1987 Vito used the Vito Version of the MFAS to test its association with such variables as ultrasound, planned pregnancy, older maternal age on 325 pregnant women of varying gestational ages. She described three phases of binding-in to the fetus occuring over the length

of the pregnancy. Kemp & Page (1987) compared maternal fetal attachment in 53 normal and 32 high risk pregnancies in the third trimester, using the MFAS, but found no significant differences in the scores between the two groups. Mercer, Ferketich, May, DeJoseph & Sollid (1988) studied fetal attachment in relation to antepartum stress using four groups of expectant parents. Their sample consisted of 153 high-risk women hospitalized for pregnancy complications, 75 high-risk women's mates, 218 low-risk women and 147 low-risk women's mates between 24 to 34 weeks gestation. Cranley's MFAS was used along with several other instruments. They were unable to find significant differences in fetal attachment between the high- and low-risk groups, although women scored higher than men.

In a study comparing prenatal fetal attachment between 54 male and female first-time expectant parents, using a questionnaire developed for the project, Condon (1985) found a 'striking' similarity between pregnant women and expectant fathers in terms of their thoughts and feelings about the fetus, but that the behavioral expression of this attachment was 'considerably attenuated' in the men.

A study was done using Grounded Theory to discover the social process of the extent of expectant parents' sense of their unborn child as a separate, individual

family member (Stainton, 1985, 1990). In semi-structured interviews, conducted betwenn 33 and 38 weeks, both parents described characteristics of the fetus in relation to appearance, communication, gender, temperament and sleepwake cycles. She also noted that not all mothers in her sample interacted with their infants during pregnancy, supporting the existence of variability in mothers expression of their prenatal relationship.

Muller (1989) administered the MFAS, the Kansas Marital Satisfaction Scale (KMSS), the UCLA Loneliness Scale (UCLA), and the Maternal Adjustment and Maternal Attitudes Scale (MAMA) along with the Muller Prenatal Attachment Inventory (MPAI) to 310 low-risk, multi-ethnic pregnant women to test for the concurrent validity of the MPAI during its development. She found strong correlations between the MFAS and the MPAI, although her objective was not to test fetal attachment theory. She did find evidence to predict relationships between fetal attachment, adjustment to pregnancy and loneliness. While there was no evidence to support maternal fetal attachment as a multi-dimensional construct, she found that the influence of a woman's marital relationship influences her prenatal attachment to her baby in that it affects her adjustment to the pregnancy.

In the 1980's, with increased use of advanced methods of fetal surveillance such as ultrasound examination,

amniocentesis and chorionic villi sampling, the formerly impenetrable world of the fetus is now being scrutinized. The potential effects of prenatal diagnosis on mother's attitudes toward the fetus has been the subject of several studies. In 1981 Milne & Rich published their study of the impact of ultrasound on 20 women during the second and third trimesters of pregnancy. They found and "enhanced awareness and personal knowledge of the baby in utero, together with a sense of increased emotional attachment, and further desire to relate to the baby" (p. 38). In a similar study Kohn, Nelson & Weiner (1980) had found that the greater sense of attachment came at a cost of increased sense of vulnerability for the 100 women in their sample who had been referred for obstetric ultrasound.

In a study comparing the effects of fetal movements versus ultrasound imaging on fetal attachment in a sample of 129 primparae, Reading, Cox, Sledmere & Campbell (1984) found that earlier perception of fetal movement was a stronger predictor of maternal prenatal attachment over the course of the pregnancy.

Using the MFAS in Spanish and English Carey (1985) compared two groups of women--a control group of 51 women who had not undergone ultrasound examination and a treatment group of 62 women who had. Carey found that maternal fetal attachment was increased by visual exposure

to ultrasound imaging.

Heidrich & Cranley (1989) studied the effects of fetal movement, ultrasound, and amniocentesis on maternal fetal attachment and perception of fetal development in a low-risk sample of 91 women in their second trimester using the MFAS and a scale developed by the researchers for the project, Perception of the Fetus (POF). They found that ultrasound had no effect on either variable, but that women who had earlier reports of fetal movement in pregnancy had higher scores on both measures. Women undergoing genetic amniocentesis showed lower attachment scores before the procedure, but at one month post-procedure their scores did not differ significantly from other women.

Another study of the psychological responses to amniocentesis (Phipps & Zinn, 1986) found increased fetal attachment among the 40 women undergoing genetic counseling and amniocentesis compared to the 32 control subjects, using the MFAS and two other instruments. The amniocentesis subjects completed the questionnaires after genetic counseling, after the amniocentesis procedure and one week after communication of the results of the amniocentesis. The control subjects completed the questionnaires during routine obstetric visits at times corresponding to those of the amniocentesis group. They concluded that the psychological disturbances that

accompanied amniocentesis were transient and were compensated for by "the enhanced emotional adaptation to pregnancy" (p. 131).

Studies using prenatal interventions to enhance attachment to the unborn baby or postpartally have been done. Two popular books, The Secret Life of the Unborn Child by Verny & Kelly (1981) and The World of the Unborn by Schwartz (1980), advocated ways of responding to the child in utero that could affect its physical and emotional well-being before and after birth. Lumley (1982) used a series of semi-structured, tape-recorded interviews and women's drawings of the imagined fetus to assess knowledge of and attitudes towards the fetus in 30 primigravidae and found that maternal fetal attachment increased over time especially as perception of the fetus as a person increased.

Grace (1989) administered the MFAS monthly to a group of 69 pregnant women, primigravidae and mulitgravidae, under the care of a single obstetrician over the course of the pregnancy. She demonstrated an increase over time of maternal fetal attachment scores. At the routine postpartum check the mothers were given the instrument, What Being The Parent of a New Baby Is Like (WPL). MFAS subscale scores were found to be related to differences in mothers' postpartum reports of their infants' centrality in their lives and differences in maternal assessment of

role attainment.

A Prenatal Tactile Intervention was developed by Carter-Jessop (1981) to enhance prenatal and postpartum attachment of mothers to their babies. The intervention consisted of activities designed to increase mothers' tactile awareness of fetal parts and position, as well as their sense of fetal activity. Mothers were also encouraged to describe the effects of their verbal interactions with the fetus, in addition to rubbing and stroking their abdomens daily. Carter-Jessop found that the process of maternal attachment was enhanced by the intervention. Davis & Akridge (1987) tested the Carter-Jessop intervention, using the MFAS as a pretest of behaviors and attitudes. They performed a postpartum evaluation, using Avant's Maternal Attachment Assessment Scale on 22 primigravidae, 32 to 37 weeks gestation, but their results were inconclusive.

Another study done to test the Carter-Jessop intervention again failed to find significant relationships between the prenatal intervention and maternal behaviors postpartum (Carson & Virden, 1984). Their sample consisted of 69 primparous and multiparous White and African American women. They did find a significant difference in the frequency and total of attachment behaviors between the two groups and recommended further studies be done investigating the

cultural differences in maternal prenatal attachment.

Ethnicity/Acculturation

The effects of cultural differences on human behavior and attitudes comprise a set of variables whose importance in studies within many disciplines is growing. An exploration of sociocultural change within a society involves a discussion of the aspects of intraethnic variations as well as interethnic relations. To that end some operational definitions, taken from Keefe & Padilla (1987), are provided for clarity.

Ethnicity--a concept involving two or more distinct cultural groups in a contact setting (p.3).

Ethnic Identification--a process of self-identification among groups members. Includes their attitude toward and affiliation with one ethnic group and culture as opposed to another ethnic group and culture (p.8).

Acculturation--the loss of traditional cultural traits and the acceptance of new cultural traits (p. 6). A type of cultural change, specifically change occurring as a result of continuous contact between culture groups. May affect one or both groups and any cultural trait (p. 15).

Assimilation--social, economic and political integration of an ethnic minority into mainstream society (p. 6).

The earliest models of ethnicity were based on objective measures of shared cultural traits such as language, religion or national origin. The concept of ethnic identity which emphasized self-identification with an ethnic group or identification forced by others represented another model in analyzing ethnicity. Additionally, within a third model of ethnicity, there has been an examination of "situational ethnicity" that varies with the social context an individual finds himself. (Keefe & Padilla, 1987).

Cuellar, Harris & Jasso (1980) developed an acculturation scale consisting of 20 items with four factors that has been used extensively in studies with Mexican Americans. It, too, yielded five distinct cultural types ranging from very Mexican to very Anglisized.

Keefe & Padilla (1987) undertook the examination of sociocultural change among Chicanos who comprise the second largest ethnic minority group in the U.S., with 4.4% of the population of the United States according to 1985 figures (p. 1). The presence of Chicanos in the U.S. Southwest is a visible one and a logical result of geographic proximity to Mexico. In order to gain a comprehensive view of Mexican American ethnicity as well as information about the range of variability within the Chicano population, Keefe & Padilla undertook a three-year

study in three cities in southern California. Their efforts yielded a model of Cultural Orientation which included the dimensions of cultural awareness (a measure of acculturation) and ethnic loyalty (a measure of ethnic identification) (p. 49). Additionally they described five cluster types of Mexican American ethnic orientation, ranging from unacculturated individuals who identify as Mexicans and with Mexican culture to those individuals who are highly Anglisized and possess very little knowledge of or identity with Mexican culture (p. 55). The questionnaire developed consisted of 136 items reflecting eight factors.

The task of assessing ethnicity among persons identifying themselves as Anglo is obviously difficult in a group that is, at once, ethnically diverse while falling under a single rubric. Phillips (1990) has developed a questionnaire from many previous studies of ethnicity and acculturation to arrive at an instrument that can be used to compare two distinct culture groups, such as Anglos and Mexican Americans.

The purpose of this study is to examine interethnic differences, i.e., differences between two culture groups of a phenomenon, rather than measuring intraethnic variations within a culture group. Thus the focus will be on ethnic identity, rather than level of acculturation, although it is admittedly difficult to completely separate

the two concepts.

Mexican Americans and Childbearing

Mead & Newton described various ways of reacting to pregnancy across cultures. These are: feelings of responsibility for fetal growth; feelings of heightened solicitude toward the pregnant woman; pregnancy as evidence of sexual adequacy; pregnancy as a time of vulnerability and debility; and pregnancy as a time of shame and reticence (1967, pp. 164-167). The purpose of a mother's status and pregnancy rules are to ensure her health and that of the fetus, the ease and safety of childbirth and the addition of the child to the kin groups and society. There is abundant literature on the externals of this process for both Anglos and Mexican Americans. For Anglos the medical model and childbirth trends provide resources and models. We may refer to the ethnographic literature on the Mexican American woman to find the similar sources within that cultural context.

Previous studies of pregnancy in Mexican or Mexican American culture has uncovered many of these concepts, but in studying any facet of childbearing among Mexican Ameicans the factor that appears to be most salient is the role of the family. While noting that for most Mexican American families close relationships and interdependence are the rule, at the same time it is this process through which the sense of worth for the individual is maintained

(Arciniega, Casaus, Castillo, 1978). Within the family constellation, roles are well-defined and the expected behavior explicitly imprinted as with families of most cultures.

In her study of 14 dyadic relationships over the course of pregnancy, Richardson (1981) found that the eight Mexican American couples in her sample were more likely to be living with an extended family. Becerra & de Anda's (1984) exploratory study of 82 pregnant Mexican American adolescents found the 39 Spanish-speaking mothers in her sample to be more vulnerable due to increased isolation as they were at a geographic distance from their families of origin. This was because the Spanish-speaking mothers were much more likely to be married and living with the father of the baby than were the English-speaking Mexican American mothers.

Keefe & Padilla (1987) found that kinship as a social system has less importance for Anglos. The Mexican American's family network tends to become more localized with each generation. This is in contrast to the ethnographic reports in Tucson of childbearing practices in the 1970's. Both O'Grady (1973) and Kay (1977, 1978, 1980) found that the rules and observances during pregnancy concerning rest, activity, emotional states, nutrition and safety of the fetus were disseminated by other female family members or <u>partera</u> (lay midwife), if

she was the primary care-giver.

One may surmise that with passage of time and increased contact with the dominant Anglo culture some of these practices may have become diluted or passed from fashion with the increasing acculturation that comes with generational distances from the mother culture. Of these, the importance of the family for Mexican Americans, especially during an important time of transition such as pregnancy, has not become diminished.

Summary

This chapter presented a summary of the significant research on the concepts central to this study: the relationship of the psychological experience of pregnancy to maternal prenatal attachment; current work on attachment theory; the important concepts surrounding the issues of ethnicity and acculturation; and a review of issues impacting the study of childbearing among Mexican Americans.

CHAPTER 3

DESIGN AND METHODOLOGY

The purpose of this study was to compare the experience of pregnancy and maternal prenatal attachment between Mexican American and Anglo women. This chapter presents the study design, the sample, setting, protection of human rights, description of the study questionnaire, data collection procedures, data analysis plan, and summary.

Research Design

A comparative descriptive design was used to examine the differences and similarities in maternal prenatal attachment between Mexican American and Anglo primigravidae. A comparative descriptive design can also be used to provide information about the relationships between certain variables in two groups as they occur naturally. The relationships between variables are identified to gain a comprehensive view of the phenomenon under examination, rather than a prediction of the types and degrees of relationships (Burns & Grove, 1987).

Maternal prenatal attachment of Anglo and Mexican American primigravidae was assessed during the last half of pregnancy by administering the questionnaire to women who met the study criteria.

Sample Description

A convenience sample of 68 primigravidae was recruited for participation in the study. Subjects were either English or Spanish speaking and had the ability to read in either or both languages.

Criteria for the selection of participants included the following:

1. She was a primigravida between the ages of 15 and 35.

2. She was in the last half of pregnancy.

3. Her pregnancy was free of obstetrical or medical complications according to ACOG standards, such as diabetes, pre-eclampsia or third trimester vaginal bleeding.

4. Participant identified self as being either Anglo or Mexican American.

Primigravidae were chosen to increase the homogeneity of the sample. The criteria of ages of 15 to 35 years and pregnancy free of obstetrical or medical complications were chosen to attempt to restrict respondents to the low-risk category. Women in their second half of pregnancy were selected so as to include women in whom quickening had occurred, which has been cited in the literature as being an important input into maternal prenatal attachment behaviors.

Data Collection Setting

The women were recruited from prenatal clinics or an obstetrician's office during regularly scheduled prenatal visits located in a large southwestern city. Additionally women were recruited from prenatal classes at a private hospital in the same city. The clinics, obstetrician and hospital serve women of various socio-economic backgrounds. Ethnically diverse women utilize these sites regularly. An obstetrician was selected who speaks Spanish and tends to attract Mexican American women for care so as to assure easier access to that population.

Protection of Human Subjects

Approval was obtained from the College of Nursing Ethical Review Subcommittee and the Director of Clinical Research at the University of Arizona prior to the collection of data (Appendix A). In addition, approval was obtained from the Nursing Research Committee of St. Joseph's Hospital and Elizabeth's of Hungary Clinic, the Executive Director of El Pueblo Clinic and from Dr. Frank Ruiz, M.D. (Appendix C)

Each woman was given a written disclaimer containing an explanation of the study to be read prior to voluntary participation in the study. The disclaimer was provided in both Spanish and English (Appendix B).

The explanation of the study's purpose was to provide information about the researcher, the study and the

voluntary nature of participation for the subject. The disclaimer was used in order to protect the agency and the participants in the study, as well to abide by the research stipulations of each institution and the obstetrician.

There is no known risk to the participants in the study as no intervention or manipulation was included in conjunction with administering the questionnaire. To assure confidentiality, subjects names were not included on the questionnaire.

Description of the Study Instruments

The questionnaire used in data collection was comprised of three instruments: 1) Demographic Information, 2) Ethnic Identification, 3) Muller Prenatal Attachment Inventory (MPAI) (Appendix D). The instrument used to elicit demographic information was compiled by the researcher. The other two questionnaires were used with permission of the authors.

Demographic Information

Data were collected on demographic characteristics of the subjects to gain information on contextual stimuli such as age, education, gestational age, income, marital status, household composition, work outside the home, ultrasound and the taking of prenatal classes for this pregnancy.

Ethnic Identification

Information regarding the contextual stimulus of ethnic identification was elicited from study participants by the use of an instrument developed by Cuellar, Harris & Jasso (1980). This questionnaire was modified by Phillips (1990) to be used in comparing different culture groups. The revised scale used by Phillips had a Cronbach's alpha of reliability of .82.

Muller Prenatal Attachment Inventory

The Muller Prenatal Attachment Inventory is a tool developed and tested to measure fetal attachment in pregnant women by evaluating and examining maternal response to the focal stimuli of the fetus and pregnancy (Muller, 1989). It consists of 27 statements referring to feelings, ideas, behaviors, and experiences of the fetus during pregnancy, followed by four response categories ranging from 'almost always' to 'almost never'. A multi-ethnic sample of 310 pregnant women in the second half of their low-risk pregnancies participated in the study.

The MPAI was found to have a strong correlation with the Cranley tool (1981), the MFAS ($r=.72$, $p < .01$). Content validity for for the MPAI was established using review by an eleven-member expert panel. Cronbach's alpha coefficient was .81. The coefficient tau, derived from the outcome of a principal components analysis, was .89.

Instrument Translation Procedure

Of the three instruments used for this study, only the Ethnic Identification instrument had been previously translated and used in Spanish. The Demographic Information and the Muller Prenatal Attachment Inventory were translated into Spanish by the researcher for use in this project. In order to assure functionally equivalent translation of an instrument the method of backstranslation was employed in order to assess the adequacy as well as the reliability and validity of the translated instrument (Jones, 1987). In a comparative study, such as this, the aims of translation of study instruments are to obtain equality of familiarity and colloquial expression in both the Spanish and English versions, and to include items common to both cultures (Chapman & Carter, 1979).

The accepted procedure to accomplish these goals is the use of the backtranslation method (Brislin, 1970, Chapman & Carter, 1979). The steps involved in this process entail three versions of the instrument: 1) the original language form, in this case English; 2) the initial translation into Spanish; 3) the translation of the Spanish version back into English by a different translator.

Data Collection Procedure

Expectant mothers who met the study criteria were

identified by staff in the prenatal clinic and the obstetrician's office, or by childbirth instructors. The researcher approached a woman, introduced herself and explained the study to her. Participation of the mother was requested, then verbal and written descriptions of the purpose and nature of the study were given in either Spanish or English according to the woman's preference. A written disclaimer, also in Spanish or English, was given to the woman and any questions she had about the study were answered. The mothers were given a copy of the questionnaire to be filled out during her wait at her prenatal visit or break at childbirth class. These were collected by the researcher and put into an envelope. There were no personal identifying features on the questionnaires.

Data Analysis

A t-test for independent samples was used to ascertain if significant differences existed on the scores on the MPAI between Anglo and Mexican American women. A t-test was also used to compare two groups of women as to those who do or do not work outside the home, those who were or were not offered a sonogram during their pregnancy, and those who were or were not married.

The Pearson product moment correlation coefficient was used to examine the relationships between gestational age, respondent's age, number of hours worked, education,

income, household composition and taking prenatal classes between the two ethnic groups. The correlations between having a sonogram and the respondent's preference for the sex of the baby, when it was known, with MPAI scores were also investigated using Pearson's r.

Reliabilities, using Cronbach's alpha, were done on the MPAI for the sample and between the two groups to provide further testing of the internal consistency of this relatively immature instrument on a multi-ethnic group.

Summary

A comparative descriptive design was used to compare the experience of maternal prenatal attachment between Anglo and Mexican American primigravidae during the last half of pregnancy. The study subjects were recruited from a convenience sample in a large Southwestern city from prenatal clinics, an obstetrician's office and childbirth preparation classes.

A questionnaire comprised of a Demographic Information instrument, an Ethnic Identification instrument, and the Muller Prenatal Attachment Inventory were administered to the subjects who volunteered to participate in the study. The questionnaire was available in either Spanish or English. A t-test was used to compare the various demographic characteristics as well as the results of the responses to the MPAI according to

ethnic identification. Correlations among several variables were calculated to explore their relationships across the sample as a whole and to compare the results between groups. Reliabilities were done on the MPAI to test for internal consistency.

CHAPTER 4

PRESENTATION OF RESEARCH FINDINGS

This chapter presents the results of the statistical analysis. The characteristics of the sample, correlations for the total sample as well as the two ethnic groups, and prenatal attachment scores will be reported. Reliabilities for the MPAI will be presented.

Characteristics of the Sample

The sample was composed of 68 primigravidae living in Tucson, Arizona whose low-risk pregnancies ranged from 23 to 41 weeks gestation. The subjects were drawn from two prenatal clinics, one obstetrician's office and prenatal classes given at a local hospital. This breakdown of the sample by recruitment site is shown in Table 1.

Thirty-four of the subjects identified themselves as Anglo Americans and 34 as Mexican American. Of the 34 women who identified themselves as Mexican American, 17 of them chose the English form of the questionnaire, while the remaining 17 opted for the Spanish form.

The data collection process lasted two months. Each pregnant woman who consented to participate filled out the questionnaire, either before or after her regular clinic or obstetrician visit, or during the break at prenatal class. The questionnaire required between 10 to 20 minutes to complete.

Table 1. Sample by Recruitment Site. N=68

	Mexican Americans (n=34)		Anglos (n=34)		Total (n=68)	
Site	Frequency	(%)	Frequency	(%)	Frequency	(%)
St. Elizabeth's Clinic	18	(53)	6	(18)	24	(35)
El Pueblo Clinic	4	(12)	1	(3)	5	(7)
St. Joseph's Childbirth Classes	8	(24)	27	(80)	35	(52)
Private Physician	4	(12)	0	-	4	(6)

The ages of the Anglo American women ranged from 18 to 35 years, with a mean of 24.71 and a standard deviation of 4.27 years. The ages of the Mexican American women ranged from 15 to 33 years with a mean of 22.29 and a standard deviation of 4.09.

Gestational age ranged from 28 to 41 weeks for Anglo American women, with a mean of 34.53 and a standard deviation of 2.81 weeks. For Mexican American women, the gestational age ranged from 23-41 weeks, with a mean 33.85 and a standard deviation of 4.09.

Thirty-one or 46% of the women in the sample worked outside the home. Mexican American women were less likely to work outside the home--36% versus 56% of the Anglos. It follows that the mean hours worked per week for Mexican Americans in this sample was 11.64 compared to the Anglo mean of 19.47 hours.

The Anglo group of women were better educated than the Mexican Americans. The total sample mean for years of education was 12.77 with Anglos averaging 13.68, with a range of 11 to 20 years. Mexican Americans had between 6 and 16 years of schooling with a mean of 11.86 years of schooling.

Income was investigated by asking respondents to characterize their income as "not making ends meet", "barely making ends meet", "having enough money to live on", and "having money left over for extras". Nearly

twice as many Mexican American women as Anglos felt that their income was inadequate. Eighteen percent of Mexican Americans responded that they did not make ends meet, compared to 9% of Anglos. Twenty-one percent of Mexican Americans barely made ends meet, while 15% of Anglos characterized their income in this way. Fifty percent of Mexican American women felt they made enough to live on, while 30% of Anglos described their income this way. Nearly half (47%) of Anglo women in the sample, stated they had money left over, while only 12% of Mexican Americans did.

In this sample, more Mexican American women stated that they were single--ten (30%) as compared to five (15%) of the Anglo women. Of the Mexican American women, 53% were married, and 18% were living with their partner, compared to 77% of the Anglos being married, and 9% living with a partner.

Number of persons in the households for the sample ranged from 1 to 8. The mean number of persons per household for Mexican Americans was 3.4, with a range of 2 to 8 persons. The mean for Anglos was 2.4, with a range of 1 to 6 persons. Eighty percent of the Anglos and 50% of the Mexican Americans lived in a 2-person household. Thirty-two percent of Mexican American women lived with 4 or more other people, compared with 3% of Anglo women. The frequencies for household membership for the two

groups is shown in Table 2.

Interesting to note is that while 19 of the Mexican American women stated they were offered a sonogram, 21 actually reported having had one. Twenty-six of the Anglos were offered sonograms, with 24 of them having had one.

As to preference for the gender of the baby, 22 or 65% of Mexican American women and 15 or 44% of the Anglos reported having no preference. Twelve of the Anglos knew the sex of their baby at the time they filled out the questionnaire, and 8 of these stated they had their preference. Among the Mexican American women, only 7 knew the sex of their baby, with 4 of them having the gender of their preference.

Forty-three or 63% of the total sample attended childbirth classes--20% Mexican American and 43% Anglo women. When examining the ethnic groups separately, 14 (or 41%) of the Mexican American mothers attended prenatal classes, whereas 29 (or 85%) of the Anglo mothers were receiving prenatal education. A little over half of the total sample was recruited from prenatal classes offered at a private hospital (Table 1).

Analysis of Data

The results of the t-test on the variables of work outside the home, marital status, offered a sonogram, and MPAI scores are shown on Table 3.

Table 2. Household Membership. N=68

	Mexican American n=34		Anglo n=34	
Relationship	Frequency	Percent	Frequency	Percent
Mother	6	8.8	4	5.9
Father	2	2.9	2	2.9
Sister	5	7.4	3	4.4
Brother	3	4.4	1	1.5
Sister-in-law	4	5.9	0	-
Brother-in-law	3	4.4	1	2.9
Aunt	1	1.5	0	-
Uncle	2	2.9	0	-
Grandmother	0	-	0	-
Grandfather	0	-	1	1.5
Spouse	23	33.8	24	35.3
Boyfriend/Fiance	3	4.4	4	5.9
Mother-in-law	4	5.9	0	-
Father-in-law	3	4.4	0	-
Cousin (Female)	2	2.9	0	-
Cousin (Male)	2	2.9	0	-
Niece	2	2.9	2	2.9
Nephew	4	5.9	1	1.5
Friend (Female)	1	1.5	0	-
Boyfriend's Son/ Daughter	1	1.5	1	1.5

Table 3. Subjects by Variables: Work Outside the Home; Marital Status; Having Been Offered A Sonogram; and MPAI Total Scores. Means, Standard Deviations and t-Test. N=68

	Mexican American n=34		Anglo n=34			
Variable	Mean	(SD)	Mean	(SD)	t-Value	p-Value
Work	1.65	(.49)	1.44	(.50)	1.72	NS
Married	2.24	(.89)	2.62	(.74)	-1.93	NS
Offered Sonogram	1.42	(.50)	1.24	(.43)	1.66	NS
MPAI Scores	84.94	(11.08)	85.24	(11.02)	-0.11	NS

Very small differences will be noted between the two groups for working outside the home and MPAI scores. The greatest variance is noted between the groups regarding marital status, where twice as many Mexican American women were single or living with a partner.

The results of the correlations among the demographic variables of respondent's age, gestation, education, income, hours of work per week, number in household, taking prenatal classes and the MPAI scores are shown on Tables 4-6.

The correlation coefficients for all subjects are shown on Table 4. There were two positive correlations which were significant at a .05 level or greater. These were gestational age and education, and the number of persons in the household and taking prenatal classes. The number of persons in the household correlated negatively with the number of hours worked. These findings may indicate that with a greater number of people in the household, there is more support for taking prenatal classes as well as decreased necessity for the number of hours worked, perhaps pointing to a larger support system at the home base.

Several correlation coefficients were found to be at the .01 significance level or greater for the demographic variables included on Table 4. These included positive relationships between the age of the respondent with her

Table 4. Pearson Product Moment Correlation Coefficients Among Demographic Variables for All Subjects. N=68

Variables	Age (Yrs)	Gestation (Wks)	Education (Yrs)	Income	Hours of Work	Number in House	Taking Prenatal Classes	MPAI
Age (Years)	1.00	.15	.53**	.23	.40**	-.33**	-.40**	.05
Gestation (Weeks)		1.00	.28*	.11	.02	-.08	-.09	.03
Education (Years)			1.00	.38**	.24	-.21	-.45**	.08
Income				1.00	.31**	-.40**	-.43**	.20
Hours of Work					1.00	-.28*	-.15	.06
Number in Household						1.00	.25*	.01
Taking Prenatal Classes							1.00	-.02
MPAI								1.00

*Significant at $p \geq .05$.

**Significant at $p \geq .01$.

Table 5. Pearson Product Moment Correlation Coefficients Among Demographic Variables for Mexican American Primigravidae. N=28.

Variables	Age (Yrs)	Gestation (Wks)	Education (Yrs)	Income	Hours of Work	Number in House	Taking Prenatal Classes	MPAI
Age (Years)	1.00	.32*	.62**	.15	.57**	-.22	-.34*	.05
Gestation (Weeks)		1.00	.55**	.08	.08	-.08	-.17	.04
Education (Years)			1.00	.49**	.53**	-.19	-.42**	.07
Income				1.00	.31*	-.28	-.48**	.23
Hours of Work					1.00	-.20	-.10	.01
Number in Household						1.00	.20	.00
Taking Prenatal Classes							1.00	-.14
MPAI								1.00

*Significant at $p \geq .05$.
**Significant at $p \geq .01$.

Table 6. Pearson Product Moment Correlation Coefficients Among Demographic Variables for Anglo Primigravidae. N=34

Variables	Age (Yrs)	Gestation (Wks)	Education (Yrs)	Income	Hours of Work	Number in House	Taking Prenatal Classes	MPAI
Age (Years)	1.00	-.14	.32	.10	.21	-.33	-.23	.01
Gestation (Weeks)		1.00	-.14	.21	.02	-.22	.15	-.20
Education (Years)			1.00	.14	-.16	.12	-.21	.08
Income				1.00	.18	.28	-.17	.10
Hours of Work					1.00	-.21	.11	.08
Number in Household						1.00	-.26	.12
Taking Prenatal Classes							1.00	.24
MPAI								1.00

level of education and hours of work; indicating that the older women in the sample were better educated and inclined to work more hours a week. Age correlated negatively in this sample with both number in the household and taking prenatal classes. Thus it was the younger women who tended to live in a larger household and were more likely to take childbirth classes.

It should be noted that the variable of income had several correlations at $p \geq .01$. Positive correlations of income with years of schooling and number of hours worked seem fairly straightforward. The negative correlations demonstrate a trend for the lower income respondents to live with more people in the household and to be more likely to be taking prenatal classes. The women taking prenatal classes were also those with fewer years of education.

In fact, the variable of prenatal education had negative, and mostly significant, correlations with all of the demographic variables examined except that of the number of persons in the household. This provides a profile of the mothers in this sample who were taking prenatal classes. They tended to be younger, less educated, lower income and live in larger households.

The number of persons in the household correlated negatively with all the other demographic variables in Table 4, except taking prenatal classes. Again, several

of these were significant.

Tables 5 and 6 examine the correlations of the same variables for both of the ethnic groups in the sample. The results of the correlations demonstrated no significant findings for the Anglo primigravidae participating in this study (Table 6). There were, however, several correlations at both $p \geq .01$ and .05 for the Mexican American mothers.

The variable of education was a salient one (Table 5). Gestational age, respondent's age, income and number of hours worked all correlated significantly and positively with years of education describing a trend for the better-educated of these Mexican American women to be older, to work more outside the home and to have a higher income. Negative correlations were with taking prenatal classes ($p=.01$) and with the number of people in the house, where there was a low, but discernable, relationship.

Of note is the fact that taking prenatal classes correlated negatively with all of the demographic variables, and with the MPAI scores, except for the number of people in the household. This relationship reflects the directions seen for the total sample. The Pearson's r's for the Mexican American mothers mirrored the total sample in the consistently negative correlations between number of people in the household and the other

demographic variables, although none of the coefficients was significant.

Additional correlations were done on the variables concerning having a sonogram and preference for the baby's gender with the MPAI scores. The results of these analyses for the sample and for each ethnic group are displayed on Tables 7-9. When evaluating the correlation coefficients for all of the subjects, having a sonogram contributed significantly to knowing the gender of the baby and this, in turn, correlated strongly to having the desired gender of the baby. Having a sonogram also correlated positively with taking prenatal classes (Table 7).

The relationship of having a sonogram and knowing the gender of the baby was not significant for the Mexican American mothers (Table 8), although it was for the Anglos (Table 9). While similar numbers of both groups had sonograms during their pregnancy (21 or 64% of Mexican Americans; and 24 or 71% or Anglos), only seven (21%) of the Mexican American women knew the sex of their baby compared to 12 (35%) of the Anglo women who knew the sex of their baby.

The significant correlation between knowing the gender of the baby and having the desired gender held between groups (Tables 8 and 9) as it had for the total sample. As was noted in the section on the

Table 7. Pearson Product Moment Correlation Coefficients Between Selected Demographic Variables for All Subjects. N=68

Variables	Having Had Sonogram	Preference for Baby Gender	Knowledge of Baby Gender	Having Desired Gender	Taking Prenatal Classes	MPAI
Having Had Sonogram	1.00	-.09	.30**	.18	.25*	.12
Preference for Baby Gender		1.00	-.00	.11	.24	.02
Knowledge of Baby Gender			1.00	.83**	.13	.00
Having Desired Gender				1.00	.14	-.07
Taking Prenatal Classes					1.00	-.02
MPAI						1.00

*Significant at $p \geq .05$.

**Significant at $p \geq .01$.

Table 8. Pearson Product Moment Correlation Coefficients Between Selected Demographic Variables for Mexican American Primigravidae. N=28

Variables	Having Had Sonogram	Preference for Baby Gender	Knowledge of Baby Gender	Having Desired Gender	Taking Prenatal Classes	MPAI
Having Had Sonogram	1.00	.21	.17	.06	.13	.08
Preference for Baby Gender		1.00	-.20	-.11	.20	-.22
Knowledge of Baby Gender			1.00	.78**	-.28	-.13
Having Desired Gender				1.00	-.15	-.24
Taking Prenatal Classes					1.00	-.14
MPAI						1.00

**Significant at $p \geq .01$.

Table 9. Pearson Product Moment Correlation Coefficients Between Selected Demographic Variables for Anglo Primigravidae. N=34

Variables	Having Had Sonogram	Preference for Baby Gender	Knowledge of Baby Gender	Having Desired Gender	Taking Prenatal Classes	MPAI
Having Had Sonogram	1.00	-.33	.34*	.23	.19	.15
Preference for Baby Gender		1.00	.04	.20	.24	.17
Knowledge of Baby Gender			1.00	.84**	.28	.15
Having Desired Gender				1.00	.24	.09
Taking Prenatal Classes					1.00	.24
MPAI						1.00

*Significant at $p \geq .05$.

**Significant at $p \geq .01$.

characteristics of the sample more Mexican American mothers expressed no preference for a certain gender of the baby compared to the Anglo mothers. This was reflected by the negative correlation between these variables (although weak) for the Mexican Americans on Table 8.

MPAI Scores

The means, standard deviations and results of the t-test for the MPAI are shown on Table 3. There were no significant differences. The MPAI did not correlate significantly with any of the demographic variables, nor with the variables relating to preference for the baby's gender or having a sonogram (Tables 7-9). This held true for the total sample as well as the two ethnic groups.

There was a negative but weak correlation of the MPAI to taking prenatal classes for the Mexican American mothers. The strongest postive correlation was between income and the MPAI among the Mexican Americans (Table 5). For the Anglos (Table 6) the strongest relationship was the positive correlation between taking prenatal classes and the MPAI scores (r=.24). Gestational age had a weak but negative relationship to the MPAI for Anglo mothers.

For the Mexican American women all of the scores relating to preference for the gender of the baby had negative, although weak, correlations to the MPAI (Table 8)--reflecting the higher frequency of the Mexican

American mothers with no preference in this matter. The correlation coefficients for the group of Anglo mothers shown on Table 9 were positive for this group of variables. The only one approaching significance was that of taking prenatal classes and their MPAI scores (r=.24).

The grand mean of MPAI scores for the total sample in this study was 85.09 with a standard deviation of 11.96. These figures compare favorably to those obtained by Muller. The grand mean for the original group upon whom the instrument was tested was 83.31 with a standard deviation of 10.17 (Muller, 1989).

In calculating reliabilities for the MPAI, there were 65 valid cases (where respondents completed all 27 items). The alpha for the total sample was .86. The Anglo American group had an alpha of .87 while the Mexican American group had an alpha of .86 demonstrating high internal consistency for the instrument for both ethnic groups, as well as the total sample. Cronbach's alpha was calculated for the Spanish form of the questionnaire, yielding an alpha of .79. This finding is based on only 14 valid cases--too few respondents to yield a meaningful estimation of its reliability.

General Findings

The research question for this study was: Is there a measurable difference in reported prenatal attachment between Mexican American and Anglo women? This section

presents the findings of the study in relation to the research questions according to the results of the statistical analyses.

Research Question I

Research question I asked if there existed differences in reports of maternal prenatal attachment between Anglo and Mexican American women. According to the results of the t-Test that compared the total scores of the MPAI between the Mexican American and Anglo women who participated in this study (Table 3), there was no significant difference in their reports of maternal prenatal attachment.

Research Question II

Research question II asked which contextual stimuli were related to maternal prenatal attachment. The variables examined include: age, education, income, hours work per week, household composition, having had a sonogram, and taking prenatal classes. None of these was shown to have a significant correlation with the MPAI as a measure of maternal prenatal attachment as demonstrated in Tables 4-9. The correlation coefficients did not reach a level of significance of .05 or greater for any of these measures for this sample of primigravidae.

Research Question III

This question asked which residual stimuli are related to maternal prenatal attachment. The variables

examined revolved around the woman's preference for the baby's gender. Tables 7-9 illustrate the absence of significant correlations between the variables of preference for the baby's gender, knowledge of the baby's gender, having the gender that was desired and taking prenatal classes.

Summary

This chapter presented the research findings of the study. Included in it were the characteristics of the sample, the results of the data analysis including the t-tests and correlations generated to answer the research questions.

CHAPTER 5

DISCUSSION OF RESULTS AND SUMMARY

In this final chapter a discussion of the results of data analysis be presented. Findings will be explored as conclusions are drawn. Limitations of the study, implications for nursing practice and recommendations for further research will also be presented.

Conclusions

Although the Mexican American and Anglo mothers in this sample, drawn from a large Southwestern city, were similar in their scores on the MPAI, there are several notable differences between the groups.

The women were recruited from four different sites. As noted in Table 1, 80% of the Anglo women were contacted at their prenatal classes which were offered at a private hospital in the city. The larger portion of the Mexican American respondents were recruited from clinics that served lower income clients.

For the total sample one of the most significant findings concerned the variable of taking prenatal classes. It was found that the women in this sample who were taking prenatal classes tended to be younger, have a lower education level, lower income and have more people living with them. They also tended to have had a sonogram during the pregnancy.

While these characteristics also held true for the Mexican American mothers in the sample, it was not the case for the Anglo mothers. They conformed to the commonly held impression of the population that attends prenatal classes--middle class, generally living as a couple, who are generally better educated and in their mid-twenties to mid-thirties (Cave, 1978; Simkin & Enkin, 1989).

The finding that presents quite different characteristics of those attending prenatal classes for this sample holds very positive implications for the state of prenatal care in this state. Arizona has been trying to improve upon its lack of provision of such services, with some advances having been noted. The impact of childbirth education has been shown to have an even greater impact on women with lower education and income levels (Nelson, 1982). The profile that emerged from the sample and for the Mexican American mothers is one such hallmark of the progress that has been made.

Barriers exist, however, for the Spanish-speaking women. Only two of the 17 Mexican-American mothers who filled out the Spanish form indicated that they were taking prenatal classes. Prenatal classes offered in Spanish are rare. Another hurdle is that quite often these women have limited access to such classes due to such factors as the cost of the classes themselves, the

ability to obtain transportation for themselves and their labor support person, child care (if they have other children) and obstacles to promoting awareness of the classes. Another potential difficulty is the time of day that the classes are offered. During the day they may use public transportation if the location is convenient, but their partner may be working and unavailable. Classes given at night may be better as regards timing, but not all have access to automobiles for transportation.

Another characteristic of the Mexican American women in this sample is that the more educated women tended to be older, have a higher income, work more hours outside the home and to be further along in their pregnancy at the time they were administered their questionnaire. They were also less likely to be taking prenatal classes. These relationships among the variables were not seen among the Anglo women, yet for the total sample the more educated women tended to be older, have higher incomes and be further along in their pregnancy. Gestational age at the time the questionnaire was administered for the Mexican American mothers, taken as a group, was lower than that of the Anglo mothers. It is interesting, in view of the sites from which the majority of Mexican American were drawn, to note that the older and more educated women were not those taking prenatal classes. Again, this trend was found for the total sample, but not for the Anglo women.

This suggests two groups of women within the group of Mexican American mothers in this study along the variables of age and education.

One possible explanation could be drawn from the fact that the older, more educated women among the Mexican Americans also tended to work more hours outside the home. These factors may have left the women less time for the effort and time that these classes require. However, a more likely explanation can be derived from the type of prenatal care the Mexican American women are enrolled in. For clinic patients there may not be available to them a mechanism to provide ready access to prenatal classes, especially in Spanish.

For the total sample, the women who had a sonogram were very likely to know the sex of their baby and to be taking prenatal classes. However, within neither of the two ethnic groups did the women who had a sonogram show a tendency to attend prenatal classes.

Although the Anglo mothers who had a sonogram were very likely to know the gender of their baby, this was not true of the Mexican Americans. The Anglo women had a slightly higher frequency of sonograms, but still the Mexican American women were much less likely to have the knowledge of the gender of their baby prenatally than did the Anglos. This finding indicates that the Mexican American women in this study who had sonograms were not

those who were also taking prenatal classes, and that they were not as desirous of knowing the gender of their baby. Indeed, for the Mexican American mothers, having the desired sex of their infant was not a strong factor.

This is contrary to the stereotype of the strong preference for boys over girls among Mexican Americans. However, this is consistent with the expressed preferences among the Spanish-speaking Mexican American mothers who were observed by Enriquez (1982) during the immediate neonatal period. Of the six case studies presented, only one had stated a preference for a boy before delivery. The other five women said that they cared more about having a healthy infant than a boy or a girl.

This suggests that to the women in this sample, both Anglo and Mexican American, knowing the sex of their baby is not as important as is having a healthy infant. This is true for most mothers, especially when expecting their first child and are not hoping to get the gender that will give them at least 'one of each' as in the case of multiparous women. In studies of parental attitudes toward the fetus ambivalence about knowing the gender of the baby has been the rule (Grace, 1984; Kemp & Page, 1987; Kohn, Belson & Weiner, 1980; Sjogren, 1988; and Stainton, 1985, 1990).

Although the literature cites the tendency of Mexican American women to live in large, extended

households (Keefe & Padilla, 1987) the number of people living in the household for the two groups were not that different. The tendency for single motherhood among Mexican Americans (Kay, 1972) was borne out in this sample.

In computing the correlations for the two ethnic groups the number of valid cases, i.e. where all the items were completed by the respondent, from the Mexican American mothers was 28 as compared to 34 for the Anglos. Thus six of the Mexican American women returned questionnaires that were not filled out completely. It was noted by the researcher during the data collection procedure that these respondents often required more time than their Anglo counterparts to fill out the questionnaire (15 to 20 minutes as compared to 10 to 15 minutes). Although the researcher had indicated her availability to answer questions, many in this group--especially the Spanish-speaking women--seemed less familiar with the process of answering such a survey as this.

The Muller Prenatal Attachment Inventory

As noted before the relationship of the MPAI to all the variables was not significant for either group of women. Contrary to what one finds in the literature (Grace, 1989; Lobiondo-Wood, 1985; and Vito, 1986), the relationship of gestational age to MPAI scores were weak

overall and found to be negative for Anglo mothers. Neither having had a sonogram, taking prenatal classes nor having the desired gender of the baby demonstrated any systematic relationship to MPAI scores.

The sample used by Muller to test her instrument consisted of 310 women in the second half of their low-risk pregnancies, living in the San Francisco bay area. It was a multi-ethnic sample, predominantly Ango, but included African American, Asian American, as well as Native American women. Hispanics were also included, but were not exclusively Mexican Americans (Muller, 1989). Muller's sample tended to be older and better educated than the sample obtained for this study. The bulk of her sample was drawn from midwifery practice, as well as childbirth classes and physicians' offices. Also, multigravid women as well as primigravidae were included. The contrasts between the two populations did not seem to affect the MPAI scores, nor the reliabilities for the instrument. This revised version of the MPAI used compared favorably to Muller's findings in the study in which she developed the MPAI.

Limitations of the Study

The limitations found in the study concern the ability to generalize these findings to other populations. One difficulty in generalization lies in the sample size itself. Another source of concern is imbalance in

recruitment site, with nearly half the sample coming a single site, prenatal classes at a private hospital.

The effect of the social desirability factor may make people hesitant to reveal the full range of their feelings and behaviors towards their unborn child. They may feel pressure to avoid presenting some of the less positive responses to their pregnancy and fetus, such as those related to the discomforts of advancing pregnancy and a growing and active fetus.

It would be interesting to include the scores of the father of the baby for the purpose of comparing his somewhat attenuated responses to that of the mother as has been done with other instruments (Condon, 1985; Grossman, Eichler, & Winickoff, 1980; Mercer, Ferketich, May, DeJoseph & Sollid, 1988; Weaver & Cranley, 1983). Other variables to be assessed would be the ethnic identity of the father and his preference for the sex of the baby to see if these factors have a relationship to the mother's ethnic identity and her preference for the gender of the baby.

A considerable amount of data were collected in the Ethnic Identification instrument which could be used as a measure of acculturation and ethnic identity. The instrument is still undergoing refinement by Phillips, especially for use with Anglos. The developmental stage of this instrument, combined with the multiplicity of

responses among the Anglos, have precluded use of the data obtained from it as being beyond the scope of this study.

The reliability of this Spanish translation of the MPAI has not been thoroughly tested given the small size of the group who have completed the questionnaire. Also, this Spanish translation reflects some colloquialisms appropriate to the population on which it was tested, i.e. Arizona-northern Sonora. Some changes may be in order if used with Spanish-speaking women in a different geographical and linguistic region.

Implications for Nursing Practice

Maternal prenatal attachment has consequences for nursing in regard to reinforcing and enhancing a positive relationship during pregnancy. The opportunities for this abound during the antenatal period of the childbearing year. Another important sphere of practice for maternity nurse is perinatal loss. With attachment there comes the potential for loss. The impetus for Bowlby's original writings sprung form his observations of the effects of separation from the attachment figure. His volume on attachment was followed by one on loss. They are two sides of the same coin.

This is no less true for maternity nursing. A situation of sudden or unexpected loss such as miscarriage, abortion, stillbirth or birth of an anomalous infant is just such an event (Brennan, 1989; Woods &

Esposito, 1987). The birth mother who is planning to relinquish her baby for adoption represents a case of anticpated or contemplated loss. She, too, has gone through the process of attaching to her unborn baby (Arms, 1983; Paine, 1990). In the NICU setting, the high risk or special needs infant also represents a loss for the parents (Driscoll, 1990).

Another area of application would be in the use of the MPAI as a screening tool. Populations where this would be helpful would be those women who might be identified as being at risk in their relationship with their baby. An example would include mothers who are engaged in such destructive behaviors as drug or alchohol use during pregnancy. This is a situation that has destructive effects on the fetus and has been the impetus for the passage of statutes aimed at punishing the mother for her addiction if she did not seek treatment. Insight into assessment of maternal prenatal attachment--styles, cues, attitudes and the variation among women and between cultural groups--can eventually lead to more sophisticated ways of intervening and conceptualizing the complex relationships that the childbearing year brings to women and their families.

Although, to date, the testing of interventions to enhance or increase the positive aspects of that relationship during pregnancy have not yielded

demonstrable benefits in the newborn period (Carter-Jessop, 1981; Carson & Virden, 1984; Davis & Akridge, 1987). This brings forth the issue of how to separate the physical and psychological experience of the pregnancy from the experience of and relationship to the fetus. There is a difference between relating to an unborn child, who is (mostly) unseen and unheard during pregnancy, and relating to that child whose temperament is now being manifest without the physical embodiment that pregnancy includes.

There is also a rite of passage that is accomplished during the labor and delivery process that has a decided effect on both mother and baby. The intrapartum period requires the mother to call upon inner resources she has never used before. This may be the first instance in which the support system she will be relying on after the birth of the baby is activated. The early neonatal period, when mother and child are first making their face-to-face acquaintance is infused with a mix of many strong emotions and responses for both mother and baby.

Thus it would appear that the use of the MPAI for screening and planning inteventions needs to be focused on the antepartal period. This is not to be construed as a limiting factor, but as an area that awaits further exploration.

Recommendations for Further Research

Recommendations for further research include continued testing of the instrument. Using the Spanish form on a larger sample of Spanish-speaking women would aid in establishing its reliability. Increased sample size and expanding it use to multiparous women, as in Muller's (1989) original study are recommeded. Continuing to test it with other ethnic groups can lead to an understanding of the complexity of the concept of maternal prenatal attachment.

The contrasts between the two populations did not seem to affect the MPAI scores, nor the reliabilities for the instrument. This begs the question of looking toward the existence of populations which would demonstrate more variation in prenatal attachment scores.

For nursing, expanding the scope of studies into cross-cultural settings is indicated. Specifically, this would be with populations who may be characterized as living in hopeless circumstances of poverty, whose infant mortality rates obviate the formation of attachment with an unborn child whose long-term viability has yet to be tested.

An extreme example lies in the favelas (shantytowns) of Brazil where the depths of poverty that characterizes the lives of millions of people has led them to practice "forms of delayed attachment and a form of causal or

benign neglect that serves to weed out the worst bets so as to enhance the life chances of healthier siblings" (Scheper-Hughes, 1989, p. 14).

This practice, and that of deferring the naming of a child for some days, weeks or months, is not uncommon such places where a high rate of infant and child mortatlity is a common feature of life. If these are the behaviors and attitudes of mothers toward their infants after birth, one can only muse at what little they feel they can afford to invest in the unborn, unseen child that will soon be competing with other surviving children.

In doing the cross-cultural studies, the ethnic identity of the spouse is an important variable to take into account, as this is a salient influence of the environment in which the woman exists. Another factor would be to poll the father as to his preference for the gender of the baby to see if the parents are unified in their preference.

Studies that explore the timing of the formation of prenatal attachment to test the assumption that quickening is the time that marks the consolidation of the maternal relationship to the fetus are still indicated. The literature abounds in studies that reinforce this (Leifer, 1980; Lobiondo-Wood, 1985; Lumley, 1982; Reading, Cox, Sledmere & Campbell, 1986; Vito, 1986), but advances in prenatal surveillance continue to test the position that

quickening has held for centuries. It may not hold up as forcefully among multiparous women, or women who have undergone amniocentesis or ultrasound before the 16-18 week time of quickening. A study that administers the MPAI throughout various timeposts during the pregnancy would shed some light on this.

Work is needed to determine if this is a many-factored or unidimensional phenomenon as noted by Muller (1989). Again there is the difficulty of separating the experience of the pregnancy from the relationship to the fetus, as well as the effects of the woman's environment. This study was one such effort at exploring some of these relationships.

Summary

This chapter presented the discussion of the findings of the statistical analyses of the study. Sixty-eight low-risk primigravidae participated by completing a question eliciting demographic information, ethnic identification and questions about her relationship with her unborn child in the form of the Muller Prenatal Attachment Inventory.

Limitations of the study were cited, and implications of the findings for nursing practice were discussed. Recommendations for further research were presented.

APPENDIX A

HUMAN SUBJECTS COMMITTEE APPROVAL

College of Nursing

THE UNIVERSITY OF
ARIZONA
HEALTH SCIENCES CENTER

Tucson, Arizona 85721
(602) 626-6154

MEMORANDUM

TO: Teresa A. Wilson

FROM: Carolyn Murdaugh, Ph.D., R.N., F.A.A.N.
Director of Clinical Research

DATE: June 5, 1990

SUBJECT: Human Subjects Review: "A Comparison of Prenatal Maternal Attachment Between Anglo and Mexican American Primigravidae"

Your project has been reviewed and approved as exempt from University review by the College of Nursing Ethical Review Subcommittee and the Director of Research. A consent form with subject signature is not required for projects exempt from full University review. Please use only a disclaimer 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.

CM:dbr

APPENDIX B

SUBJECT DISCLAIMERS

SUBJECT DISCLAIMER

Maternal Prenatal Attachment of Anglo and Mexican American Women

Teresa Wilson, a graduate nursing student, is conducting a reserach study to learn about emotions and feelings during pregnancy in Anglo and Mexican American women. You are being asked to participate in this study because you are pregnant with your first baby and are between the ages of 15 and 35.

You are being invited to give your opinion on the statements in the questionnaires in either Spanish or English. If you decide to participate, it will take about 15 minutes of your time. Your participation in this study will not affect the care you receive during your pregnancy. Please do not put your name on the questionnaire--no names will be used in this study. Results from this study will be used to help nurses improve the care of Mexican American and Anglo women.

You may choose not to answer some or all of the questions, if you so desire. You may change your mind about participating in this study and stop if you wish. You may ask questions at any time while completing the form. There are no known risks to you for participating in this study.

Thank you for your time and valuable information.

Teresa A. Wilson R.N.C., B.S.N.

DECLARACION DE PARTICIPANTES

Afecto Materno Prenatal de Mujeres Anglo-Sajonas y Mexico-Americanas

Teresa Wilson, enfermera de estudios avanzados en maternidad, esta conduciendo un estudio de las emociones y los sentimientos durante el embarazo entre las mujeres Mexico-Americanas y las Anglos. Le pedimos que participe en este estudio por que este es su primero embarazo y tiene entre 15 y 35 años de edad.

Esta invitada a dar su opinion acerca del cuestionario en español o en ingles. Si Ud. decide llenar el cuestionario va tomar como quince minutos de su tiempo. El participar o no en este estudio no va afectar el cuidado que recibe durante el embarazo. Por favor no ponga su nombre en el cuestionario--su nombre no sera usado en este estudio. Los resultados de este estudio ayudaran a las enfermeras mejorar el cuidado de las mujeres Mexico-Americanas y Anglos.

Ud. puede decidir no contestar a algunas o a todas las preguntas si Ud. desea. Puede parar o retirarse del estudio si desea. Puede pedir ayuda con las preguntas en cualquier momento mientras esta llenando las formas. No hay ningun riesgo conocido si participa en este estudio.

Gracias por su tiempo y informacion valiosa.

Teresa A. Wilson, R.N.C., B.S.N.

APPENDIX C

LETTERS GRANTING ACCESS TO SUBJECTS

St. Elizabeth of Hungary Clinic

140 West Speedway / Tucson, Arizona 85705-7698 / (602) 628-7871
Founded by Our Lady of Victory Missionary Sisters

June 1990

Permission granted to Teresa Wilson, R.N.C., B.S.N. to collect data for study of Maternal Prenatal attachment of Anglo and Mexican-American women during months of July and August 1990 at St. Elizabeth of Hungary Clinic.

Sincerely,

Sister Alice Mary Quintana
Administrator

Member Agency of
Catholic Community Services of Southern Arizona, Inc.

The Most Reverend Bishop of Tucson
Manuel D. Moreno

John E. Cotter
Chief Executive Officer

Frank E. Ruiz, M.D.

Obstetrics and Gynecology

June 1, 1990

To Whom It May Concern:

RE: Teresa Wilson

By means of the following, I authorize Teresa Wilson to collect data for her study, ie., subjects to fill out a questionnaire on ethnic identity and prenatal attachment. Permission is given for data collection during the months of July and August of 1990.

If you have any questions regarding this correspondence, do not hesitate to call me.

Sincerely,

F. Ruiz M.D.

Frank E. Ruiz, M.D.

FER/efe

San Raphael Medical Plaza / 899 N. Wilmot, Suite C-7 / Tucson, AZ 85711 / (602) 750-8901

EL PUEBLO CLINIC
101 W. IRVINGTON ROAD TUCSON, ARIZONA 85714
(602) 573-0096

August 9, 1990

Teresa A. Wilson, BSN, RNC
2808 E. Adams Street
Tucson, Arizona 85716

RE: Permission to Administer Questionnaire

Dear Teresa A. Wilson, BSN, RNC:

I have reviewed all the documentation you have sent me pertaining the questionnaire on prenatal care. All the documents seem to be in line. You have my authorization to proceed in administering your questionnaire to those El Pueblo Clinic clients who agree to participate.

Obstetric clinic is Thursday mornings. We will expect you on August 16th, 23th, and 30th. If any questions arise with staff, present them this letter.

If I may be of further assistance, please contact me at your convenience.

Sincerely,

Marco A. Moreno-Campoy
Executive Director

mamc

fc: File 5.01.84

Carondelet St. Joseph's

June 7, 1990

Ms. Teresa Wilson
2808 E. Adams St.,
Tucson, AZ 85716

Dear Teresa:

Your research proposal entitled "A Comparison of Maternal Prenatal Attachment Between Anglo and Mexican American Women" has been approved by St. Joseph's Hospital Research Committee for data collection. Your primary contact will be Polly Phillips, Director, or her designee.

Good luck in your research, and please let us know if we can be of any further assistance. We look forward to hearing about your results.

Sincerely,

Peggy MacMacken

Peggy MacMacken, RN, MS
Administrative Director

PM:sm

350 North Wilmot Road
P. O. Box 12069
Tucson Arizona 85732
(602) 296-3211

APPENDIX D

STUDY INSTRUMENTS

PRENATAL ATTACHMENT QUESTIONNAIRE

Directions: Please fill in the blanks or circle the number that best answers the questions. You may choose not to answer any of the questions if you wish.

GENERAL DEMOGRAPHIC INFORMATION

1. Today's date is _____.

2. What is your due date? _____

3. How old are you? _____

4. Are you employed outside your home?
   1. Yes 2. No

5. If 'yes', how many hours a week do you work outside your home? _____

6. How many years of school have you completed? (Circle correct number)

1 2 3 4 5 6 7 8	9 10 11 12	13 14 15 16	17 18 19 20
grade school	high school	college	graduate

7. How would you characterize your income?

   1. not making ends meet
   2. barely making ends meet
   3. have enough money to live on
   4. have money left over for extras

8. What is your marital status?

   1. single
   2. living with a partner
   3. married
   4. divorced
   5. widowed

9. How many people live in your household? _____

10. What is your relationship to the people living in your house? (Circle all that apply)

1. mother
2. father
3. sisters
4. brothers
5. sister-in-law
6. brother-in-law
7. aunt
8. uncle
9. grandmother
10. grandfather
11. spouse
12. mother-in-law
13. father-in-law
14. cousin (F)
15. cousin (M)
16. niece
17. nephew
18. close friend (F)
19. close friend (M)
20. Other (Please specify)

_____

11. Were you offered an ultrasound examination during this pregnancy?

1. Yes 2. No

12. Did you have an ultrasound examination during this pregnancy?

1. Yes 2. No

13. What was your preference for the sex of your baby?

1. Boy 2. Girl

14. Do you know the sex of your baby?

1. Yes 2. No

15. If you know the sex of your baby, is it the one you preferred?

1. Yes 2. No

16. Are you taking or have you taken prenatal classes?

1. Yes 2. No

ETHNIC IDENTIFICATION

17. Which of the 2 following ethnic groups do you identify with?

    1. Mexican American
    2. Anglo

18. Do you identify with a country of origin other that the U.S.?

    1. Yes
    2. No

19. Which one? _____

20. Which ethnic identification do you use?

    1. _____

    2. _____ -American

    3. American of _____ descent

    4. American.

21. Which ethnic identification does (did) your mother use?

    1. _____

    2. _____ -American

    3. American of _____ descent

    4. American

22. Which ethnic identification does (did) your father use?

    1. _____

    2. _____ -American

    3. American of _____ descent

    4. American

23. What is the ethnic origin of your close friends?

    1. Almost exclusively _____
    (Mexican, Italian, Polish, etc)

    2. Mostly _____

    3. About equally _____ and other Anglos.

    4. Mostly Anglos, Blacks or other ethnic groups.

    5. Almost exclusively Anglos, Blacks, or other ethnic groups.

24. What language do you speak at home?

    1. _____only
    (Spanish, Italian, Polish, etc)

    2. Mostly _____, some English

    3. _____ and English equally (bilingual)

    4. Mostly English, some _____

    5. English only

25. Whom do you now associate with in the outside community? (do not include your friends)

    1. Almost exclusively _____
    (Mexican, Italian, Polish, etc)

    2. Mostly _____

    3. About equally _____ and Anglos.

    4. Mostly Anglos, Blacks or other ethnic groups.

    5. Almost exclusively Anglos, Blacks, or other ethnic groups

26. What is your food preference?

    1. Exclusively _____food
    (Mexican, Italian, Polish, etc).

2. Mostly _____ food, some American food.

3. About equally _____food and American food.

4. Mostly American food, some _____ food.

5. Exclusively American food.

27. What is your music preference?

1. Only _____
(Spanish, Italian, Polish etc)

2. Mostly _____

3. Equally _____ and English

4. Mostly English

5. English only

28. What celebrations are most important to you?

1. Exlusively _____ celebrations.
(Mexican, Italian, Polish, etc)

2. Mostly _____celebrations, some American.

3 About equally _____ and American celebrations.

4. Mostly American celebrations, some _____.

5. Exclusively American celebrations.

29. If you had a choice what would be your TV/radio preference?

1. Only programs in _____.
(Spanish, Italian, Polish, etc.)

2. Mostly programs in _____.

3. Equally _____ and English programs.

4. Mostly programs in English.

5. Only programs in English.

30. If you had a choice, what would your movie preference be?

1. _____ language movies only. (Spanish, Italian, Polish, etc)

2. _____ language movies mostly.

3. Equally English and _____.

4. English-language movies mostly.

5. English-language movies only.

31. If you consider yourself a _____-American, how much pride do you have in this group?

1. Extremely proud.

2. Moderately proud.

3. Little pride.

4. No pride, but does not feel negative toward group.

5. No pride and feel negative toward group.

32. Where were you raised?

1. In _____ only. (Mexico, Italy, Poland, etc)

2. Mostly in _____, some in U.S.

3. Equally in U.S. and _____.

4. Mostly in U.S., some in _____.

5. In U.S. only.

33. How would you rate yourself?

    1. Very _____.
    2. Mostly _____.
    3. Bicultural.
    4. Mostly American.
    5. Very American.

34. What contact have you have with _____?
    (Mexico, Italy, Poland, etc)

    1. Raised for one year or more in _____.
    2. Lived for less that 1 year in _____.
    3. Occasional visits to _____.
    4. Occasional communications (letters, phone calls, etc.) with people in _____.
    5. No exposure or communication with people in _____.

35. Where were you born? _____

36. Where was your father born? _____

37. Where was your mother born? _____

38. Where was your mother's mother born? _____

39. Where was your mother's father born? _____

40. Where was your father's mother born? _____

41. Where was your father's father born? _____

42. In what language do you think?

    1. Only in _____.
       (Spanish, Italian, Polish, etc)
    2. Mostly in _____.
    3. Equally in English and _____.

4. Mostly in English.

5. Only in English.

43. Can you read _____? Yes No
(Spanish, Italian, Polish, etc)

44. Can you read English? Yes No

45. Which do you read better?

1. Read only _____.
(Spanish, Italian, Polish, etc)

2. Read _____ better than English.

3. Read both _____ and English equally well.

4. Read English better than _____.

5. Read only English.

6. Read neither _____ nor English.

46. Can you write in English? Yes No

47. Can you write in_____? Yes No
(Spanish, Italian, Polish, etc)

48. Which do you write better?

1. Write only _____.
(Spanish, Italian, Polish, etc)

2. Write _____ better than English.

3. Write both _____ and English equally well.

4. Write English better than _____.

5. Write only English.

6. Write neither _____ nor English.

PRENATAL ATTACHMENT

The following sentences describe thoughts, feelings, and situations women may experience during pregnancy. We are interested in your experiences with these thoughts, feelings, and situations during the past month. Please put a circle around the letter under the word that applies to you.

	almost always	often	sometimes	almost never
49. I am reassured when I feel the baby move.	a	b	c	d
50. I wonder what the baby looks like.	a	b	c	d
51. I imagine calling the baby by name.	a	b	c	d
52. I worry that I might do something to hurt the baby.	a	b	c	d
53. I enjoy feeling the baby move.	a	b	c	d
54. I think that my baby already has a personality.	a	b	c	d
55. I allow other people to put their hands on my abdomen to feel the baby move.	a	b	c	d
56. I believe that things I do make a difference to the baby.	a	b	c	d
57. I plan the things I will do with my baby.	a	b	c	d
58. I tell others what the baby does inside me.	a	b	c	d
59. I imagine what part of the baby I'm touching.	a	b	c	d

60. I know when the baby is asleep.	a	b	c	d
61. I can make my baby move.	a	b	c	d
62. I think I have given up a lot for the baby.	a	b	c	d
63. I buy/make things for the baby.	a	b	c	d
64. I feel love for the baby.	a	b	c	d
65. I feel physical pain when the baby kicks me.	a	b	c	d
66. I'm tired of having the baby in me.	a	b	c	d
67. I try to imagine what the baby is doing in there.	a	b	c	d
68. I like to sit with my arms around my abdomen.	a	b	c	d
69. I dream about the baby.	a	b	c	d
70. I know why the baby is moving.	a	b	c	d
71. I stroke the baby through my abdomen.	a	b	c	d
72. I share secrets with the baby.	a	b	c	d
73. I know the baby hears me.	a	b	c	d
74. I get very excited when I think about the baby.	a	b	c	d
75. I think the baby moves too much.	a	b	c	d

Thank you for your help and cooperation.

Teresa Wilson, RNC

CUESTIONARIO DEL AFECTO MATERNAL

Instrucciones: Por favor llene los espacios o encierre en un circulo el numero que mejor responda a las preguntas. Ud. puede decidir no contestar cualquiera de las preguntas.

INFORMACION GENERAL DEMOGRAFICA

1. La fecha de hoy es _____.

2. Cual es su fecha probable de parto? _____.

3. Cuantos anos tiene Ud.? _____.

4. Trabaja Ud. afuera de la casa?
   1. Si 2. No

5. Si contesto, 'si', cuantas horas a la semana trabaja afuera de la casa? _____

6. Cuantos años de educacion tiene Ud.?
   (Encierre con un circulo el numero corecto.)

1 2 3 4 5 6 7 8	9 10 11 12	13 14 15 16	17 18 19 20
primaria	secundaria	colegio o universidad	escuela para graduados

7. Como calificaria sus ingresos?

   1. No tiene suficiente para satisfacer sus necesidades.
   2. Apenas tiene suficiente para satisfacer sus necesidades.
   3. Hay suficiente para vivir.
   4. Sobra dinero para comprar cosas extras.

8. Cual es su estado civil?

   1. soltera
   2. viviendo con mi amigo
   3. casada
   4. divorciada
   5. viuda

9. Cuanta gente vive en su casa? _____

10. Cual es su parentesco con la gente que vive en su casa?
(Marque todas las que se apliquen.)

1. madre
2. padre
3. hermanas
4. hermanos
5. cunada
6. cunado
7. tia
8. tio
9. abuela
10. abuelo
11. esposo
12. suegra
13. suegro
14. primas
15. primos
16. sobrina
17. sobrino
18. amiga
19. amigo
20. otro

(por favor especifique)

_____

11. Se le ofrecio un sonograma durante este embarazo?
1. Si 2. No

12. Tuvo un sonograma durante este embarazo?
1. Si 2. No

13. Cual fue su preferencia para el sexo su bebe?
1. Niño 2. Niño

14. Sabe Ud. el sexo del bebe?
1. Si 2. No

15. Si Ud. sabe el sexo del bebe, es lo preferido?
1. Si 2. No

16. Esta tomando o tomo un curso prenatal?
1. Si 2. No

IDENTIFICACION ETNICA

17. Con cual de los 2 grupos etnicos siguientes se identifica Usted.?

1. Mexico-Americano
2. Anglo

18. Ud. se identifica con un pais de origen diferente a los E.U.?

    1. Si 2. No

19. Con cual? _____

20. Que identificacion etnica usa Ud.?

    1. _____

    2. _____ -Americana

    3. Americana de descedencia _____

    4. Americana

21. Que identificacion etnica usa (uso) su madre?

    1. _____

    2. _____ -Americana

    3. Americana de descendencia _____

    4. Americana

22. Que identificacion etnica usa (uso) su padre?

    1. _____

    2. _____-Americano

    3. Americano de descendencia _____

    4. Americano

23. Cual es el origen etnico de sus amigos mas cercanos?

    1. Exclusivamente _____
    (Mexicanos, Italianos, Polacos, etc.)

    2. En su mayoria _____
    (Mexicanos, Italianos, Polacos, etc.)

    3. Casi igual _____
    (Mexicanos, Italianos, Polacos, etc.)

4. En su mayoria Anglos, Negros u otros grupos etnicos

5. Exclusivamente Anglos, Negros u otros grupos etnicos

24. Que idioma habla Ud. en la casa?

1. Solamente _____
(Español, Italiano, Polaco, etc.)

2. Mas _____, algo de Ingles
(Español, Italiano, Polaco, etc.)

3. Igual en _____ y en Ingles (bilingue)
(Español, Italiano, Polaco, etc.)

4. Mas Ingles que _____
(Español, Italiano, Polaco, etc.)

5. Solamente Ingles

25. Con quien se asocia ahora en la comunidad?
(No incluya su amigos mas cercanos)

1. Exclusivamente con _____
(Mexicanos, Italianos, Polacos, etc.)

2. En su mayoria con _____
(Mexicanos, Italianos, Polacos, etc.)

3. Casi igual_____ y otros grupos etnicos
(Mexicanos, Italianos, Polacos, etc.)

4. En su mayoria con Anglos, Negros u otros grupos etnicos

5. Exlucsivamente con Anglos, Negros u otros grupos etnicos

26. Que tipo de comida prefiere?

1. Solamente comida _____
(Mexicana, Italiana, Polaca, etc.)

2. La mayor parte comida _____y parte Americana
(Mexicana, Italiana, Polaca, etc.)

3. Lo mismo comida _____ y Americana
(Mexicana, Italiana, Polaca, etc.)

4. La mayor parte comida Americana y alguna comida _____
(Mexicana, Italiana, Polaca, etc.)

5. Solamente comida Americana

27. Que tipo de musica prefiere Ud.?

1. Solamente musica en _____
(Español, Italiano, Polaco, etc.)

2. La mayor parte en _____
(Español, Italiano, Polaco, etc.)

3. Igual en _____ y en Ingles
(Español, Italiano, Polaco, etc.)

4. La mayoria en Ingles

5. Solamente en Ingles

28. Que celebraciones son mas importantes para Ud?

1. Exclusivamente celebraciones _____
(Mexicanas, Italianas, etc.)

2. La mayoria de las celebraciones son _____ y algunas Americanas
(Mexicanas, Italianas, etc)

3. Igual, celebraciones _____ y Americanas
(Mexicanas, Italianas, etc.)

4. En su mayoria celebraciones Americanas y algunas _____
(Mexicanas, Italianas, etc.)

5. Exclusivamente celebraciones Americanas

29. Si Ud. tuviera la opcion que tipo de programas de television/radio preferiria?

1. Solamente programas en _____
(Español, Italiano, Frances, etc.)

2. La mayor parte de los programas en _____
(Español, Italiano, Frances, etc.)

3. Igual programas en _____.
(Español, Italiano, Frances, etc.)

4. La mayoria de los programas en Ingles

5. Solamente programas en Ingles

30. Si Ud. tuviera la opcion que tipo de peliculas preferiria?

1. Solamente peliculas en _____
(Español, Italiano, Frances, etc.)

2. La mayoria de las peliculas en _____
(Español, Italiano, Frances, etc)

3. Igual en Ingles que en _____
(Español, Italiano, Frances, etc.)

4. La mayoria de las peliculas en Ingles

5. Solamente peliculas en Ingles

31. Si Ud. considera un _____- Americana, Que tan orgullosa se siente de ser un miembro de este grupo?

1. Muy orgullosa

2. Moderadamente orgullosa

3. Poca orgullosa

4. Nada orgullosa, pero tampoco se siente negativa respecto a este grupo

5. Nada orgullosa, y tengo sentimientos negativos hacia este grupo

32. En donde crecio Ud.?

1. En _____ unicamente
(Mexico, Italia, Polonia, etc.)

2. La mayor parte del tiempo en _____
(Mexico, Italia, Polonia, etc)
y algun tiempo en los Estados Unidos

3. La misma cantidad de tiempo en los Estados Unidos y en _____
(Mexico, Italia, Polonia, etc.)

4. La mayor parte del tiempo en los Estados Unidos y la menor parte en _____
(Mexico, Italia, Polonia, etc.)

5. En los Estados Unidos unicamente

33. Que clasificacion se daria a Ud. mismo?

1. Muy _____

2. En gran parte _____

3. De dos culturas

4. En gran parte Americanizada

5. Muy Americanizada

34. Que contacto ha tenido Ud. con _____
(Mexico, Italia, Polonia, etc.)

1. Criada un año o mas en _____
(Mexico, Italia, Polonia, etc.)

2. Vivi menos de un año en _____
(Mexico, Italia, Polonia, etc.)

3. Visitas ocasionales a _____
(Mexico, Italia, Polonia, etc.)

4. Comunicaciones ocasionales (cartas, llamadas telefonicas, etc.) con gente de _____
(Mexico, Italia, Polonia, etc.)

5. Ningun contacto o communicacion con gente de _____
(Mexico, Italia, Polonia, etc.)

35. En donde nacio Ud.? _____

36. En donde nacio su padre? _____

37. En donde nacio su madre ?_____

38. En donde nacio la mama de su madre? _____

39. En donde nacio la mama de su padre? _____

40. En donde nacio el papa de su madre? _____

41. En donde nacio el papa de su padre? _____

42. En que idioma piensa Ud.?

    1. Solamente en _____
    (Español, Italiano, Polaco, etc.)

    2. La mayoria del tiempo en _____
    (Español, Italiano, Polaco, etc.)

    3. Igual en Ingles y en _____
    (Español, Italiano, Polaco, etc.)

    4. La mayoria del tiempo en Ingles

    5. Solamente en Ingles

43. Puede leer en _____? 1. Si 2. No
(Español, Italiano, Polaco, etc.)

44. Puede leer en Ingles? 1. Si 2. No

45. En cual idioma lee mejor?

    1. Leo solamente _____.
    (Español, Italiano, Polaco, etc.)

    2. Leo mejor en _____ que en Ingles.
    (Español, Italiano, Polaco, etc.)

    3. Leo ambos _____ e Ingles igual de bien.
    (Español, Italiano, Polaco, etc.)

    4. Leo mejor en Ingles que en _____.
    (Español, Italiano, Polaco, etc.)

    5. Leo solamente Ingles.

    6. No leo Ingles ni _____.
    (Español, Polaco, Italiano. etc.)

46. Puede o pudo escribir en Ingles? 1. Si 2. No

47. Puede o pudo escribir en _____?
(Español, Polaco, Italiano, etc.)

48. En que idioma escribe mejor?

1. Ecribo solamente en _____.
(Español, Italiano, Polaco, etc.)

2. Escribo mejor en _____ que en Ingles.
(Español, Italiano, Polaco, etc.)

3. Escribo ambos _____ e Ingles.
(Español, Italiano, Polaco, etc.)

4. Escribo mejor en Ingles que en _____.
(Español, Italiano, Polaco, etc.)

5. Escribo solamente Ingles.

6. No escribo ni en Ingles ni en _____.
(Español, Italiano, Polaco, etc.)

AFECTO PRENATAL

Las frases siguientes describen pensamientos, sentimientos y situaciones que puede tener una mujer durante el embarazo. Nos interesan sus experiencias con estos pensamientos, sentimientos y situaciones durante el mes pasado. Por favor encierre en un circulo la letra debajo de la palabra que se aplica a su respuesta.

		casi siempre	muchas veces	a veces	casi nunca
49.	Estoy tranquila cuando siento el moviemiento del bebe.	a	b	c	d
50.	Me pregunto a quien se parece el bebe.	a	b	c	d
51.	Me imagino llamando al bebe por su nombre.	a	b	c	d
52.	Me preocupo el hacer algo que le hiciera daño al bebe.	a	b	c	d

53.	Me gusto mucho sentir los movimientos del bebe.	a	b	c	d
54.	Creo que el bebe ya tiene una personalidad.	a	b	c	d
55.	Dejo que otra gente pongan su manos sobre mi estomago para sentir el bebe moviendose.	a	b	c	d
56.	Creo que las cosas que hago pueden ayudar o no al bebe.	a	b	c	d
57.	Hago planes de las que hare con mi bebe.	a	b	c	d
58.	Yo le cuento a otros lo que hace el bebe dentro de mi.	a	b	c	d
59.	Me imagino que parte del cuerpito del bebe estoy tocando.	a	b	c	d
60.	Yo se cuando duerme el bebe.	a	b	c	d
61.	Yo puedo hacer que que el bebe se mueva.	a	b	c	d
62.	Creo que he tenido que dejar muchas cosas por el bebe.	a	b	c	d
63.	Yo compro o hago cosas para el bebe.	a	b	c	d
64.	Siento amor por el bebe.	a	b	c	d
65.	Siento dolor fisico cuando el bebe me da patadas.	a	b	c	d
66.	Estoy cansada de tener el bebe dentro de mi.	a	b	c	d
67.	Trato de imaginar lo que esta haciendo el bebe.	a	b	c	d

68.	Me gusta sentarme con los brazos alrededor de mi estomago.	a	b	c	d
69.	Tengo sueños con el bebe.	a	b	c	d
70.	Yo se porque el bebe se esta moviendo.	a	b	c	d
71.	Yo acaricio al bebe a traves de la panza.	a	b	c	d
72.	Comparto secretos con el bebe.	a	b	c	d
73.	Yo se que el bebe me puede oir.	a	b	c	d
74.	Me pongo muy emocionada cuando pienso en el bebe.	a	b	c	d
75.	Creo que el bebe se mueve demasiado.	a	b	c	d

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