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FATHERHOOD.

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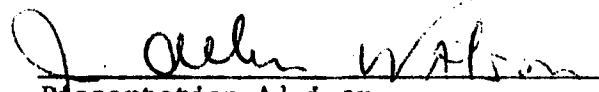
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Ora Strickland Davis

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Approved by


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APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at the University of North Carolina at Greensboro.

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DAVIS, ORA STRICKLAND. Mood and Symptoms of Expectant Fathers During the Course of Pregnancy: A Study of the Crisis Perspective of Expectant Fatherhood. (1977) Directed by: Dr. J. Allen Watson Pp. 284.

This study was designed to examine the general emotional state of expectant fathers and symptom manifestation of expectant fathers during the course of pregnancy.

The specific purposes of the study were: First, to explore the general emotional state of expectant fathers during pregnancy by studying changes in the levels of anxiety, depression, and hostility as pregnancy progressed; second, to explore the occurrence of symptoms in expectant fathers during early, middle, and late pregnancy; and third, to determine which expectant fathers are **most** likely to experience symptoms and increased levels of anxiety, depression, and hostility during pregnancy by using assumptions underlying crisis theory to guide the investigation.

Ninety-one expectant fathers from the Greensboro, North Carolina, area comprised the sample. The sample included black and white men of working-class and middle-class backgrounds. Experienced fathers and men expecting their first child were selected for participation in the study. After an initial personal contact, each subject was mailed a questionnaire in early, middle, and late pregnancy.

Respondents provided information on somatic and psychiatric symptoms manifested and their satisfaction with their personal situations (definitions of the situation) at each data point. The

Today Form of the Multiple Affect Adjective Check List (Zuckerman & Lubin, 1965) was used to obtain anxiety, depression, and hostility scores from each respondent at each data point. A combination of multifactorial analysis of variance, multifactorial repeated measures analysis of variance, multivariate analysis of variance, and Pearson product-moment correlation coefficients were used to test the seven study hypotheses. A probability level of .05 was set as the significance level for the study's findings.

The major findings of this research were as follows:

1. Inexperienced expectant fathers did not have significantly higher anxiety, depression, and hostility scores; and therefore do not experience greater stress during pregnancy than experienced expectant fathers as implied by maturational crisis theorists.

2. Experienced expectant fathers tended to define their situations as less satisfying than inexperienced expectant fathers; therefore the simultaneous functioning in the expectant father role in addition to the father role by experienced expectant fathers may affect their satisfaction with their personal situations negatively.

3. Men who had reported unplanned pregnancies defined their personal situations as significantly less satisfying than men who reported planned pregnancies; thus, men with planned pregnancies are generally more satisfied with their personal situations during pregnancy.

4. Working-class expectant fathers defined their situations as significantly less satisfying than middle-class expectant fathers; therefore, social-class factors such as availability of resources, do influence expectant fathers' perception of their personal situations during pregnancy.

5. Working-class expectant fathers with unplanned pregnancies had increases in the group of anxiety, depression, and hostility scores during the progression of pregnancy, while middle-class expectant fathers with unplanned pregnancies experienced decreases in the group of anxiety, depression and hostility scores during the progression of pregnancy. Hence, middle-class men begin a more rapid recovery process when faced with an unplanned pregnancy than working-class men.

6. Anxiety, depression, and hostility scores were significantly and negatively correlated with expectant fathers' level of satisfaction with their personal situations; therefore, as the expectant fathers' satisfaction with their personal situations decrease, levels of anxiety, depression, and hostility increase.

7. In general, there was no significant variation in anxiety, depression, and hostility as pregnancy progressed.

The major findings related to symptom manifestation by expectant fathers are these: (a) Fathering experience did not significantly affect symptom manifestation in expectant fathers. (b) Men who reported unplanned pregnancies reported significantly more symptoms during pregnancy than men who reported planned pregnancies. (c) Working-class expectant fathers reported significantly more symptoms than middle-class

expectant fathers. (d) Black expectant fathers reported significantly more symptoms than white expectant fathers. (e) In general, the number of symptoms reported by expectant fathers increased significantly as pregnancy progressed. (f) The number of symptoms reported by expectant fathers were significantly correlated with anxiety and depression scores, and to the expectant fathers' level of satisfaction with their personal situations. As levels of anxiety and depression increased, the number of symptoms reported by expectant fathers increased; as the expectant fathers' satisfaction with their personal situations decreased, the number of symptoms reported increased.

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CHAPTER I

INTRODUCTION

In past years, human reproduction has been viewed with a major emphasis on the physiological processes and the physiological alterations that occur in the mother and child during pregnancy and parturition. An emphasis on the mother and fetus during pregnancy has tended to encourage a perspective of pregnancy as an almost totally feminine experience. Although there are books written for the prospective father's "prenatal consumption," most of the efforts during pregnancy are matricentric (King, 1968, p. 20). Health professionals have encouraged this matricentric view of pregnancy by focussing mainly on its clinical aspects, and by placing little emphasis on the social and emotional effects of pregnancy on the woman and her significant others.

The interval surrounding reproductive processes is not only an important period in a woman's own maturation (Grimm, 1967, p. 3) but also in the life of the expectant father. The Colmans (1971, p. 172) have emphasized that pregnancy is a "psychological event of great power" for both sexes which may be perceived as a "critical developmental stage in its own right."

Statement of the Problem

For quite some time, the physical and emotional changes which occur in expectant mothers have been recognized and investigated.

Although the psychobiology of motherhood has long been a subject of scientific investigations, the psychobiology of fatherhood seems to have been ignored by researchers (Benedek, 1970). Until recent years, the father has not been given much consideration in scientific literature (Nash, 1965, p. 262), and he was often not considered to be an important part of the childbearing experience. Efforts to present scientific findings on the reactions of expectant fathers during this period have been minimal and indicate a need for a better understanding of the pregnancy experience on the expectant father. Therefore, this study will examine the general emotional state of the expectant father and symptoms that he may experience during the course of his mate's pregnancy. More specifically, the purposes of the study are these:

1. To explore the general emotional state of expectant fathers during early, middle, and late pregnancy by studying changes in the levels of anxiety, depression, and hostility as pregnancy progresses.
2. To explore the occurrence of symptoms in expectant fathers during early, middle, and late pregnancy.
3. To determine which expectant fathers are more likely to experience symptoms and increased levels of anxiety, depression, and hostility during pregnancy by using assumptions underlying crisis theory to guide the investigation.

Background of the Study

Not only has pregnancy been viewed as an important phase in the individual development of the parents (Colman & Colman, 1971, p. 172), but it has also been indicated as a period of stress and potential crisis for the family and its members.

The nine-month period of fetal growth and development can be considered a dramatic time for all parents. Whether the pregnancy was planned or not, or whether it is the first, second, or fifth, it creates reactions within the total family system and within the individual family members. Even when the circumstances appear to be the best, the anticipated arrival of a new family member requires the family system to make adjustments. Transition and change within the family system are characteristic of families in the midst of the pregnancy experience since certain anticipated changes in the family structure and individual roles must be accepted and accomplished. Undoubtedly, the pregnancy will have the most profound effects on the lives of the parents.

The period of pregnancy is often a rewarding, exciting, and growth-producing time for those most intimately affected by it. However, at the same time, pregnancy may be a period of stress because of the accompanying changes and adaptations that the parents are expected to make in their lives in response to it. Therefore, the experience is accompanied by the possibilities of individual and family conflict and crisis.

For the prospective father, the childbearing period is one of many challenges, promises, and potential problems. The period surrounding the pregnancy has been described as one of stress for the mother, father, and the marriage (Branson, 1971, p. 14). Because of the adjustments required and its emotional impact upon the individual, pregnancy has been called a "crisis period" for the expectant father (Arnstein,

1972, p. 42; Hogenboom, 1967, p. 458; Hott, 1976, p. 1326; Colman, 1969, p. 796). Because of the crisis perspective taken of expectant fatherhood by several authors, the assumptions underlying crisis theory will guide much of this investigation. A brief discussion of crisis theory is presented in the following section.

Crisis Theory

Crisis theory assumes that specific events, such as death or separations from significant others, births, and role transitions, can create disequilibria in the family system which may threaten its ability to meet basic needs and decrease its functional capacity. Although crisis events place the family at risk, resolutions of crises "may lead to a deterioration in functioning, status quo, or enhanced functioning" (Selig, 1976, p. 291).

A crisis need not be acute or extreme in the opinion of Thomas (Volkart, 1951). Any situation which is a threat, a challenge, a strain on the attention or which calls for new patterns of action may be correctly called a crisis. Although crises may have a serious impact on the family, their effects may also be mild. Thomas perceived the impact of crises on a continuum from mild to serious (Volkart, 1951, p. 12).

Unlike Thomas (Volkart, 1951), who suggested that crises do not necessarily create a major disruption in family life, Hill (1971, p. 9) viewed crises as events which place unusual strain on a family's security and resources to the extent that the family's problem cannot

be solved quickly by means of its normal range of problem-solving mechanisms. A stressor, or crisis-provoking event is a situation for which the individual or family has had little or no preparation prior to its impact (Hill, 1958, p. 140). The stressor presents hardships to which the individual or family must adjust.

Although several individuals may experience the same type of crisis-precipitating event, its effects will vary according to the hardships that may accompany it. The same crisis-precipitating event may present different hardships for different individuals or families. Whether a stressor is construed as a crisis depends upon the definition the individual or family makes of the event (Hill, 1958, p. 141). Therefore, a similar event may be defined as a crisis by one individual and not by another. Hill (1971, p. 9) has suggested that crises may be defined on the basis of several main factors, among which are: (a) the nature of the event; (b) the degree of hardships created by the event itself; (c) the family resources, which may fluctuate during the crisis experience; and (d) the individual's or family's previous history with crisis, particularly with those of a similar nature.

The concept of "definition of the situation" is of central importance in crisis theory because it calls attention to the fact that social, psychological, and cultural influences have a bearing on the individual's perception of an event (Caudill, 1958, p. 20; Hansen & Hill, 1964, p. 803). Racial background and social class are factors which reflect common cultural influences which may affect the definitions conveyed to stressing situations by a social group. Therefore,

individuals with different social and cultural backgrounds tend to define their situations differently, whereas individuals with similar backgrounds will define an event similarly. From his study of class differences in family reactions to crisis, Koos (1950) concluded that the social and cultural heritage of the family dictates strongly what it shall regard as crisis, the type of crises it is most likely to experience, and how it will deal with crisis events when they arise.

In the context of crisis theory, the family is viewed as an arena of "interacting personalities" (Burgess, 1926), which is organized internally into positions, norms and roles (Hill, 1958, p. 140). Since family roles are reciprocal and complementary, when one person meets stress, his family, willing or not, will share his distress. What influences one member of the family also affects the other members; therefore, most crises occur in the context of the family. Individuals seldom experience crises in isolation.

Stressors or crises are not necessarily bad for families. Crises may be growth producing for the family (Parad & Caplan, 1960, p. 5; Scherz, 1971, p. 363) because adaptive responses to stress can, and often do produce healthy solutions to unresolved problems. The family may emerge from the crisis with new and creative solutions for dealing with stresses and strains that are superior to those that were present before the impact of the crisis.

For stress to be alleviated, the present method of family functioning may have to be altered--with changes in structures (roles)

and processes in order to handle the difficulty (Glasser & Glasser, 1970, p. 6). Hill (1971, p. 13) indicated that the course of family adjustment to crisis "varies from family to family and crisis to crisis." However, there are commonalities in the adjustment of individuals and families to crisis. The basic component parts to the profile of adjustment to crisis are: Crisis → a period of disorganization → recovery → reorganization (Hill, 1971, p. 14).

Expectant Fatherhood as a Maturation Crisis

Each individual moves through a sequence of statuses and roles which correspond to different stages in the life cycle as he matures. For the inexperienced expectant father, the prospective arrival of his first child can be considered a maturational step, for it implies that he has reached a more advanced stage of development in his psychosexual maturity (Benedek, 1970, p. 173).

According to maturational crisis theorists, families and individuals are faced with stress-producing "transition points" (e.g., marriage, bearing the first child, death of a spouse, or children leaving home) in their life cycles. Expectant fatherhood may well be considered a transition point or phase in the development of the first-time expectant father. One of the basic assumptions of maturational crisis theory is that stress and crises are likely to occur at the transition points in human and family development. Conflict and stress are considered to be inherent and yet growth producing in the management of developmental tasks when change toward the next stage or task is imminent.

Although status transition points are expectable and normal in the life cycle of a family, they always have elements that are novel for the individuals experiencing them. Rapoport (1963, p. 69) posited that critical turning points, such as expectant fatherhood for the inexperienced father, often provide disequilibria for the individual concerned because of the novelty accompanying them. Scherz (1971, p. 364) has suggested that stress appears at transition points because of "conflict between the wish to retain the status quo and the wish for change." Scherz further assumes that developmental transition points are accompanied by a "mourning process" due to the loss of some of the gratification of the old status, and for behavior that may have to be given up if the new task is to be mastered. As a result of this **mourning** process, the individual involved in the transition experiences temporary mixed reactions of sorrow, often with mild depression, anger, and the wish to maintain the old status. This implies that the inexperienced expectant father may undergo a negative shift in mood during the transition period to fatherhood.

Expectant fatherhood is the anticipatory stage of the role of father, and involves taking on the new role of expectant father and moving into the role of father or parent. The taking on of a new role implies some type of expected transformation in the individual. Certain old "self-definitions" may have to be abandoned and new ones acquired (Cogswell, 1968, p. 368).

Grimm (1967, p. 18) and Cogswell (1968, p. 368) have indicated the lack of preparation that most people have for some of the roles

they are expected to fulfill as adults. Most individuals do not receive any realistic training for parenthood in our society (Rossi, 1968, p. 35.) Therefore, as he moves into his new role of father, the prospective father may find that certain expectations for his behavior are changing, which he may have some difficulty accepting. In addition, the role of the expectant father is not clearly defined in the American culture as a whole (Antle, 1975, p. 40). This lack of clear role definition and demonstration may make expectant fatherhood and the transition to parenthood even more difficult and stress-producing.

For the experienced father, expectant fatherhood involves readjusting his enacted role of father to incorporate another child (Cronenwett & Newmark, 1974, p. 211). Because he has enacted the role of father and has previously dealt with expectant fatherhood as a maturational transition point, he is not likely to be subjected to the degree of stress that might be felt by the inexperienced father.

Expectant Fatherhood as a Period of Potential Stress

Hogenboom (1967, p. 460) maintained that the birth of a second or any succeeding child may be stressful for a father if it represents discontinuity in homeostasis. Wainwright (1966, p. 40) supported Hogenboom's contention and suggested several factors which may have stress-producing effects upon the father. These factors include increasing responsibility, triggering of sexual conflicts, the reactivating of unresolved parental attitudes, the cementing of neurotic

relationships, the disrupting of dependency needs, and the re-experiencing of previous rivalries.

Increasing responsibility. As his paternity becomes more real to him, the expectant father begins to recognize the full weight of the responsibilities imposed by the pregnancy, and his future obligations to the unborn child.

The father has been designated as the chief provider and protector of his offsprings. The uniqueness of fathering, according to Benedek (1970, p. 179), lies in the protector and provider roles. Man's self-esteem is derived primarily from his ability to carry out his roles of provider and protector for his family, and much of the father's prestige within the family is determined by his economic success (Wapner, 1976, p. 6).

During the interval of pregnancy, the father is expected to provide some degree of security--both financial and emotional, to the female. The increased financial responsibility will also stay with him for years after his child is born. This is a consideration which every father is forced to face, even before his child makes its way into the world. Some men may need to make drastic shifts in their housing and budgets in order to make way for the expected baby. During the nine months of preparation for the arrival of the baby, there will be an accumulation of doctor bills, wife's wardrobe bills, bills for baby clothes and equipment, and a hospital bill if the baby is not delivered at home. If the wife has been working, there may be at least a temporary decrease in family income.

The prospective father may be concerned about how he will manage financially, and become increasingly insecure about his competence as a provider (Antle, 1975, p. 41). In his study of 128 expectant fathers, Wapner (1976, p. 6) reported that the major concern of the men in his study centered around the issue of being responsible and providing for a young family. In another study of 64 expectant fathers, the men expressed concern about whether they could carry the increased financial responsibilities brought about by the pregnancy even though they were pleased that their wives were pregnant (Liebenberg, 1969, p. 267).

In addition to his responsibility as the provider and protector of his family, the prospective father may have added household responsibilities as pregnancy progresses. As pregnancy drains the woman of some of her energy, some expectant fathers may feel anxiety, anger, and resentment that household responsibilities are neglected and increasingly placed on their shoulders (Liebenberg, 1969, p. 268). Although he may understand that his mate's enlarging figure makes certain tasks uncomfortable for her, there may be negative and mixed feelings about the amount of involvement required of him in addition to those he was previously expected to shoulder.

Changes in the marital relationship. In his discussion of how to live with a pregnant wife, Bradley (1965, p. 108) advised the expectant father of the mood changes which are characteristic of many pregnant women and exclaims. "Let's face a fact: they're nuttier than a fruitcake!"

Another challenge for the expectant father is the changes that may arise in his relationship with his spouse. He may find, to his surprise or dismay, that the pregnancy may have precipitated unexpected and unanticipated changes in his wife's behavior which influence his interaction with her (Antle, 1975, p. 41; Pines, 1972, p. 334). An emotional manifestation displayed by many pregnant women is that of introversion and passivity which progresses during the entire pregnancy (King, 1968, p. 20; Rubin, 1970, p. 504). The expectant mother tends to become much more concerned with herself. She may become dependent, uninterested and demanding of attention (Yoshioka, 1971, p. 18). Where she was previously an outgoing person, the expectant mother may now prefer to stay at home and involve herself in quieter kinds of activities. There is a change in the woman's "cognitive style" that makes her seem more unpredictable to those close to her (Rubin, 1970, p. 502).

In his discussion of the effect of pregnancy emotions on the family, Newton (1963, p. 662) emphasized the idea that the emotions that the woman feels during pregnancy are of great significance to the health and welfare of the entire family unit. The hormonal changes which accompany pregnancy produce physical discomforts and unaccustomed mood swings which impose an added burden on those around her. The emotions of pregnancy are experienced indirectly by the husband and other children in the family. Pines (1972) assumed that the emotional state of the woman during pregnancy may have major implications for the entire family unit.

However strongly her husband and family may identify with her at this stage, the mother's changing emotional life also imposes an alteration of relationships within a family unit, so that each pregnancy and birth must inevitably be accompanied by a normal family crisis and end with the absorption of a new family member (Pines, 1972, p. 334).

Even though the expectant father is not biologically pregnant himself, he is aware of the developing fetus and feels its presence emotionally because he lives in daily contact with his mate who is experiencing physiologic and psychosomatic alterations. For the father-to-be, his wife's behavior may be baffling and frustrating. As the expectant mother becomes more dependent, moody and wrapped up in her own fantasy world, the expectant father may feel "pushed out" and more distant in his interaction with his mate (Antle, 1975, p. 4). He may feel that close companionship with his mate is lost (Mace, 1963, p. 177).

Additionally, the prospective father is expected to be understanding and supportive to his mate as she progresses through her pregnancy. He may feel insecure in his role of expectant father as his spouse's mood swings and her dependency needs during pregnancy become more pronounced. He may, himself, become contaminated by his mate's anxieties and may not be able to give her support due to his own dependency needs.

Wainwright (1966, p. 40) pointed out that pregnancy may place even greater demands on the father if his marital relationship was tenuous prior to the pregnancy. The pregnancy may represent an

undesired binding force in an unsatisfactory marriage. This situation is more stress producing since separation or divorce is much less feasible.

Pregnancy and dependency needs. The increase in dependency that pregnancy encourages in some women has been discussed. Antle (1975, p. 41) and Colman (1969, p. 796) suggested that the expectant father also experiences heightened dependency needs along with his spouse. Liebenberg's (1969) study with expectant fathers supported this point and stressed the prospective father's needs for "mothering." If a large part of the marital relationship has been based on the gratification of the husband's dependency needs by a mothering wife prior to pregnancy, he may be faced with a difficult adjustment by the shift in dependency balance during pregnancy (Colman, 1969, p. 796).

Sexual adjustments and tensions. Sexual tensions may further contribute to the stress of expectant fatherhood. Although some women relax sexual inhibitions during pregnancy and enjoy marital union more, others find that they have a lowered sexual drive (Arnstein, 1972, p. 46; Branson, 1971, p. 14; Liebenberg, 1969, p. 270). The expectant father may, himself, experience a lowered sexual desire as he is confronted with the change in his mate's physical appearance. Pregnancy was associated with a decrease in sexual desire in men and women according to a study by Landis, Poffenberger and Poffenberger (1950). Wapner (1976, p. 10)

found that about 69% of expectant fathers reported a loss of sexual drive at least sometimes during pregnancy.

There is also a tendency for couples to cease coitus as the pregnancy approaches term. Many couples cease sexual intercourse during pregnancy because the doctor orders it (Landis et al, 1950, p. 771). Some husbands tend to have a marked disinclination to become involved in sexual activity with the beginning of fetal movement (Liebenberg, 1969, p. 270).

The sexual stresses and frustrations associated with expectant fatherhood have been documented in studies by Hartman and Nicolay (1966) and by Masters & Johnson (1966). In their study of 91 expectant fathers who had been arrested for various offenses, Hartman and Nicolay (1966, p. 233) found that 45% of expectant fathers were arrested for sex offenses as opposed to 17.6% of a matched control group (significant at the .01 level).

Masters' and Johnson's (1966) interviews with 79 husbands regarding their wives' pregnancies indicated that restrictions on sexual activity during pregnancy may encourage promiscuous behavior in expectant fathers. A long period of abstinence from sexual relations was a hardship that many of the men were not willing to accept. Eighteen of the 79 husbands questioned reported that they had sought sexual gratification outside of their marriages during the periods of enforced abstinence during pregnancy and after childbirth. Several of the men admitted that this had been their first venture into extramarital sexual activity.

Unexpressed Conflicting Feelings. Psychoanalysts have traditionally viewed anticipatory parenthood as a period which carries with it conflicts and drives which trail back into an individual's past (Benedek, 1959, 1970; Bibring, Thomas & Dwyer, 1961; Bucove, 1964; Jarvis, 1962; Jessner, Weigert & Foy, 1970). The developmental processes involved in anticipatory fatherhood, from the psychoanalytic perspective, characterizes expectant fatherhood as a time when:

(1) preoedipal and oedipal conflicts may surface into the man's psyche (Benedek, 1959, p. 399; Jarvis, 1962, p. 689); and (2) there is a final realization of final maturation into adulthood (Benedek, 1970, p. 212).

Pregnancy is a time when previously unconscious fantasies, wishes and conflicts come to the surface. Many of these conflicts are believed to have been improperly solved in childhood and were repressed. Because expectant parenthood is a time when psychological disequilibrium is likely to occur, the individual is able to examine these old conflicts, as an adult, to find new solutions to them (King, 1968, p. 19). Jarvis (1962, p. 689) posited that "pregnancy and the birth of a child tend to act as powerful stimuli to the father's psyche" and bring preverbal memories to consciousness. Although there are varying degrees of solutions and responses to this upsurge of previously unconscious conflicts, the well-adjusted father may experience a "syntonic strengthening of his attachment to his newly augmented family" (Jarvis, 1962, p. 689). In other expectant fathers, reactions may resemble marked psychological disturbances (Bucove, 1964; Freeman, 1951;

Jarvis, 1962; Wainwright, 1966; Zilboorg, 1931). In some extreme cases, prospective fathers may display an exacerbation of the old conflicts in the form of acting out behaviors which are characterized by fight, action-flight, and identification (Coley & James, 1976, p. 361). The higher incidence of wife battering during pregnancy exemplifies one type of fight behavior which may be exhibited by expectant fathers. Gayford (1975) and Gelles (1975) reported a higher incidence of wife-directed violence during pregnancy. Action-flight behavior, as reported by Curtis (1955, p. 942), Liebenberg (1969, p. 270), Jarvis (1962, p. 696), and Coley and James (1976, p. 360) include the immersion of the expectant father into his work to the extent that he has little time for his mate and home life; separating from or abandoning the pregnant spouse; increased incidences of "drunkenness;" and the taking of short unexplained leaves from his family during evenings or high points of stress. The prospective father who becomes ill with severe, unexplained pregnancy-related symptoms that require hospitalization is an example of extreme identification.

At a more conscious level, some prospective fathers may find that they have conflicts involving strong feelings of jealousy toward the unborn child, his wife's mother, or the physician's importance in the life of his partner (Antle, 1975, p. 41; Branson, 1971, p. 14). Some women may take what the obstetrician prescribes or proscribes as law and the expectant father's ego may be shattered by the feeling that he is the "low man in the hierarchy of influence in his own home"

(Duvall, 1971, p. 204). Such emotions may be quite guilt-provoking and threatening, and he may have difficulty discussing them with anyone.

According to Arnstein (1972, p. 42), a man may have negative as well as loving feelings about his pregnant wife. One of the difficulties that confront him is that in our culture, he is supposed to have only positive feelings about the pregnancy and his forthcoming fatherhood. Therefore, when negative feelings do occur, they are often accompanied by anxiety and guilt. The expectant father's response to these unacceptable feelings may be to try to suppress them. He is likely not to be successful at this attempt, and these negative feelings may be translated into physical symptoms (Arnstein, 1972, p. 46).

Expectant Fatherhood and Symptom Manifestation

For quite some time, it has been suggested that expectant fathers are afflicted by symptoms which bear some likeness to those experienced by women during pregnancy. This phenomenon has been dubbed the "Couvade syndrome," by virtue of its resemblance to some aspects of the primitive ritual Couvade. Sir Edward Taylor, a nineteenth-century anthropologist, derived the term "Couvade" from the French verb couver, which means to brood or hatch (Trethowan, 1972, p. 66).

The ritual Couvade, as practiced by primitive men, consists of "an apparent pretence of childbirth or lying-in by a pregnant woman's husband at or about the time she is confined" (Trethowan, 1972, p. 66). Although the details of the practice may vary, the ritual Couvade occurs in two main forms: (a) pseudo-maternal Couvade wherein the man retires

to bed at about the time of his wife's confinement and simulates childbirth; and (b) dietetic Couvade which consists of the observance of certain proscribed dietary restrictions by the father during the post-natal period (Trethowan & Conlon, 1965, p. 58).

Although the ritual Couvade is a pretense, the expectant father who suffers from Couvade syndrome does not deliberately act out the symptom of pregnancy. His acquisition of symptoms is quite unintentional, and may occur without any awareness on his part that there is a connection between his symptoms and his wife's condition (Curtis, 1955).

Psychopathology. Trethowan (1972, p. 66) regarded the Couvade syndrome as analogous to, or possibly a neurotic equivalent of, the ritual Couvade. However, not all men who suffer from the Couvade syndrome should be considered neurotic. The symptoms which are exhibited by expectant fathers are most likely due to a state of anxiety, precipitated by concern over their wives' pregnancies.

Quite a different explanation of the Couvade syndrome rests on the supposition that the human male unconsciously envies a woman's ability to create a child (Van Leeuwen, 1966, p. 320). This pregnancy envy brings with it feelings of hostility which lead to the identification by the expectant father with the mother and her suffering. Psychoanalysts have propagated the idea that the event of their wives' pregnancies may temporarily reactivate some remnants of expectant

fathers' early identification with the mother (Arnstein, 1972, p. 44). The array of somatic symptoms manifested by some expectant fathers may arise due to the pregnancy's appeal to male feminine traits which leads to further identification with the pregnant female (Jessner, Weigert & Foy, 1970, p. 236).

Feelings of ambivalence toward the pregnant spouse and the unborn child felt by the expectant father is another possible explanation for the occurrence of Couvade syndrome (Trethowan, 1972, p. 87). The symptoms which occur can be regarded as the result of the father's unconscious use of reaction-formation against concealed or repressed hostile or sadistic wishes.

Incidence. Though the exact incidence of the Couvade syndrome is difficult to determine, it is likely to be much more common than many might suppose. Estimates of its incidence has varied from as low as one in nine (11%) (Trethowan, 1971), to as high as one in two (50%) (Dickens & Trethowan, 1971). Although the Couvade syndrome is considered a malady which affects expectant fathers, very occasionally, other relatives may be affected. A father may develop symptoms of the Couvade syndrome during his daughter's pregnancy, or a pregnant women's children may develop symptoms (Trethowan, 1972).

Clinical symptoms. Although there is a variety of Couvade symptoms, those most frequently exhibited are alimentary, and mimic

the symptoms of pregnancy. Trethowan (1972, p. 74) observed that almost any symptom which the father develops during his spouse's pregnancy, but which disappears with the birth of the infant may well be a symptom of the Couvade syndrome.

Nausea and vomiting are among the more common symptoms and affect as many as one in five expectant fathers. Nausea and vomiting typically tends to start at around the third month of the wife's pregnancy. Contrary to the expected, the wives of husbands who suffer from nausea and vomiting may not experience these symptoms at all (Trethowan, 1972, p. 74). Other alimentary symptoms that are common in Couvade syndrome are alterations of the appetite, indigestion, heartburn, abdominal pain, and in rare cases, abdominal swelling.

Toothache is believed to be a very important symptom of the Couvade syndrome. About one-fourth of all husbands are affected by toothache during their wives' pregnancies (Trethowan, 1972, p. 75). Toothache is one of the oddest manifestations of the Couvade syndrome. The designation of toothache as a Couvade symptom goes far back into history. Expectant fathers have been known to continue to suffer from toothache even after extraction of the supposedly offending tooth. Although several theories have been advanced to explain this phenomenon, the most commonly accepted hypothesis is that the development of toothache by expectant fathers is a magical act which comes about to protect the teeth of their wives from damage during pregnancy. This notion rests upon the old wives' tale that for every child the mother loses a tooth (Trethowan, 1968, p. 114).

At or about the time of their wives' labor, some expectant fathers suffer from sympathy or spurious labor pains. This symptom is believed to occur quite commonly, and may present itself as an isolated event or it may be associated with other Couvade symptoms (Trethowan, 1972, p. 76). Sometimes the man's earlier symptoms may have subsided, but may return again when labor begins.

Apart from the symptoms which have been discussed previously, other recorded complaints by expectant fathers include leg cramps, skin rashes, nosebleeds, marked perspiration, boils, and aches and pains in different parts of the body. Although there is a long list of possible complaints that may occur with the Couvade syndrome, appetite changes, toothache, and nausea and vomiting are three key symptoms (Trethowan, 1968, p. 111; 1972, p. 78). Highly significant differences in the incidence of these symptoms were found in a group of expectant fathers as compared with a control group (Trethowan & Conlon, 1965, p. 62).

Although psychiatric symptoms have not traditionally been considered part of the Couvade syndrome, they have been observed to occur quite frequently in expectant fathers. Depression, tension, insomnia, irritability, nervousness, weakness, headaches, and concentration difficulty are commonly experienced. Trethowan and Conlon (1965, p. 63) found that 40% of the expectant fathers in their study admitted to being anxious, and there was a significant relationship between somatic symptoms and admitted anxiety.

Empirical investigations. Probably the most renowned and controlled study of the Couvade syndrome was carried out in England by Trethowan and Conlon (1965) with 327 men whose wives had just delivered an infant, and a control group of 221 men whose wives were within childbearing age, but who had not been pregnant during the previous nine months. The major findings, as reported by these investigators are as follows:

1. A significantly larger number of the expectant father group reported one or more symptoms.
2. The occurrence of appetite changes, toothache, and nausea or sickness was significantly higher for the expectant fathers than for the controls. Except for backache, all other symptoms were also more common in expectant fathers.
3. The expectant fathers exhibited more symptoms at all age levels except in the case of those aged 45 and over.
4. It was observed that the peak incident of symptoms in expectant fathers occurred around the beginning of the third month of pregnancy, steadily diminishing thereafter, with a secondary rise just prior to the baby's birth.
5. There was an association between somatic symptoms and certain minor psychiatric complaints. A similar association was found between somatic symptoms and admitted anxiety.
6. Those expectant fathers having their first child did not appear to be more liable to symptoms than those who already had one or more.
7. At least one in nine of the expectant fathers in the survey suffered from Couvade symptoms.

In a reanalysis of the data from the study discussed above (Conlon & Trethowan, 1965), Trethowan (1968) suggested a modified

conclusion. He subdivided the 327 expectant fathers into four groups according to how closely their complaints fulfilled criteria which reasonably could lead to a supposition that they were due to the Couvade reaction. After dividing the subjects up, the incidence of Couvade symptoms appeared to be one in seven. This incidence is higher than the one in nine which was originally suggested.

Munroe, Munroe & Whiting (1971) have carried out a study of the ritual Couvade across cultures. They studied 74 societies in order to test Bachofen & Taylor's supposition that Couvade is the father's attempt to legalize his paternity in communities practicing "mother right," and that it is an indicator of a society's change from a maternal to a paternal orientation. After comparing sleeping arrangements, residence patterns, and Couvade ratings, the investigators concluded that the ritual Couvade is typically found in societies with mother-infant sleeping and/or a form of matri-residence. In a closer observation of Couvade practices by the Carib males, it was found that most Carib husbands experience physical symptoms during their wives' pregnancies. Carib fathers who practiced Couvade intensively were more likely not to have had an adult male present in the home during the early years of life. The "intensive" Couvade males gave more female-like responses than a group of "nonintensive" Couvade males on several sex-differentiating measures.

In a psychiatric study of 55 military expectant fathers, Curtis (1955) found some evidence of Couvade symptoms. He studied three

groups of men who had been grouped with respect to their varying levels of success in the handling of their problems as expectant fathers. After comparing the type of complaints offered by the men in each group, Curtis observed that normal expectant fathers and a group of expectant fathers with mild problems, developed symptoms which were similar to the complaints of pregnant women. He also noticed that these men suffered their greatest difficulty during the first and last few months of their wives' pregnancies.

Liebenberg (1969) reported that 65% of the expectant fathers in her study developed pregnancy symptoms. Although exact figures are not reported for the occurrence of specific symptoms, she indicated that several of the expectant fathers suffered from fatigue, gastrointestinal symptoms, backaches, headaches, weight gain, food craving, insomnia, restlessness, anxiety, and peptic ulcers.

Wainwright (1966) presented findings from case studies of 10 new fathers with psychiatric disorders which he associated with their fatherhood. He found that symptoms were common in this group of men and included paresthesia, marked perspiration, abdominal pain and cramps, insomnia, concentration difficulty, anxiety, mild depression, anorexia, and early morning awakening. However, all 10 men attributed their illness to other external stresses rather than the birth of a child.

Propositional Statements

Based on the literature related to expectant fatherhood and the assumptions underlying crisis theory, there are a series of major

propositions that summarize the expectant father's emotional and symptomatic involvement during pregnancy.

1. Expectant fatherhood is stressful for men.
2. If pregnancy is unexpected, then the expectant father will experience more stress.
3. Expectant fathers who have previously enacted the role of father will experience less stress than those who have not.
4. The way that an expectant father defines his situation during pregnancy will affect his emotional reaction.
5. Expectant fathers with different socio-cultural backgrounds will define their situations differently, which leads to different reactions during pregnancy between socio-cultural groups.
6. Many expectant fathers experience pregnancy-related symptoms, which vary in type and incidence during the course of pregnancy.
7. There is a relationship between socio-cultural factors and symptom manifestation in expectant fathers.
8. There is a relationship between the emotional reactions of expectant fathers and symptom manifestation.

Statement of Hypotheses

In order to examine the preceding propositions, the following research hypotheses have been structured to guide the study.

1. Inexperienced expectant fathers will complain of more symptoms; will have higher anxiety, depression, and hostility scores on the MAACL (Zuckerman & Lubin, 1965); and will define their situations as less satisfying than experienced expectant fathers.

2. Expectant fathers who report that pregnancy was not planned will complain of more symptoms; will have higher anxiety, depression, and hostility scores on the MAACL; and will define their situations as less satisfying than expectant fathers who report that pregnancy was planned.
3. There will be a difference in the definitions of situations; complaints of symptoms; and the anxiety, depression, and hostility scores on the MAACL between working-class and middle-class expectant fathers.
4. There will be a difference in the definitions of situations; complaints of symptoms; and the anxiety depression, and hostility scores on the MAACL between black and white expectant fathers.
5. The stage of his wife's pregnancy will be related to the expectant father's complaints of symptoms; his definition of his situation, and his anxiety, depression, and hostility scores on the MAACL.
6. Symptomatic complaints of expectant fathers will be related to their definitions of their situations; and their anxiety, depression, and hostility scores on the MAACL.
7. The lower the expectant father's satisfaction with his personal situation, the higher will be his anxiety, depression, and hostility scores on the MAACL.

Definitions of Terms

To assure a common understanding of the basic terms used throughout this study, the following operational definitions are offered.

Expectant (or prospective) father: A man whose wife has been diagnosed as pregnant by a practicing physician.

Inexperienced expectant father: A man who is expecting his first child.

Experienced expectant father: A man who has fathered at least one child prior to his wife's present pregnancy.

Middle class: Those men with occupations rated above 50 on the Reiss Socioeconomic Index (Reiss, 1961). This includes professionals, managers, and skilled workers.

Working Class: Those men with occupations rated between 20 and 50 on the Reiss Socioeconomic Index (Reiss, 1961). This includes clerical-service and semi-skilled workers.

Anxiety: Those designated aspects of anxiety measured by the Multiple Affect Adjective Check List (MAACL).

Depression: Those designated aspects of depression as measured by the Multiple Affect Adjective Check List (MAACL).

Hostility: Those designated aspects of hostility as measured by the Multiple Affect Adjective Check List (MAACL).

Symptoms: Subjective complaints of physical or psychiatric disturbances reported by the expectant fathers.

Definition of the situation: The expectant father's level of satisfaction with his personal circumstances as rated by him in the following areas: His work, house, financial situation, his sexual adjustment during pregnancy, his involvement in household tasks, his relationship with his parents, wife's health and physical condition, and his relationship with his wife.

Early Pregnancy: A gestation of 10 through 16 weeks as calculated by the expected date of delivery.

Middle Pregnancy: A gestation of 22 through 26 weeks as calculated by the expected date of delivery.

Late Pregnancy: A gestation of 33 through 38 weeks as calculated by the expected date of delivery.

Significance of the Study

Although several investigators have examined expectant fathers' involvement in pregnancy, no attempt has been made to measure their level of emotional involvement with standardized instruments. Interview and case study data have been used almost exclusively to describe

the reactions of prospective fathers to their wives' pregnancies. Little effort has been made to compare the responses of different socio-cultural groups, or the responses of inexperienced expectant fathers to those who have had a child before.

Although a few investigators have studied pregnancy-related symptoms, little effort has been made to determine the type of symptoms experienced during different stages of pregnancy in American respondents, and their relationship to the man's emotional state.

Finally, even though several writers characterize expectant fatherhood as a crisis period, no attempt has been made to determine what types of expectant fathers are most likely to experience high levels of stress.

Assumptions

Based on the literature that denotes emotional involvement in pregnancy by the prospective father, the basic assumption of this study is that mood states are variable and reflect the emotional involvement of expectant fathers. Another assumption is that these mood states are measurable and can be detected via the use of a standardized instrument. Finally, it is assumed that there is no direct or indirect effect of the different wives' physicians on the reactions of prospective fathers to pregnancy.

CHAPTER II

THE ROLE OF THE FATHER IN THE FAMILY: A REVIEW OF LITERATURE

The major purpose of this chapter is to examine the role of the father in the family during the childbearing and childrearing periods. This review consists of two major divisions. The first part of the review considers the father's role in the family in general, and deals with theoretical speculations about the evolution of the paternal role, Western conceptions and dimensions of the paternal role, and the father's influence on child development. The second part of this review focuses on the role of the father during the childbearing period, and includes literature on his role during pregnancy and childbirth, and his adjustment to fatherhood.

The material in this chapter includes empirical data and theoretical speculation. Relevant literature has been selected from many different fields including child development and family relations, anthropology, sociology, social work, psychiatry, nursing, education, and psychology.

The Paternal Role in the Family

The Roots of Paternalism

In every known society, there exists some form of the family. In every society, there are culturally prescribed arrangements by which

men assist women in the care of their young. This distinctively human aspect of family life lies in the paternal behavior of the human male, who helps provide for women and their children (Mead, 1949, p. 188).

What is the basis of paternal behavior? Why have men joined with mother and child? Two basic explanations have been offered. First, sometime during early history, a "social invention" was made under which males started caring for females and their young (Mead, 1949, p. 189). Second, there is believed to be a biological and an instinctual urge for males to propagate and provide for females and their young (Benedek, 1959; 1970; Freud, 1949, 1950; Biller & Meredith, 1975; Lynn, 1974; Rypma, 1976).

Margaret Mead (1949, p. 189) maintained that man's nurturing behavior is learned and not instinctive. The young male, in every known human society, learns that after he grows up he will be expected to provide for some female and her young in order to be a full member of society. **As heirs of tradition, men provide for women and children.** The usual societal expectation is that each man should provide for the woman who is his sexual partner and whatever children she may have. Mead (1949, p. 192) posited that men must learn to want to provide for others, and that this learned behavior is fragile and can disappear under social conditions that do not teach it effectively. Therefore, prescribed paternal behavior became a "social invention" which served to establish and maintain the family unit according to cultural norms.

Biller and Meredith (1975) offered several biologically based explanations for the exhibition of paternal behavior. They contended that paternal behavior is not completely learned, and that the human male possesses a basic nurturant disposition, the "father instinct" which the child satisfies. Like the mother, the human father has evolved into a hairless creature with high tactile sensitivity. In addition to heightening his enjoyment of sex, the male's sensitive skin also makes the warm physical contact with a child pleasurable. Part of the "father instinct" is the attraction of the male to the round-faced, big-eyed "cuteness" of his warm and cuddly infant (Biller & Meredith, 1975, p. 13).

The father's paternal behavior and feelings toward his infant are affected by three other factors: (a) The helplessness of the human infant and the long interval of childhood ~~have~~ required protection for the mother and child by the father. (b) The male's attraction and love for his mate emanate to their offspring. "Part of the father's attachment to the child results from the child's attachment to the mother" (Biller & Meredith, 1975, p. 13). (c) The father's natural curiosity has an impact on his propensity to become attached to his infant. He wants to see what his warm, tiny infant is all about. Frequent contact with the infant then encourages love, attachment, and nurturing behaviors in the man. (d) Finally, a man perceives his child as a reflection of himself. When the father fondles and nurtures his child, it becomes attached to him, will mimic him, and respond to him. This imitation

is the sincerest form of flattery and reinforces the "fathering instinct."

Lynn (1974, pp. 22-25) also made a case for the biological derivatives of paternalism in his discussion of the evolution of the human family unit. Several salient points were made which may explain the roots of paternalism. Like Biller and Meredith (1975), Lynn professed that the human male's establishment in the family may be founded upon the immature nature of the infant, which hampered the mother by the intimate care demanded by her baby's slow development. Therefore, male assistance was necessary for the survival of the species. However, Lynn offered an alternative theory. It is possible that the male joined with the female to form a family because it was sexually gratifying for him. Due to the consequent contact with the young, man grew attached to them and became nurturant and gentle. This theory postulates that the sexual drive was the basic biological reason that man joined with woman to form a family. Another point of view offered by Lynn (1974, p. 24) postulates that the establishment of social conventions through language greatly supplemented the weak binding force of sexuality. Therefore, kinship concepts became more defined through language, including the role of the father, which could then be more readily taught to each new generation.

From the psychoanalytic point of view, the biologic roots of fatherhood lie in the instinctive drive for survival. Freud (1949, 1950) designates two types of basic instincts--the death instincts (manifested as destructive or aggressive impulses) and the libidinal, sexual or life

instincts (comprised under the name of Eros). The purpose of the life instincts is to prolong life and bring it to higher development. Reproduction is evidence for victory of Eros (Freud, 1950, p. 135).

A man's desire to survive becomes especially evident when the offspring is of his own sex (Benedek, 1959, 1970). It seems that parenthood is intended for the continuation of the self. Both fathers and mothers seem to get more direct gratification from a child of their own sex, and this is more obvious in the attitudes of men (Benedek, 1970, p. 171). The man's identification with his son tends to be immediate. The father can project into his son the aspiration of his ego ideal, and may unconsciously anticipate his future self-realization in the son.

Not only is fatherhood a biologic fulfillment, but psychoanalysts also view it as a means for further evolution of the man's personality (Benedek, 1970, p. 172). A recognized attribute of the male child is competition with his father. This competition results from the biologic tendency to develop mature masculinity. Through reproduction, the male asserts his biologic function and achieves the goal of competition with his own father by becoming a father. He himself becomes a link in the chain of generations between his father and son, and he has reached a further stage of development in his psychosexual maturity. As a mature man, the male needs to be needed (Erikson, 1963, p. 266), and the protection and care of the female and her young is a fulfillment of this need.

In conclusion, it has been suggested that paternal behavior has evolved from biological influencers or instincts, and from social

invention. Although both factors have been recognized as participants in the evolution of paternal behavior, neither alone can adequately explain the basis upon which males became involved in protecting and nurturing females and their offspring. In analyzing the roots of paternalism both biologic and social influences must be considered.

Conceptions and Dimensions of Fatherhood

Anthropologists and other scientists who have studied societies around the world have seen many variations in the father role. In some societies the father is a strong figure, and in others he has no special responsibility to the specific children he sires (Gilder, 1975, p. 14). Paternity is not even acknowledged in some cultures, such as in the Trobriander society of Melanesia (Malinowski, 1966).

Not only are there cultural variations in the conception of fatherhood, but variations within cultures are also quite common. In the United States, many forces affect the conceptions and enactments of the father role. Some of the forces which encourage diversity in the father role include the disparate cultural heritage of the population, regionalization of the country, and unevenly distributed resources which is responsible for distinct socio-economic classes that profoundly mold the life styles of their members. Instead of one American family mold, these geographical, historical, and social forces combine in different ways and instigate a variety of family patterns. Therefore, the father's role will vary in the various family forms (Lynn, 1974, p. 75).

Regardless of the enormous variation in his role, the father has traditionally been responsible for certain kinds of tasks, even across cultures. Although some cultures define the role of the father differently, a close examination reveals striking similarities in the broad definition of the role (Lynn, 1974, p. 27). The father almost always has been responsible for providing shelter, protection, and food for his children and mate. In the United States, these aspects of the father role are instilled in the norms and values, and are reflected in legislation which deals with family life.

In the American culture, the father remains the legal and nominal head of the family unit. He is the major representative of the family in the community, and his occupation determines the economic and social status of the family as a whole. Generally, his spiritual and ethical values set the climate in which his children will be reared in the home (Leonard, 1966, p. 47).

Fathering. There are countless variations in the manifestations of fathering. "Fathering" can best be considered as the "sun of nurturing, protection, affection, guidance, and approval given by the father to his child" (Leonard, 1966, p. 326). Fathering involves the availability of the man to his child to give love and to receive love: "To be admired, emulated, and obeyed (to be used as a model for identification and superego formation" (Leonard, 1966, p. 326). Genuine fatherliness is expressed in the man's readiness to respond to the child in his

tenderness, patience, and his "inventiveness in playing and holding the child's interest" (Benedek, 1970, p. 176). It is expressed in the way a father diapers his infant, holds his child, and smiles to and talks to his child. Fathering is manifested in all the father's activities which promote the child's development.

Traditional and developmental conceptions of fatherhood. There are two divergent conceptions of fatherhood between which most fathers carry out their roles--the traditional conception and the developmental conception.

The traditional conception of fatherhood holds the father as an image of authority, and as the family's main representative. As an authority figure and patriarch, he is conceived as punitive, strong, active, and providing for his wife and children a livelihood and the means of emotional security. He is excused from considerable active participation in child care and day-to-day family activities. The authority of the traditional father is unquestionable and his own goals and aims are the goals and aims of his children. The children, in turn, are expected to accept paternal authority and owe their father honor and obedience (Benedek, 1970; Elder, 1949). Certain prerogatives in making decisions about family members and their activities are in the realm of the traditional father's role, and his wishes are given precedence over those of his wife in a wide range of family matters. Usually, the appearance of the father as a wise and strong family man is not violated (Benson, 1968). As a tough disciplinarian, the traditional

father builds strong superegos in his children based on their fear of him (Benedek, 1970, p. 176).

With a shift of the authoritarian family to a more individualistic family type, the values of the authoritarian family are being modified and replaced by those associated with developmental families. In the developmental family, there is a greater recognition of individual needs, desires, and potentialities of each family member, whether he be father, mother, or child. This change in the family is based on interpersonal relationships of mutual understanding, affection, and companionship (Elder, 1949, p. 98).

Developmental conceptions of fatherhood emphasize fathering activities which teach the child cooperation and self-reliance, help the child develop socially, encourage emotional well-being, and provide for the child's mental growth through understanding guidance. The developmental father participates actively in child care and shares the role of his wife in the care of his children (Elder, 1949; Benedek, 1970).

Benson (1968, p. 92) postulated that the shift from traditional conceptions of fatherhood to the more individualistic developmental conception has been in response to social changes associated with industrialism. The scope of the father's authority has been eroded because industrialism has placed strong pressures upon the patriarch to moderate the demands he makes on his wife and children. Although no single social condition or event can rightfully be held responsible for the change in the father's status, industrialism does have several

implications for the family which seem to affect paternal status. A major force has been the more exaggerated separation of home and work which tends to weaken the father's image. The length and burdensomeness of industrial work fatigued the working-class father and drained him of physical strength, along with stripping him of the prestige necessary to the preservation of his authority (Benson, 1968, p. 94). Benson (1968, p. 92) also attributes the decline in paternal authority in the family to the emergence of an egalitarian marriage pattern and the emphasis on a democratic family ideal.

Dimensions of paternal behavior. The dimensions of paternal behavior are set in terms of the requirements of society, and can be viewed as collective responses of fathers to social necessity and social standards (Benson, 1968, p. 38; Reiber, 1976, p. 366). The general expectations of fathers are established by the community, which generates innumerable avenues to help do what is expected.

Two general dimensions of fatherhood have been isolated by Benson (1968), each of which consists of clustering of important social paternal functions for any society. They are the survival dimension and the expressive dimension.

The survival dimension has been most closely associated with the father's role in past years. It pertains to those functions which the

father carries out to sustain the family physically, and to maintain familiar societal values. This dimension includes the functions of reproduction, material support, maintaining commitment to order, transmission of survival skills and personal styles, and serving as a mediator between the family and society.

Reproduction is the most obvious paternal function. However, it is well to keep in mind that reproduction is not a necessary aspect of fatherhood. Biological father is often equated with the social and nurturant father, when in actuality, the two may be personified by one or two different men. Reproduction is necessary for the survival of the species, but fatherhood encompasses much more than impregnation. The human community requires nurturant fathers, not just a man's spermatozoa. Material support and physical nurturance are required of men in all societies. In fact, the biological father is not as important as the social father after conception, because the infant needs the latter to play a vital role in his life for many years to follow.

The father aids in maintaining order in society by making clear to his children the general rules which govern social relationships, and by promoting a desire for family members to live by these rules. An important aspect of the paternal role is the socialization of children. Acting as censor, promoter, and teacher, the social and nurturant father is an embodiment of social control (Benson, 1968).

Survival skills and personal styles are transmitted by the father because he is a central figure in the conveyance of basic eating,

sleeping, elimination, work and health habits to his children. All of these habits fall within the realm of the survival dimension and keep the individual and his primary world intact.

Through his socialization activities, the unique qualities (personal styles) of the father are passed on from one generation to the next. Those include the total range of interests skills, and personal styles within each culture or subculture.

As the mediator between the family and society, the father is the liaison between the interests of the larger social environment and those of the family. He is especially vital in helping children to adjust to the demands of societal institutions as they reach out from the nest into the social world (Benson, 1968, p. 61).

The maintenance of solidarity and the management of tension in the family is not the exclusive province of the mother. Fathers do a number of things which encourage a feeling of security and emotional well-being in family members. Providing bodily comfort, playing with the children, and showing love and respect for children are some of the father's expressive activities. Through the caring, teaching, and guidance that he gives to his children, the father promotes a sense of immediate significance in their lives (Benson, 1968, p. 63).

Findings from a study by Landis (1962) supported the proposition that the father's role in the family includes an expressive dimension. Three thousand college students were asked to rate their feelings of

closeness or distance to each of their parents up to the age of fifteen. If the students reported that they were close to their fathers, they were also more likely to report that their parents' marriages were happy. This was not the case for mother-close relationships. Landis concluded that a father-close relationship is a more accurate index of family integration than is a mother-close relationship.

Although the wife-mother role in the family has been characterized as specializing in the "expressive function" (Parsons & Bales, 1955), it is naive to ignore the impact that the husband-father can have on his wife's behavior, which in turn has an effect on their child. Since the husband is one of the most important persons in the mother's life, he has the power to affect her deeply. Any untoward effects that he may have upon the mother is possibly passed on to their child (Bartemeier, 1953, p. 278). Thus the father not only has a direct expressive function for his child, but also an indirect one based on the quality of his relationship with the mother.

In summary, the conceptions and dimensions of fatherhood tend to vary widely over time and space, even within cultures. In Western society, conceptions of fatherhood fall between two extremes--the traditional and developmental conceptions. The traditional conception of fatherhood holds the father as a patriarch and family provider who is aloof, active, strong, and punitive. The developmental conception of fatherhood holds the father as a warm and nurturant being who encourages individual growth and development of each family member. There has been more of a trend towards the developmental conception

of fatherhood in recent years. Since general expectations of fathers are established by the community, then the dimensions of paternal behavior are set by the needs, standards, and requirements of society. In general, the father role typically encompasses providing economic and psychosocial support for the family.

As a final summary of the conceptions and dimensions of fatherhood, it seems appropriate to cite Maxwell's (1976) impressions of how middle-class American fathers perceive their roles in the family:

A father in America today is likely to view himself as the center pole in the family tent, the base on which the family rests, the one who--more than any other--is obligated to see that its needs are supplied and its physical security maintained. The essence of the role drifts out beyond economics to touch the behavior of children, the resolution of emotional conflict, guidance into the unpredictableness of decision-making, or spiritual and moral development, but the uniqueness of the role remains the same. If one is responsible in terms of what the family has, what the family does, or what the family is, that one is the father. The qualities of the role are strength, competence, wisdom, dependability, and stability (Maxwell, 1976, pp. 387-388).

Paternal Contributions to Child Development

Traditionally, in Western society, there has been a clear set of roles prescribed for the mother and father in the family. The traditional prescriptions designated child care as the responsibility of the mother. The father has not been viewed as a vital participant in child care, except for meeting the child's needs for food and shelter. Benson (1968, p. 4) asserted that the father is widely acknowledged as the "weak link" in the family as far as interaction

is concerned. Nash (1965, p. 262) has characterized the perceptions of sociologists and psychologists in the area of child care as "matri-centric," and pointed out that few give the father a role of any crucial importance in childrearing. Although his instrumental function (Parsons & Bales, 1955) in the family has been thoroughly recognized, and possibly overemphasized, the father has been viewed as a mere appendage in the child's development. The stress placed on the mother's role in child development has de-emphasized the father's active input in the development of the child. Paternal contributions to child development have typically be regarded as secondary to those of the mother.

In an attempt to place the paternal role in child development in a more accurate perspective, this section of the review will focus on the father's contributions to child development in three area: (a) childrearing and socialization; (b) cognitive development; and (c) personality and sex-role development. A full review of this material is beyond the scope of this discussion, and the research studies cited here are merely an arbitrary sample of this literature.

Childrearing and socialization. The father's participation in childrearing, socialization, and child care was not a specific focus of researchers until the forties. It seems that World War II and the frequent father absences which accompanied it encouraged a greater emphasis on the father's influence on childrearing by a few researchers (Gardner, 1943; Elder, 1949; Tasch, 1952).

L. Pearl Gardner (1943) was among the first researchers to specifically study father-child relationships. She interviewed 300 middle-class fathers to investigate their attitudes in relation to their paternal duties and to ascertain the nature of their various activities in the family. These fathers' responses were separated into three categories (early childhood, late childhood, and the adolescent period) according to the ages of the children to which they gave guidance.

In early childhood 60% of the fathers reported that they gave some routine care to their young children. The two areas cited most often were feeding and amusing the child. Fathers of preschool-age children viewed themselves as contributing largely to the intellectual acuity of their children.

Guidance of children in the 6 to 12 year age group was along social, economical, and intellectual lines. Children at this age level were encouraged to share family responsibilities by the assignment of household duties in 80% of cases. Seventy-two percent of the fathers characterized themselves as pals to children in this age group, and 78% reported that they played outdoor games involving physical activity with their children. Sixty-three percent of the men indicated that they gave help to their children with school work.

In the area of adolescent guidance, few fathers reported active involvement. Sex training or instruction was only given by 37% of fathers. Ninety-seven percent of the fathers encouraged their adolescents to continue their education.

Elder (1949) studied the difference in the father-child activities of fathers with traditional conceptions of family members' roles and those with developmental conceptions. Thirty-two World War II fathers were interviewed and classified as traditional (19 fathers) or developmental (13 fathers) based on their conglomerate conceptions of father, mother, and child roles. Several differences emerged between the two groups of fathers in the variety and content of father-child activities and relations. Developmental fathers participated more in father-child activities (such as picnicking, helping children with school work, assisting with child care activities, and allowing children to help plan family expenditures) than traditional fathers. Developmental fathers placed a greater emphasis on frankness between father and child, and were more likely to expect their children to complete high school and attend college. Traditionally oriented fathers disciplined their children for a larger number of reasons, but used fewer kinds of discipline. Traditional fathers were also less likely to look forward to their children's maturation. Fathers in this study received their greatest satisfaction from companionship with their children and from providing for their families.

One of the most important studies on the role of the father in childrearing and socialization was done by Tasch (1952). This study is valuable because it is quite comprehensive and it is among the few in which the father has been investigated directly. Eighty-five fathers with a total of 160 children were selected to be interviewed. Tasch's

sample represented a diverse range in regard to education, occupation, and nationality of origin. The men in this study saw themselves as active participants in child care, and viewed childrearing as a vital part of their role as fathers. Fathers reported a number of activities in which they participated with their children. Provision of routine daily care and safety; activities related to the development of the child's intellectual abilities and interests; activities contributing to the development of motor abilities and skills; recreational activities; and activities related to the development of social standards, conduct, and control were among those most frequently mentioned. The data indicated that fathers with children between 5 and 12 years of age reported the largest number of different activities. The father's role in child development, as inferred from activities reported by men in this study is best described by the following picture: "Father is a companion, child rearer, guide and teacher, disciplinarian, example of masculinity, and economic provider" (Tasch, 1952, p. 346).

The disciplinary aspect of the father role has been a focus of several investigators. Eron, Banta, Walder, and Laulicht (1961) found that the father's punitive behaviors are related to child aggression. Sixty mothers and 50 fathers were independently interviewed to gain information on a number of presumed psychosocial antecedents to aggressive behavior. Both the mother's and father's punishment for aggressive behavior was related to the frequency of aggression at home, but only the father's punishment was related to school aggression. The researchers found that fathers and mothers did

not agree much in their ratings of their children's behavior. However, when an independently obtained outside criterion was used, the father's rating related more adequately than did the mother's. This finding has important implications since childrearing studies have traditionally utilized data obtained only from one parent--the mother.

Hoffman (1961) found that 445 children in the third through the sixth grades associated their fathers more than their mothers with discipline. Fathers were more likely to discipline boys than girls, and were associated with less positive affect and instruction than mothers.

Fathers who are warm and nurturant are more likely to be effective disciplinarians. Based on standardized interviews with 379 mothers of 5-year-old children, Sears, Maccoby, and Levin (1957) reported that spankings more often "did good" when the father giving the punishment was warmer toward the children than the mother. If the mother was the warmer parent, spankings tended to be more effective if she administered the punishment. In households where both parents were warm, spankings seemed to be more effective when the father was the disciplinarian. There was also a tendency for men to participate more in the discipline and rearing of first children than later ones, regardless of the children's sex.

From interviews with 86 nursery school children, Schvaneveldt, Fryer and Ostler (1970) revealed that females viewed the father as the more nurturant parent while males perceived the mother as more nurturant. Children perceived the "bad" father and mother in relation to discipline.

Preschool girls more often perceived the "good" father as the one who displayed affection to others and who performed appropriate social and citizenship tasks. In general, the children viewed the "good" father as the one who participated with them and the "bad" father as one who did not.

On the whole, fathers may be more restrictive and less nurturant, and may differentiate between boys and girls in asserting their power (Lynn, 1974, p. 219). Emmerich (1962) reported findings from a study which investigated how the parent's sex, child's sex, and child's age are associated with the parent's role. Analysis of questionnaire data obtained from parents of children 6 to 10 years old suggested that fathers are not as nurturant as mothers and are more restrictive with their children. Both fathers and mothers exerted more power toward children of their own sex than toward their opposite-sex children.

Fathering and cognitive functioning. Several investigators have revealed that inadequate fathering is associated with academic underachievement. This section discusses research which has explored, in some way, the effects that the father has on the cognitive functioning of the child.

Most of the research which has implicated the vital role that fathers play in the cognitive functioning of children has been father-absence studies. Sutherland was the first investigator to present empirical evidence suggesting an intellectual disadvantage among father-absent children (Biller, 1973, p. 88), when he discovered that Scottish children who were father-absent scored significantly lower than those who were father-present on I.Q. tests (Sutherland, 1930).

Sutton-Smith, Rosenberg, and Landy (1968) utilized a sample of 760 college sophomores to explore the relationship between father absence and aptitude. Absence of the father for two or more consecutive years was found to be related to lower quantitative and linguistic aptitudes. Father absence was more influential on males and children in three-child families. Only children and children with a younger sibling of the same sex were affected least by father absence. In a study reported later (Landy, Rosenberg, and Sutton-Smith, 1969), these researchers found that female college students whose fathers had been totally absent from the home had significantly lower American College Entrance Examination scores than father-present girls. Their findings also suggested that father night-shift work before age ten may have a negative effect on the quantitative aptitude of females.

Lessing, Zagorin and Nelson (1970) studied the effects of father absence on cognitive functioning by utilizing a sample of 433 children (age 9 to 15) who had attended a child guidance clinic. Father absence was defined as two or more years of absence from the home by the father, regardless of whether the absence was consecutive or nonconsecutive. Regardless of the child's sex and social class, father absence was associated with lower scores on Block Designs, Object Assembly and Performance I.Q. ($p \leq .01$) on the Wechsler Intelligence Test for Children. Working-class children who had no father figure earned significantly lower Verbal and Full Scale I.Q. scores than their peers. Middle-class father-absent children did not seem to be as greatly handicapped as those in the working class.

Carlsmith (1964) utilized the Math and Verbal aptitude scores of the Scholastic Aptitude Test (SAT) to examine the sex-typed ability of college freshmen and high school seniors who had experienced early father absence. All of the students were males born between 1941-1945 (during the war years when early father absence was not uncommon), and were from intact families. Findings imply that fathers probably affect the conceptual approach of boys. The results indicated that early father absence (before 12 months of age), along with father absence of more than one year were associated with a Verbal aptitude score which is superior to Math aptitude score in males. This is an aptitude pattern that is typical of a feminine conceptual approach since males generally score higher on Math aptitude than on Verbal aptitude, and females generally score higher on Verbal aptitude than on Math aptitude.

Several investigators have studied the quality of the father-child relationship as a factor in the child's cognitive functioning. Radin (1972, 1973), Shaw and White (1965), Kimball (1952), and Grunebaum, Hurwitz, Prentice and Sperry (1962) have reported research evidence which reveal that the characteristics of the father-child relationship have possible consequences for the child's achievement.

The association between sex-role preference, the father's childrearing practices, and intellectual functioning of the child was examined by Radin (1972). A sample of 21 lower-class and 21 middle-class white fathers were interviewed and observed at home during interactions with their four-year-old sons. The frequency of paternal

nurturance and restrictiveness was recorded during the interview. The Stanford-Binet, Peabody Picture Vocabulary Test (PPVT), and Brown's It Scale for Children were subsequently administered to the children. Paternal nurturance was positively correlated with the Stanford-Binet and PPVT I. Q. scores ($p < .0001$). Paternal restrictiveness was negatively correlated with the scores on the Stanford-Binet. The combination of restrictiveness and nurturance accounted for 36% of the variance in I. Q.'s obtained on the Stanford-Binet. Middle-class fathers were more nurturant and more readily met the implicit and explicit needs of their children. The total number of father-son interactions did not appear to be as important as the quality of paternal behaviors.

In a follow-up of the study (Radin, 1972) discussed above, Radin (1973) retested 30 boys from the original sample on the Stanford-Binet Intelligence Scale and the Peabody Picture Vocabulary Test (PPVT) one year later. The amount of paternal nurturance recorded at the time of the initial study was still positively and significantly ($p < .01$) related to the Stanford-Binet and PPVT I. Q. scores for the total sample. A negative and significant ($p < .05$) association between restrictiveness and postkindergarten PPVT I. Q. was also found. As in the original study, there were significant social class differences in the scores for nurturance and total father-son interactions and in test scores.

Through the use of interviews, conferences and psychological tests, Grunebaum, Hurwitz, Prentice, & Sperry (1962) have studied the role of father in the development of neurotic learning inhibitions in

18 boys between 7 and 13 years of age. Although all of the boys were of average intelligence, all were one to two years below expectation in academic achievement, as measured by the Metropolitan Achievement Test. The boys' fathers were reported to view themselves as failures and to have general attitudes of self-devaluation. They tended to compete with their sons for the mother's love and support, rather than presenting themselves as figures with whom the sons could identify. These men perceived and related to their sons as if they were siblings. The wives viewed themselves as far superior to their husbands, and the husbands shared this perception. Both parents reported a wish for their son to succeed but unconsciously subverted their achievement strivings. This study was unstructured, exploratory and clinical in nature, but it pointed out some of the dynamics of the father-mother-child relationship which can thwart the child's academic performance.

In her study of the relationship between personality factors and scholastic achievement, Kimball (1952) has revealed evidence that further supported the notion that the father-son relationship can have a significant impact on cognitive functioning. Twenty highly intelligent adolescent boys who were failing in their school work were selected for intensive clinical study. A poor father-son relationship was consistently evidenced in the case study material. Many of the fathers were reported to have been strict or distant in their relationships with their sons. The responses of 17 of the case study subjects to a sentence completion technique was compared to a control group of 100 subjects. Results showed that a higher number of the underachievers

($p \leq .05$) had a negative relationship with their fathers than subjects in the control group.

Shaw and White (1965) compared the self-perceptions of 114 high school students with those of their parents. The students were all above average in intelligence. Boys with B averages or better (high-achievers) had significantly more similar perceptions of themselves and their fathers than did boys with averages below B (low-achievers). High-achieving boys perceived their mothers as less similar to themselves than did the low-achieving boys. Father and son self-ratings were significantly correlated among high-achievers, but not among low-achievers. These results suggested that a positive father-son relationship and identification are related to academic performance in males.

Blanchard and Biller (1971) have investigated the possible consequences of early paternal deprivation on cognitive functioning by studying the effects of different levels of father accessibility on the academic performance of third-grade boys. The boys were categorized into four groups according to the age that father absence began, and the degree of interaction between father and son in father-present homes. The four groups were: (a) early father-absent (beginning prior to age 3); (b) late father-absent (beginning after age 5); (c) low father-present (father-son interaction less than 6 hours a week); and (d) high father-present (father-son interaction more than 2 hours per day). Subjects were matched across the groups by age, I.Q.,

socioeconomic status and presence or absence of male siblings in the home. Classroom grades and Stanford Achievement Test scores were the measures of academic performance utilized.

Boys in the early father-absent group tended to be under-achievers, those in the late father-absent and low father-present groups generally functioned below grade level, while the boys in the high father-present group exceeded their grade level in academic performance. The early father-absent boys suffered the most detrimental effects in academic performance. This group scored significantly lower on their grades and on every index of the achievement test.

The father's influence on personality and sex-role identification. The first part of this section will present studies which examine the impact of the father on general personality development, and will be followed by studies which concentrate on the effects of fathering on sex-role identification.

Reuter and Biller (1973) and Slater (1962) have shown that paternal nurturance is related to personality adjustment in the child. The relationship between the perceived paternal nurturance-availability of 172 male college students and their personality adjustment was studied by Reuter and Biller (1973). They found that high personality adjustment scores (on the California Psychological Inventory and the

Gough and Heilbrun's Adjective Check List) were associated with high paternal nurturance combined with moderate or high paternal availability, and high paternal availability combined with moderate or high paternal nurturance. In contrast, relatively poor scores on the personality adjustment measures were related to the combination of high paternal nurturance and low paternal availability, or high paternal availability with low paternal nurturance. Males who reported that their fathers gave them little attention seemed especially handicapped in their psychological functioning. The researchers concluded that males who have sufficient opportunities to observe a nurturant father are likely to imitate his behavior and develop positive personality characteristics. Boys with fathers who are seldom at home, but are highly nurturant may feel frustration, which, in turn, makes imitation of the father difficult. On the other hand, the consistent presence of the unnurturant father appears to be a detriment to the male child's personality functioning since the father is an inadequate model.

The relationship between college men's personality characteristics and their conception of their parents has been studied by Slater (1962). The analysis of questionnaire data from 138 male college freshmen showed that when fathers are nurturant their sons are higher in ego strength and social competence. Students who scored high on measures of ego strength and social competence were more likely to report that their fathers were affectionate and emotionally supportive. Students whose responses suggested low ego strength, social introversion,

and impulsiveness were likely to characterize their fathers as being inhibiting in their demands and discipline.

Stolz and her collaborators (1954) investigated the relations of veteran fathers with their first-born children who were born while they were away from home in the Armed Services, and the effects that this early separation had on the developing personalities of the children. The 19 veterans, whose families were involved in the study, had been involved in World War II and were separated during the pregnancy of the mother and reunited after the first child was at least a year old. A control group consisted of 19 families in which there had been no father absence.

The war-separated children were reported to be shy, withdrawn, and unresponsive toward their fathers. Typically, these children were not affectionate toward their fathers and often refused their attention during their early relationships. They also exhibited more serious behavior problems, were more dependent, showed more fears of a serious nature, and showed more overt expressions of tensions than children in the control group. The war-separated children were also less skillful in establishing and maintaining associations with their peers. Several of the veterans complained that their first-born sons' behaviors were unmasculine. The researchers pointed out that this situation was frustrating for the fathers and tended to have detrimental effects on the war-separated children's psychological development.

The father's involvement in the disciplining of children has been associated with child personality factors in a study cited previously by Hoffman (1961). She found that children were more likely to report feeling angry at others, feeling sad, frustrated and disturbed in general when they associated discipline more with the father than the mother. Boys who reported that their fathers were the chief disciplinarians were rated by teachers as higher on impulsivity, aggressiveness and use of physical force as well as initiation of friendships.

The fathers influence on sex-role development in the young male is well recognized and has been the topic of much of the fathering research.

Mussen and Distler (1959) studied the parental perceptions of 20 kindergarten boys who were either high or low in male role identification. There were 10 boys in each of the high or low male role identification groups as determined by the It Scale for Children. Doll-play and story completion sessions with each child were used to measure paternal nurturance, punishment, and power. Fathers were perceived as more nurturant and rewarding by boys who were highly identified with the male role ($p = .02$). Boys with strong father-identifications also perceived their fathers as more punitive and threatening ($p = .06$). In accordance with the role theory of identification, highly father-identified boys viewed their fathers as more powerful agents who were sources of both reward and punishment.

A sample of black and white preadolescent boys was studied by Hetherington (1966) to examine the development of "sex-role preferences, dependency, aggression, and recreational activities" in father-absent and father-present boys. Using scores on the It Scale for Children and ratings of two male recreation directors, a group of 32 father-absent boys was compared with a control group of 32 father-present boys. Boys who had been separated from their fathers before age 4 (early father-absent) and those who experienced father absence after age 6 (late father-absent) were more dependent on peers than those who had fathers living in the home. The early father-absent boys manifested significantly less aggression ($p < .05$) and fewer masculine sex-role preferences ($p < .005$) than the late father-absent and father-present boys. The early father-absent boys also played fewer physical games involving contact. The investigator concluded that father absence after age 5 does not have much effect on sex-typed behaviors. This finding is similar to Biller's (1969), who found that masculine sex-role orientation tends not to be affected if father-absence occurs after age 4.

Hetherington (1965) has also investigated the effects that the sex of the dominant parent has on sex-role preference and identification in children. A total of 216 boys and girls, ranging in age from 4 to 11 comprised the sample. Half of the children were from mother-dominant homes and half from father-dominant homes as determined by interviews with their parents. Sex-role preferences were found to be more appropriate when the father was the dominant parent rather than

the mother. The sex role of girls from mother- and father-dominant homes did not differ significantly; however, mother dominance was associated with less masculine sex-role preferences in boys of all ages. Boys in father-dominant homes identified more with their fathers, and boys in mother-dominant homes identified more with their mothers. Although girls in mother-dominant homes identified more with the mother, they identified equally strongly with both parents in father-dominant homes. The results of this study imply that even though a passive father does not seem to adversely affect the sex-role preference and identification of girls, he may have a retarding effect on the masculine development of boys.

In a study cited previously, Sears, Maccoby & Levin (1957) sought to test the assumption that the normal male initially identifies with his primary caretaker, the mother, then later shifts to a masculine identification with his father. It was suggested that if the girl maintains her initial identification with the mother, while the boy shifts his to his father, that the young boy would have a more equal identification with both parents than the young girl. To test this assumption, each of the 379 children in the study were provided with a family of five dolls along with an open-topped house for 20-minute sessions of permissive doll play. The researchers predicted that girls would use the mother doll more than boys would use the father doll. The researchers' expectations proved to be true and statistically reliable. These findings supported the assumption that young boys are more nearly equal in their identification with both parents due to the shift in their identification from the mother to the father.

Few researchers have examined the role of the father in feminine sex-role development. However, Leonard (1966) presented six case studies which indicated that the father's availability and his relationship with his daughter may have a tremendous effect on her psychosexual development. Leonard contended that the girl's oedipal relationship cannot develop normally if the father is unavailable, does not participate in the family situation, or if he has not solved his own oedipal conflict. The presence and participation of the father in the family is necessary for "oedipal reality", and stimulation from the father and mother are necessary for the "unfolding of all the complexities of the oedipal organization" (Leonard, 1966, p. 329). In addition to having a mother available for identification, the girl needs a father who can appropriately provide reassurance of her feminine characteristics.

The findings of Mussen and Rutherford (1963), in their study of first grade children, supported Leonard's contention. They found that fathers of highly feminine girls were more encouraging of feminine sex-typed activities than fathers of unfeminine girls. This is further evidence that fathers can facilitate their daughter's sex-role identification.

From the presentation of the research evidence on the father's contributions to child development, it is clear that the father plays a vital part in the child's life. His influence has been shown to touch on almost every aspect of the child's development.

Empirical findings indicate that the lack of a strong father figure may possibly affect the child adversely, whereas the nurturing, available, and adjusted father, who is comfortable in the paternal role, is necessary for optimal child development.

After reviewing research on fathering, several shortcomings are apparent: (a) Fathering research has tended to center on the male child, often ignoring his effects on the female. (b) Data have mainly been obtained from other sources, such as the mother or child, rather than from the father, himself. (c) Few investigators have directly studied father-child interaction, with most studying the effects of father absence and differing levels of father availability on the child. (d) Little research has been done on the contributions of the father during early development.

In conclusion, although present research indicates the father's vital role in the family and in child development, further investigations are necessary to bring perceptions of his role closer to reality.

The Role of the Father During the Childbearing Period

The Role of the Expectant Father

The role of the father during pregnancy has been viewed largely as a secondary phenomenon (Jessner, Weigert & Foy, 1970, p. 209). However, the importance of the father during pregnancy and his involvement in the phenomenon has begun to gain special recognition in the past decade. More fathers are being included in prenatal courses and

instruction prior to delivery, and more have demanded and are given a more active role during their wives' labor and delivery.

What has prompted this recognition of the father as a significant contributor during pregnancy when he was so often forgotten, even pushed out of indepth involvement in previous years? Not so long ago, the idea of a husband being more than proudly, but distantly, interested in his wife's pregnancy was generally accepted (Dick-Read, 1959, p. 263). A redefinition and shift in the emphasis of the role of the expectant father is evolving due to the change in the social structure of middle-class America. No longer does the average middle-class expectant couple have parents nearby with whom they can counsel frequently in their daily lives. Urban life has tended to precipitate a "residential isolation of the nuclear family from collateral and generational relatives" (Jessner et al., 1970, p. 231). Therefore, where the wife may have turned to other relatives to provide her with a large share of support during pregnancy in previous decades, today she requires more support from her husband. Just as important as the change in social structure is the shift in the concept of masculinity and the narrowing of the differences in culturally approved roles of men and women. The recognition of the emotional importance of fatherhood to the child and mother has also encouraged the shift in the emphasis of the expectant father role (Jessner et al, 1970, p. 231).

The major aspects of the expectant father's role have been supporter and protector of his pregnant mate. Dick-Read (1959, p. 270)

goes so far as to say that the health of his gravid spouse is the responsibility of the husband, the father of the child.

A vital contribution to the gravid woman's mental health is made by the sympathetic and understanding husband (Haward, 1969, p. 232). The husband's relationship with his wife is the most important interpersonal relationship during pregnancy. In addition to meeting his wife's dependency needs, probably the most significant function performed by the husband is that of providing a chance of communication for her. The gravid woman has a need to talk about her condition and fears. The husband, who participates in dealing with his wife's doubts and anxieties constructively, can provide immeasurable relief and divert her hostilities and anxieties to the ultimate benefit of the child.

Although the prospective father may not be essential to the survival of his offspring, he can and does take part in the intra-uterine development of his child and is expected to learn and practice the important role of father. The increased level of participation during pregnancy by prospective fathers may be due to the greater recognition and acceptance of his importance and influence in this early crucial phase in the life of a human being. From the moment of conception, the expectant father is expected to protect, care for, and provide for his child, indirectly, by assuring the optimum health of its mother.

Several researchers have further delineated the role of the expectant father during pregnancy via empirical investigations. Two major areas of investigation pursued have been the feelings, behaviors,

and attitudes of expectant fathers; and effects of pregnancy on the marital relationship.

Behaviors, attitudes, and feelings of expectant fathers.

Bernstein and Cyr (1957) studied the casework interviews of 69 low-income fathers to glean some understanding of the problems seen by them during pregnancy, their feelings about prospective fatherhood, and their reactions to the birth of the baby. Most of the fathers were concerned about certain aspects of their situations during pregnancy or felt that these would become troublesome after the arrival of the baby. Some of the areas of concern were: the appropriateness of living arrangements, a need to modify work and study schedules, their fitness for fatherhood, changes in their wives during pregnancy, questions about their wives' fitness for motherhood, and personal problems concerning self, wife, family members and marital relationships.

Reactions to their wives' pregnancies were mixed with about equal numbers of expectant fathers showing open delight or displeasure. Most fathers were pleased immediately after the birth of their babies and participated actively in their care until about two months after the birth.

A psychiatric study of 55 expectant fathers in a military environment was reported by Curtis (1955). The 55 subjects were divided into three groups according to their success in handling their problems as expectant fathers. Seventeen men with serious problems were

assigned to one group; a second group consisted of 14 men with minor psychiatric problems; and a control group included 24 normal expectant fathers who had not been referred for psychiatric consultation. Data were collected by projective tests and a personality inventory.

Findings indicated that differences in personality structure seemed to account for most of the problems of these men. Their emotional adjustment to approaching fatherhood was affected most by their conscious desire to become fathers. Unmarried fatherhood expectancy was a more complicated and disturbing event. Fifteen of the men in the group with more serious psychiatric problems were rejecting toward the expected baby, and 11 of the men with minor problems were rejecting in attitude, but in an indirect way. Although none of the men in the control group came for psychiatric consultation, nine presented themselves to sick call and reported minor psychiatric problems; another eight had similar but less severe complaints. In all groups, the men seemed to experience their greatest difficulty during early and late pregnancy. Anxiety and depressive reactions were more common, and men in all groups developed symptoms which were similar to complaints of pregnant women. For all groups there was a greater restlessness in home life, and marital tension increased. This study revealed that expectant fatherhood can be a source of acute emotional stress; however, one should question and be mindful of the possible circumstances of the military environment in contributing to the behaviors of these expectant fathers.

Liebenberg (1969) has reported the findings of a civilian psychiatric study with results which are similar to those reported by Curtis (1955). Unlike Curtis who included experienced fathers and first-time fathers in his sample, Liebenberg's sample included 64 normal young couples undergoing a first pregnancy. The main focus of this study was to evaluate "realistic" and "emotional" adaptations to the pregnancy. The approach to the data was via interview. Most of the men in the study were college educated and were engaged in scientific or professional work. Although many of the men worried about increased emotional and financial responsibilities placed on them by the pregnancy, most were pleased on having the pregnancy confirmed. Some of the more important findings of this study were as follows:

1. Pregnancy appeared to be a period of heightened dependency for some men.
2. The fathers were believed to express envy of pregnancy "all the way from vigorously denying the pregnancy to almost fusing with the wife in an attempt to biologically experience the pregnancy." Sixty-five percent of the men developed "pregnancy symptoms."
3. The level of involvement in the pregnancy varied from husband to husband. Some men found it difficult to accommodate their wives' fatigue and encouraged them to lead a "normal life," while others participated fully in the pregnancy.
4. Many husbands exhibited action-flight behavior during the second and third trimesters of pregnancy by becoming unavailable to their wives because of heavy work or class schedules.
5. Fear for the wife and for the child were expressed and included fear of stillbirth, deformity or retardation, and concern about effects upon the mother physically.

6. Response to the baby was very positive by most of the men. Most of the husbands did help with infant care during the early weeks after birth, but this involvement fell off markedly by the time the infant was three months old.

Liebenberg's study is limited by its focus on middle-class, first-time fathers. This is a very significant study, however, because it was one of the few early studies on expectant fatherhood that considered the psychiatric effects of impending parenthood on normal expectant fathers. Liebenberg's findings support the proposition that pregnancy is crucial for the male as well as the female.

In a multidisciplinary study of first pregnancy, McCorkel (1964) conducted interviews with 29 fathers who were university students. The focus of the study was on three facets of expectant fatherhood: (a) Shifts in the prospective father's self-concept; (b) changes in husband-wife relationships; and (c) changes in his social world outside of the home. His findings indicated that each of the men changed his definition of his situation throughout the pregnancy. Although there were apparent differences between the subjects, there emerged natural groupings of the expectant fathers based upon similar reactions to pregnancy. Three groups were delineated according to their major orientation toward marriage and pregnancy: (a) Those with a predominantly romantic orientation; (b) those with a family orientation; and (c) those with a career orientation.

A casual approach to parenthood was characteristic of the men with a romantic orientation. Most of these men were young and newly married. There was a general feeling of awe generated by the prospect

of the responsibilities of having to support a wife and child, where they were previously supported by parents or wives. Prospective fatherhood was regarded as a burden by the career-oriented men who generally felt that pregnancy interfered with their professional responsibilities. The new responsibilities imposed by pregnancy were easily accepted by the family-oriented expectant fathers. They expressed fulfillment in the prospect of being fathers and "family" men. The pregnancy was perceived as a gift, and their relationships with their wives subsequently became closer.

Most of the men seemed to extend themselves toward the unborn child. McCorkel also observed that the anticipatory fatherhood which occurred during pregnancy brought about a beginning transformation of identity. The transformation into fathers appeared to have begun prior to pregnancy in the family-oriented husband. This transformation was detailed and intensified in this group of men as pregnancy progressed. There was an active denial of an identity transformation in the career-oriented men. They tended to believe that their old selves were adequate for the change in their life situation. First pregnancy for the romantically oriented men was largely a maturational experience. It served as a sharp reminder that they were no longer carefree adolescents but were adults. The transition for the romantically oriented expectant fathers was frequently accompanied by conflict with relatives and marital crisis.

Because the McCorkel study represented a population of university expectant fathers, the generalizability of the findings are

somewhat limited. However, this study has pointed out the wide differences in reactions of expectant fathers through interviews with this relatively homogeneous sample.

Wapner (1975, 1976), Marquart (1976), and Obrzut (1976) have reported more recent studies which have been concerned with the feelings, behaviors, and attitudes of expectant fathers.

Wapner (1975, 1976) sought to determine the fears, worries, and satisfactions of the expectant father, along with his feelings about himself and his changing world. Data from a sample of 128 middle-class subjects were collected by an expectant father's self-rating instrument; a form for wives of subjects to rate their husbands on the same attitudes, feelings and behaviors; and a form on which the Lamaze childbirth educator evaluated the expectant father on four class behaviors.

In general, the first-time fathers in Wapner's study seemed to be confident about becoming fathers and overwhelmingly accepted the idea. The responsibility of providing for a young family was their major concern although the actual amount of income earned was not the issue.

A great deal of emotional involvement in the pregnancy was reported. As a group, they disagreed vigorously with any statement that was indicative of discontentment or noninvolvement with the pregnancy. Few of the prospective fathers were bothered by their wives' discomfort during the pregnancy, even though 63% of the men reported

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that they were "almost always" or "often" conscious of all of their wives' physical feelings.

There was a greater concern by expectant fathers about their mates. Seventy-one percent felt more protective of their wives since **they** had become pregnant. There tended to be an increase in overall nurturant quality as indicated by the men's reports. However, the wives rated their husbands lower on nurturant qualities than the men rated themselves.

Lamaze instructors rated the expectant fathers as generally highly involved in the childbirth classes. Subjects who learned the childbirth educational materials always reported less stomach upset than other subjects. Those who were rated as affectionate to their wives, also reported themselves as having an overall positive attitude about expectant fatherhood and more behavioral involvement in the pregnancy.

Wapner's study is an important contribution to the understanding of expectant fatherhood. However, it is likely that expectant fathers who attend formal childbirth education classes are a different breed than those who do not. Wapner has taken a unique approach by obtaining data from the father and also from others close to the pregnancy experience.

Pregnancy was felt to be personally stressful according to Marquart's (1976) interviews with 15 married prospective fathers. Most of the men (13) felt that their wives had been changed by the pregnancy, although the wives' level of independence had not noticeably been affected.

As in the Wapner study (1975, 1976), the men reported that they were more protective of their wives. Most of the expectant fathers felt that their relationships with their mates were more interdependent and closer. The men also observed that their wives exhibited "nesting" tendencies by wanting projects, such as preparing the baby's room, completed immediately. They also noticed that as expectant fathers, they were more interested in social contacts with fathers or expectant fathers because of their common interests.

Obrzut (1976) interviewed 20 first-time expectant fathers to acquire a better understanding of their definition of fathering, feelings about fatherhood, and preparation for fathering. The fathers in this study viewed fathering and mothering as complementary processes with unique aspects; however, there was support for the trend toward decreased stereotyping of the parental role based on sex. Although 70% of the men had ambivalent feelings initially towards fathering, interview data indicated that feelings of fatherliness developed as the pregnancy progressed. The areas of concern identified by these men were: infant-care skills, adequacy as a father, financial security, and concern related to the baby's effect on the marital dyad.

Husband-wife relationships. LaRossa (1975) used the interview approach to examine how married couples respond to the first pregnancy and to study the structure and phenomenology of spousal relationships. He included 16 married couples in his study who were interviewed during the 12th, 20th, 28th, and 36th weeks of their respective first pregnancies. LaRossa proposed

two general questions to which he sought answers: (a) How does the husband-wife system work during the first pregnancy? (b) How does the husband-wife system work, in general?

In answer to the first question, it appears that the marital system undergoes shifts in its organization prior to the arrival of the first child. For the most part, these shifts are transformations in the type of conflict experienced by the couple and alterations in the balance of power within the dyad. In answer to the second question posed, LaRossa's data indicated that organizational transformations which the couples experienced during pregnancy point to the general pattern-- that is, marriage does work as a system in conflict, and the system's nucleus is the total process through which social power is distributed. LaRossa concluded that marriage and the transition to parenthood are not devoid of frustration, anxiety, and doubt for both men and women.

Landis, Poffenberger, and Poffenberger (1950) have studied husband-wife relationships during pregnancy by focusing on the effects of first pregnancy upon the sexual adjustment of 212 couples living in the barracks village at Michigan State College. The data were collected retrospectively via anonymous questionnaires. A summary of the findings are:

1. Generally, couples who had a good sexual adjustment before pregnancy had good sexual adjustments during pregnancy and following the birth of the child.
2. In a few couples who had a poor sexual adjustment before pregnancy, there was an improved sexual adjustment after pregnancy. On the other hand, a few couples who had good sexual adjustment before pregnancy had a much poorer sexual adjustment after pregnancy.

3. The husbands' sexual desire seemed to have followed a general pattern of decrease as pregnancy progressed, along with their wives' decreasing sexual desire. The general level of sex desire of husbands and wives remained somewhat lower after childbirth as compared to before the pregnancy.
4. Almost half of the wives reported that they had noticed a change in their husbands' attitudes toward them after they became pregnant. Of those who noticed a change 93.6% felt that the husbands were more considerate and thoughtful.
5. Fear of another pregnancy was a hindrance to good sexual adjustment postdelivery.

In summary of the research on the role of the expectant father, findings suggest that most men do have concerns during pregnancy. The degree of concern varies from man to man, and ranges from minimal to extensive. One of the consistent concerns expressed by expectant fathers in several studies was in regards to increased responsibilities, particularly financial ones. Pregnancy has also required men to make adjustments in their relationships with their wives. The research shows that there is a higher level of emotional involvement and participation in pregnancy by the father than previously thought. Reactions to pregnancy by prospective fathers have been mixed but mostly positive. Findings of the research imply that pregnancy is crucial for the prospective father as well as for the mother.

The Role of the Father During Childbirth

Childbirth and territoriality. Several decades ago, childbirth was a family affair which was predominately under the influence of the expectant mother and father. The parturient

woman was attended at home, often surrounded by her most significant others, as the drama of childbirth was enacted in her own familiar environment. Her husband, her mother, or her husband's mother, were likely to be in attendance with a midwife or physician to give her support and to assist her as a new life made its debut into the world. Because this drama was enacted in the couple's own home, the father had a choice as to whether he would remain present during the birth and assist or take his leave. During the immediate postdelivery period, he had the freedom to spend an unlimited amount of time touching and carressing his wife and newborn. Childbirth was truly a shared family event which could facilitate the husband-wife relationship and family solidarity.

Today, the hospital has become the major setting for this important family event. Only 37% of infants were born in hospitals in the United States in 1935. However, by 1964 the percentage had risen to 97.4 (Womble, 1966, p. 409). The movement of childbirth from the home into the hospital had major implications for the expectant couple, especially the man. Whereas childbirth occurred in the parents' own territory during home deliveries, movement of the event into the hospital made the parents intruders on foreign grounds (Marquart, 1976). Care connected with childbirth became primarily centered around the mother. Although she had always been allowed her own place in the hospital as a patient, no such arrangements were made for the father. He was viewed as unnecessary to the delivery and was excluded from the labor and delivery experience. The prospective father no longer had

much of a choice as to what his level of participation in childbirth would be, because he was intruding on other's territory. Hazlett (1967) well describes the consequences of this shift in the territorial base during childbirth.

The obstetrician came into his own only after childbirth was transferred from the home to the hospital. The delivery room became his stamping ground, his arena, his domain--his territory. When on occasion he is faced with the threat of husband-invasion, he defends that territory from his very depths--from his instincts (Hazlett, 1967, p. 4).

Today, husbands are still excluded from active participation in their wives' labor and delivery by some obstetricians. However, in recent years there has been a shift toward complete involvement of the prospective father in childbirth. Some of the arguments against allowing husbands in the delivery room that have been given by obstetricians and other hospital personnel are:

The husband might infect the delivery room, his wife or his baby; he may faint or otherwise misbehave; he may disrupt the delivery room routine; he may get a distorted idea of delivery room procedure and institute lawsuit if anything goes wrong (Hazlett, 1967, p. 4).

Sehgal (1974) probably represents the views of many obstetricians when he discussed his viewpoints on allowing husbands to be present at the delivery in a recent article. He states:

I believe the husband's or mother's presence in the Labor Room is usually very helpful for the patient's emotional support--but having the husband in the Delivery Room is something else again! There, his presence affects not only his wife, but several other people--the obstetrician, the anesthetist, other doctors, nurses, and even other patients in adjacent delivery rooms . . .

He (the obstetrician) may allow the husband to be in the delivery room, if he is convinced that the man is emotionally mature, understands the process of labor and delivery from having attended prenatal visits with his wife, that he will not be in the way and that he will leave immediately if circumstances demand it . . .

In a teaching hospital it's even worse. . . . Just imagine what it would be like to have a husband in the delivery room--along with medical students, interns and residents! The husband couldn't possibly understand any teaching discussions among the house staff about the management of the patient . . .

No physician should be forced to let a husband stay in the delivery room. . . . A physician should be equally free to decline to take care of a patient who insists on her husband being present when she has her baby.

And finally, it should be remembered that the quality of obstetrical care depends on the professional ability of the physician, and not whether the husband is or is not allowed to stay in the delivery room and watch the whole procedure (Sehgal, 1974, pp. 56-58, emphases added).

Why would the expectant father allow himself to be pushed aside or pushed out of one of the most important events of his life? Hazlett (1967) has discussed the role that the man's guilt has upon his reaction to childbirth. Coitus has tended to be associated with both love and aggression by many. Parturition has been associated with pain which incites guilt in the father of the unborn child for bringing such suffering upon his wife. This produces the desire within the expectant father to atone himself by placing his wife in the "safe hands" of the physician. The consequences of this has been the loss of all prepotency by the husband during his wife's parturition.

Prepared Childbirth and the re-corporation of the father into the childbirth experience. During the mid-forties, Grantly Dick-Read, a British obstetrician, brought the natural childbirth method and philosophy to this country via lectures and in his book, Childbirth Without Fear (1944, 1953, 1959). Dr. Dick-Read's theory was that all lower animals seem to instinctively do something that keeps the process of birth from being painful. Humans, lacking this instinctual knowledge, do the wrong thing, which causes pain and prolongs labor (Bradley, 1965, pp. 9-10). Superstition, civilization and culture are believed to have brought influences to bear upon the minds of women which have caused the arousal of fears and anxiety concerning parturition. This fear and anxiety causes muscle tension during labor which causes pain and slows down the childbirth process. Dr. Dick-Read's childbirth education program focused on the methods by which fear may be overcome, whereby "tension may be eliminated and replaced by physical and mental relaxation" (Dick-Read, 1959, p. 24).

Although Dick-Read was not enthusiastic about having the husband present at the birth, an American obstetrician, Dr. Robert Bradley, began to utilize his method. Bradley (1965) began to encourage husbands to act as their wives' coaches in applying the natural childbirth method.

During the early 1950's Dr. Fernand Lamaze introduced France to the psychoprophylactic method of childbirth, after observing the method in Russia. The psychoprophylactic method originated out of Pavlov's

research on conditional reflexes. It attempts to create complex chains of conditional reflexes during pregnancy which will be applicable at confinement. Thus the woman is taught to give birth, and she rids herself of the bad influences she previously accumulated, which may inhibit her in the act of birth (Vellay, 1960).

The Lamaze method, as it came to be known, also encourage the active involvement of the husband during labor and delivery. This method rapidly spread to the United States and young expectant couples began to demand that they be allowed to practice it.

Because the women who practiced natural childbirth and the psychoprophylactic method were awake and tended to experience delivery with little difficulty, it was only logical that the husbands should be present at the birth. Not only was it natural that he should be present, but that he should also assist her in her delivery by taking on the role of labor and delivery coach. Therefore, prepared childbirth programs have encouraged a less illness-oriented perception of childbirth and are now encouraging the re-incorporation of the expectant father into the the childbirth experience.

During this trend toward increased participation in the childbirth experience by the father, some researchers have focused on the implications of prepared childbirth for the husband and his wife. Several studies have investigated the effects of prepared childbirth education and attendance at labor and/or delivery for fathers and their mates.

Gayton (1975) compared natural and non-natural-childbirth fathers on state-trait anxiety, their attitude toward childbirth and self-concept.

Sixty expectant fathers volunteered to participate in this study. There were 30 expectant fathers in the non-natural-childbirth group and 30 in the natural-childbirth group. The groups were made comparable by matching subjects on age, education and pretest trait anxiety. Non-natural-childbirth fathers had not participated in training in the psychoprophylactic method of childbirth and had not been present during their wives' deliveries. Each of the fathers were administered the Trait Anxiety Scale and the Meaning of Words Inventory between the sixth and eighth months of their wives' pregnancies and again within one month postpartum. The state anxiety during labor and delivery was sampled retrospectively within one month after birth using the State Anxiety Scale.

Fathers who had attended prepared childbirth classes were found to be significantly (.001 level) less state anxious than the fathers who had not attended prepared childbirth classes. Although the natural-childbirth fathers' self-concept tended to increase, the non-natural-childbirth fathers scores decreased. There were no differences between the two groups of fathers in their attitude toward childbirth nor in the net change in trait anxiety.

Hott (1972) studied the self-concepts of 44 prepared childbirth fathers and their concepts of their wives. Comparisons were made of these men's responses to 35 men whose wives chose the traditional method of childbearing without husbands present. Only first-time fathers were included in the sample. The men in the prepared childbirth group had all attended psychoprophylactic training. Prior to their first class,

the prepared group was administered the Osgood Semantic Differential. The nonprepared group was administered the test during the seventh month of their wives' pregnancies. The Osgood Semantic Differential was administered to each subject again by the wife's third postnatal day. Although it was hypothesized that the fathers who participated in psychoprophylactic training would show greater agreement among prenatal measures of self and wife, and would show a greater increase in concordance postnatally than men who did not participate, statistically significant differences between the two groups on pre- or postnatal measures of self or wife were not found.

In order to explore the question of whether a father's preparation for childbirth and/or his presence at delivery is beneficial, Cronenwett and Newmark (1974) administered a 28-item questionnaire to 152 fathers after their wives gave birth. The study's focus was on determining if variations in fathers' preparation and attendance influenced three factors: (a) The paternal-child relationship; (b) the development of the couple relationship; and (c) the father's overall perception of the childbearing stage of his family's development as positive or negative. Each of the 152 fathers who returned his questionnaire was placed in one of three groups: Prepared attenders (at childbirth), unprepared attenders, nonattenders. The three groups of fathers did not differ significantly on demographic variables nor in the source of medical care and type of delivery.

Findings showed that there were not statistically significant differences in the paternal-child relationship as a result of the variations in the fathers' delivery experiences. Formal preparation

and attendance at delivery positively influenced the father's perception of himself along with his relationship with his mate. Regardless of whether they had been prepared or not, fathers who attended delivery viewed childbirth as a more positive experience than nonattenders. The wives of prepared attending fathers had 40% less regional anesthesia during labor and delivery and "26% greater incidence of labors shorter than ten hours when compared with nonattenders" (Conenwett & Newmark, 1974, p. 216). These findings suggest that prepared attendance at labor and delivery are beneficial to the husband-wife relationship, to the father's perception of himself and childbirth, and to the process of labor and delivery. However, in situations where groups are self-selected, such as in this study, the inevitable "chicken or the egg" question comes to mind. That is: Do men who already have positive self-perceptions, positive perceptions of childbirth, and good relationships with their wives choose to attend classes and to be present at the delivery, or do these experiences have an effect on the men?

Zussman (1970) has investigated the social, cultural, and psychological reasons for husbands' participation in their wives' labor experience. This was a comparative study of two groups of men: one group in which men chose to remain with their wives during labor, and another group in which men chose not to remain during labor. The subjects were 40 white, urban, middle-class men. Data was collected by interview.

Zussman found that in all instances where the husband had been present at the labor, it was the wife who had initiated discussion about

his presence. Several variables were found to be associated with the husband's attendance at labor. Men who remained with their wives were older, better educated, had married at a later age and tended to be employed in service-oriented occupations. These men's wives were also better educated, older and tended to be employed in service-oriented occupations. The childbirth experience seemed to be a more positive one for the men who were in attendance at labor. There was less acceptance of the idea that husbands should also be present at delivery by both groups of men.

In summary, the research on prepared childbirth and paternal attendance during labor and delivery suggest that both childbirth preparation and presence of the father at labor and/or delivery are beneficial. Prepared childbirth fathers are likely to be less state anxious at labor, to have a more positive self-concept, and better relationships with their mates. Fathers who are in attendance during labor and/or delivery tend to view childbirth as a more positive experience.

The Families Adjustment to Parenthood

If the family is considered a social system with interrelated roles, positions, and statuses, then a change in the system by the addition of a family member is likely to produce a period of reorganization and stress. There is a body of research literature on transition to parenthood which focuses on the "changes in the family system and perceived correlates associated with the addition of the first child" (Hobbs & Cole, 1976, p. 723).

LeMasters (1957) was the first researcher to study parents' adjustment to the arrival of their first child. Of the 46 white middle-class couples interviewed, he reported that 83% had experienced "extensive" or "severe" crisis. His analysis of data revealed that the crisis pattern occurs even though the marriage is "good" and the baby was planned or desired. LeMasters concluded that the couples had very little preparation for parenthood and had idealized and romanticized parenthood. He felt that these two factors contributed to the couples' difficulty in adjusting to the first child.

Using a sample very similar to the one in LeMasters (1957) study, Dyer (1963) gathered data on the adjustment of 32 couples to the birth of their first child. Dyer reported that 53% of the couples experienced "extensive" or "severe" crisis and 38% "moderate" crisis. A college educated husband, good marital adjustment, a marriage of three years or more, taking preparation for marriage courses, and planned parenthood were all significantly related to less crisis. The reactions and problems experienced by fathers in adjusting to the first child were: less sleep; adapting to new responsibilities, schedules, and routines; and, adjusting to the great amount of time and work the baby required. Dyer concluded that the birth of the first child does constitute a crisis event for the father and mother.

Unlike LeMasters (1957) and Dyer (1963), who used only middle-class respondents in their studies, Hobbs (1965) used a 50% random sample of urban, white, first-time parents from Greensboro, North Carolina. His sample of 53 couples varied by age, education, and occupation.

Using a checklist of 23 items, Hobbs gathered data that varied considerably from those of LeMasters (1957) and Dyer (1963). None of the couples in his study reported "extensive" or "severe" crisis. However, 13% reported "moderate" crisis and about 87% reported "slight" crisis. He found that fathers experienced significantly less crisis than mothers ($p = .005$). Over 90% of fathers and 70% of the mothers rated their marriages as more happy and satisfying than before the birth of the baby. For fathers there were negative and significant (.01 level) correlations between age of the baby and crisis score, and income and crisis score. Most fathers said they were "somewhat" or "very much" bothered by interruption of routine habits such as sleeping and going places (75%), and increased money problems (60%).

In an attempt to determine if the differences in his findings might have been a function of different approaches to the data and different measuring instruments, Hobbs (1968) replicated his previous study (Hobbs, 1965) by administering the 23-item checklist and a structured interview to a random sample of 27 couples. Checklist scores and interview ratings were found to be significantly correlated for men and women. However, ratings of interview data were more likely to categorize couples in the "severe" category. Findings supported those of the previous study (Hobbs, 1965), indicating that adjustment to the first child is not a severe crisis experience.

In a more recent replication of Hobbs' 1965 study, Hobbs and Cole (1976) reported findings using a similar sample of 65 couples from

the Greensboro area. This investigation also indicated that fathers have less difficulty adjusting to the arrival of the first child. The father's age and difficulty score were highly correlated (.41) and significant at the .01 level. Correlations between income and difficulty score were significant at the .05 level. Like the couples in the original study, 90% of these couples reported that their marriages were happy and satisfying prior to their baby's birth. However, significantly fewer men and women felt their marriages became more satisfying after the birth of their baby than respondents in the original study.

Results similar to Hobbs' (1965, 1968) have been reported by Meyerowitz and Feldman (1966) who studied the marital satisfaction of 400 primiparous couples from different regions of the United States. Data were collected from each couple five months before delivery, five weeks after delivery, and five months after delivery. Even though men and women reported a less positive marital relationship during pregnancy, the decline was more pronounced for husbands than for wives. Both spouses reported slightly higher degrees of marital satisfaction when the baby was one month old than during pregnancy. A steady decline in marital satisfaction was anticipated by both spouses when the baby was 5 months old.

Russell's (1974) study of 271 working-class and middle-class couples from Minneapolis reported checklist evidence which also supported findings by Hobbs (1965, 1968). Only 4.8% of the husbands and 3.1% of the wives reported "extensive" and "severe" crisis after the birth of

their first child. The men's crisis scores were significantly lower than the women's ($p = .001$). Whereas women were more concerned about their physical and emotional selves, the men had a broader range of concerns which included problems external to themselves, such as interruption of sleep by the baby, suggestions from in-laws about the baby, increased money problems, and the additional amount of work required. Fathers who reported very active babies were more likely to report a high degree of crisis. Factors negatively related to crisis for men were: age, high levels of marital adjustment, and planned parenthood. Preparing for parenthood by attending classes, reading books or caring for others children were positively associated with men's gratification scores. Most of the respondents (85%) reported that the marital relationship had not been adversely affected by the birth of their first child.

In general, the findings of the studies on transition to parenthood indicate that at least some degree of stress and adaptation is experienced by first-time parents. However, there is disagreement on the extent of stress or crisis which is most likely to occur after the birth of the first child. Consistent findings suggest that new fathers experience less crisis than new mothers, and that income and marital adjustment are negatively related to crisis during transition to parenthood.

There are several methodological issues which concern this reviewer. First, researchers have used similar but different operational

definitions of crisis. This factor may account for some of the discrepancies in the findings between studies. Second, all of the researchers used first-time parents in their studies. It is likely that comparisons between first-time and experienced parents' adjustments after childbirth may yield information that has not been contributed by previous investigations. Finally, some of the studies include small, unrepresentative samples which markedly restrict their generalizability.

The primary focus of this review has been on the role of the father in the young family. An attempt has been made to bring into focus the broad range of the father's functions and his vital role in the lives of family members.

The paternal role has been presented as a variant role which specializes in the protection and nurturance of females and their offspring. Biological and social influencers have been implicated as factors which have encouraged the evolution of the father's role, while societal prescriptions and proscriptions have been designated as factors which shape the characteristics of the role. The father has been shown to be an active and significant contributor to child care and child development.

During the childbearing period, the father has been presented as an active participant through his support and promotion of maternal well-being. In addition, he has been required to make adjustments in his personal life, and shown to be deeply and emotionally involved in pregnancy. Evidence suggest that the father is again becoming involved in labor and childbirth, and that his participation is beneficial for him and his mate.

Finally, the literature indicates that the expectant father faces stress and varying concerns during pregnancy; and, that the inexperienced father continues to experience stress, due to his parenthood, during the early months after the birth of his child.

CHAPTER III

METHOD AND PROCEDURE

In conducting field research, it is often difficult to approximate the ideal. Limitations are placed on the investigator in terms of his ability to gain access to respondents and to control the selection of subjects. The hazards of field research are further complicated when the sample is self-selected and a panel design is used. Babbie (1973) has presented the pertinent and fundamental problems that face the researcher using the panel approach. Although there are limitations in the generalizability of findings, Babbie points out that "this the most sophisticated survey design for most explanatory purposes" because "it most closely approximates the classic laboratory experiment" (Babbie, 1973, p. 65). Thus, the present study is a panel survey directed toward a better understanding of the changes in expectant fathers' responses over time.

Design of the Study

Data for this study were collected at three different points during the prospective father's childbearing experience to determine consistencies and variations in his mood and experience of symptoms. Repeated measures of anxiety, depression, hostility, symptoms and

definition of the situation were obtained during early (10 to 16 weeks), middle (22 to 26 weeks), and late (33 to 38 weeks) pregnancy.

A panel design was selected because this approach is more likely to give the best data for the time periods studied. If prospective fathers had been asked to report their feelings and mood states retrospectively after childbirth, the information provided would have been less accurate. The panel design was also used because it has the additional advantage of indicating definite change over time, or lack of change due to the collection of data from the same respondents at different time periods during pregnancy. Although cross-sectional data might imply change over time, it would not effectively present process and change over time.

Approach to the Data

The selection of subjects for this study was accomplished via a three-stage process. In order to establish contact with expectant fathers early in their wives' pregnancies, the investigator interviewed at least one physician from each obstetrical office in the Greensboro, North Carolina area to request their cooperation (see Appendix A). Of the twelve obstetrical offices contacted, nine agreed to help the investigator obtain a sample for the study. Because of possible medical-legal problems which could have resulted from giving the researcher direct access to the records of prenatal patients, access to records could not be secured. Therefore, participating obstetrical

offices were supplied with forms (Appendix B) which they gave to their patients who were in early pregnancy in order to gain permission for the researcher to contact their spouses. Expectant mothers were asked to complete the bottom portion of the form, giving their names, telephone numbers, addresses, and husbands' names if they agreed to allow their husbands to be contacted. After obtaining this information, the researcher mailed an introductory letter (Appendix C), which explained the general purpose of the study, to potential participants. Each man was subsequently contacted by visit or by a telephone call and was asked to participate. It was hoped that this initial personal contact would encourage participation.

If the prospective father agreed to be involved in the study, he was given an explanation of his role in the study, and encouraged to cooperate fully. Each participant was mailed a questionnaire three times during his wife's pregnancy, and was asked to complete each questionnaire promptly and to return it in an addressed, stamped return envelope. The first questionnaire was completed during early pregnancy and included socio-demographic information in addition to other information which related directly to the study (see Appendix D, Forms A, A-2, B, and C) and the Multiple Affect Adjective Check List (MAACL). The second questionnaire was completed during middle pregnancy and was identical to the first questionnaire, excluding Form A. The last questionnaire was completed during late pregnancy and was identical to the previous one, except an additional form (Appendix D, Form D)

requesting information about the fathers' concerns during pregnancy and their preparation for expectant fatherhood, was included. If the participant did not return a questionnaire within 14 days after it had been mailed, he was contacted by a follow-up letter (Appendix E) or telephone call and reminded to do so.

Respondents

The subjects in this study were expectant fathers whose wives had received prenatal care during early pregnancy by private obstetricians in the Greensboro, North Carolina area. Men who by self-report had long-term physical and/or psychological illnesses or who designated their health status as less than "average" prior to their wives' pregnancies were excluded from the study. Expectant fathers who were single were not included in the sample.

A total of 162 expectant fathers were contacted and asked to participate in the study. Thirteen men refused to participate; two men were excluded from the sample due to long-term physical illnesses, and 15 men were dropped from the sample after their wives aborted spontaneously. A sample of 91 expectant fathers was realized, with only those men who returned all three questionnaires included in the final sample. Fifty-six percent of the men who were initially contacted comprised the sample. Excluding the men who were dropped from the sample due to illnesses and spontaneous abortions, the final sample represented a 63% return rate of all three questionnaires by each subject.

Characteristics of the Sample

Considering the nature of the study, it was not surprising that 66% of the sample were under age 30. The average age of the expectant fathers was 28.3. Ages ranged from 20 to 54 years. The mode was 29 years and the median age was 28.5.

TABLE 1
DISTRIBUTION OF RESPONDENTS BY AGE

Years of Age	N	%
20 - 24	14	15
25 - 29	46	51
30 - 34	22	24
35 - 39	6	7
40 - 44	1	1
Over 45	1	1
No answer	1	1
TOTAL	91	100

The majority of the sample had completed at least 12 years of formal education. Only 3% of the sample reported less than a twelfth-grade education. The educational level of the respondents ranged from 10 years of formal education to 21 years. The mean years of formal

education completed was 14.4. About 58% of the men had completed 12 to 15 years of education and about 35% had completed 16 to 19 years of formal education. Three of the respondents (3%) had attained an educational level of 19 or more years.

Categorized according the Reiss Socioeconomic Index (Reiss, 1961), 49% of the sample were middle-class and 51% were working-class.

Because the sample was not limited by race, respondents for this study included blacks and whites. The majority of the respondents (77%) were white. Of the 91 subjects in the study, 21 were black and 70 were white. Table 2 shows the distribution of the sample by social class and race.

TABLE 2
SOCIAL CLASS OF EXPECTANT FATHERS BY RACE

Class	Black		White		Total	
	N	% of Sample	N	% of Sample	N	% of Sample
Middle Class	8	9	36	40	44	49
Working Class	13	14	34	37	47	51
TOTAL	21	23	70	77	91	100

As for fathering experience, 56% of the sample had no children and 44% had one child or more. Seventy-five percent of the men with children had only one child. The largest number of children that was reported was six (see Table 3). Experienced fathers reported a mean of 1.4 children.

TABLE 3
DISTRIBUTION OF RESPONDENTS SAMPLED BY
NUMBER OF CHILDREN

Number of Children	N	% of Experienced Fathers	% of Sample
None	51	0.0	56
1	30	75.0	33
2	7	17.5	8
3	1	2.5	1
4	1	2.5	1
5	0	0.0	0
6	1	2.5	1
TOTAL	91	100.0	100

Based on the age of the youngest child, the child-spacing patterns of the experienced fathers ranged from 1 to 15 years. The mean

number of years between the previous child and the last pregnancy was 4.1 years with a standard deviation of 2.9. The mode was 3 years.

TABLE 4
CHILD-SPACING PATTERNS OF EXPERIENCED FATHERS
IN THE SAMPLE

Age of Youngest Child	N	%
Less than 1	0	0.0
1	5	12.5
2	7	17.5
3	10	25.0
4	6	15.0
5	2	5.0
6	5	12.5
7	2	5.0
8	1	2.5
9 - 11	0	0.0
12	1	2.5
15	1	2.5
TOTAL	40	100.0

The nature and limitations of the study controlled for the marital status of the sample. The number of years married for the total sample was 4.7 with a standard deviation of 3.3. Inexperienced fathers reported a mean of 3.7 years married while experienced fathers reported a mean of 4.7. The majority of the sample (74%) had been married six years or less (see Table 5).

TABLE 5
DISTRIBUTION OF INEXPERIENCED AND EXPERIENCED FATHERS
IN THE SAMPLE BY NUMBER OF YEARS MARRIED

Number of Years Married	Inexperienced Fathers	Experienced Fathers	Total Sample		
			N	%	
Less than 1	6	1	7	8	
1 - 2	11	5	16	18	
3 - 4	18	5	23	25	
5 - 6	9	12	21	23	
7 - 8	4	9	13	14	
9 - 10	1	4	5	6	
11 - 12	0	2	2	2	
13 - 14	1	0	1	1	
15 - 16	1	1	2	2	
No answer	1	0	1	1	
	TOTAL	51	40	91	100

Summarizing the data for this section, the sample for this study was relatively heterogeneous. Twenty-three percent of the sample were black and 77% were white. The sample was almost evenly split as far as social class is concerned. Forty-four men were middle-class and 47 were working-class. Most of the sample (56%) were inexperienced fathers. In general, the average expectant father in this study was white, working class, under age 30, married for less than six years, and was an inexperienced father.

Instruments

Data were collected by self-administered questionnaires which consisted of three parts: (1) Socio-demographic data; (2) questions which related directly to the content of the study; and (3) the Multiple Affect Adjective Check List (MAACL) (Zuckerman & Lubin, 1965).¹

The questionnaire was pretested for clarity prior to the actual collection of data with 20 expectant fathers who had attended prepared childbirth education classes in the Greensboro, North Carolina area. Only minor revisions were subsequently made.

Included in the questionnaire was a list of symptoms (Appendix D, form B) which have been reported to affect expectant fathers during pregnancy (Curtis, 1955; Liebenberg, 1969; Trethowan, 1968, 1972; Trethowan & Conlon, 1965; Wainwright, 1966). Respondents were instructed

¹Copies of the Multiple Affect Adjective Check List and manual may be obtained from the Educational and Industrial Testing Service, Post Office Box 7234, San Diego, California 92107.

to check those symptoms which they had experienced within the four weeks prior to completion of the questionnaire.

In order to elicit each prospective father's definition of his personal situation at the specified points during pregnancy, a scale based on Cantril's Self-Anchoring Striving Scale (Cantril, 1965) was incorporated into the questionnaire (Appendix D, Form C). Each respondent was asked to rate his satisfaction with eight areas of life on a continuum from zero (0) to ten (10). With zero representing the worst possible life and ten representing the best possible life, the respondent was instructed to designate the number on the continuum which reflected his level of satisfaction with each area at the specified point in time. The areas included within the scale were the respondent's satisfaction with his: (1) Financial situation, (2) work, (3) house or apartment, (4) relationship with wife, (5) wife's health, (6) sexual adjustment, (7) involvement in household tasks, and (8) relationships with parents.

The Multiple Affect Adjective Check List (MAACL) was used to measure affective states of the prospective fathers--specifically, anxiety, depression, and hostility. It was designed to fill the need for a self-administered test which would provide measures of the clinically relevant negative affects.

The MAACL is available in two forms--the General and Today forms. The General version of the MAACL is a quick measure of general affective states and is useful for gross discrimination of negative affects,

whereas the Today version of the test is useful for measuring changes in affect over shorter periods of time such as days or months (Zuckerman, 1960; Zuckerman & Lubin, 1965). The Today version of the MAACL was used in this study, which was devised to measure day-to-day fluctuations in affect.

The Today version of the MAACL is suggested as an instrument for studies requiring repeated assessments of affect and where one would like to measure changes in affect over periods of days, weeks, or months (Zuckerman, 1960; Zuckerman & Lubin, 1965). Affective traits such as anxiety, depression, and hostility are assumed to show large intra-individual variations from day-to-day and from situation-to-situation.

Adjectives with affective connotations were collected for the MAACL. However, adjectives which are of low frequency in the written language and words above the eighth-grade reading level are not included in the check list. Therefore, respondents of less than average intelligence can understand the items (Zuckerman, 1960; Zuckerman & Lubin, 1965). The final list of adjectives consist of 132 items.

Test data on the MAACL have been collected on a number of samples and the Today form has been shown to be sensitive to affectual changes resulting from examination anxiety among college students, therapy sessions, intake of drugs, combat training, perceptual isolation and stage fright (Zuckerman & Lubin, 1965).

The validity of the instrument has been determined by testing "Examination Anxiety." College students scored significantly higher on

the Today form on examination days than on nonexamination days (Winter, Ferreira & Ransom, 1963; Zuckerman, 1960; Zuckerman & Baise, 1962; Zuckerman, Lubin, Vogel & Valerius, 1965). Students who rated themselves as more worried about the exam showed significantly greater increases in scores than those who rated themselves as less worried (Zuckerman & Baise, 1962). In another study, the rise in MAACL scores was significantly greater for students who received low examination grades than for students who obtained high grades (Zuckerman, 1960).

Since the Today form was designed to measure day-to-day fluctuations in affect, it is expected to show high internal consistency reliability on a single testing but low reliability on retest. The internal consistency reliability of the Today form for anxiety ranges from .79 to .85, and the retest reliability ranges from .21 to .31 in normal subjects. The range for the internal consistency reliability of the Today form for depression is .65 to .92. Retest reliability on the depression scale is .21 for normal subjects. The internal consistency reliability for hostility is .90, and the retest reliability is .15 (Zuckerman & Lubin, 1965, p. 17).

Correlations with years of formal education are low and less than .20. Sex differences are small and insignificant, and age has not been found to correlate with the Today form (Zuckerman, 1960; Zuckerman & Lubin, 1965).

The time set of the Today form can be changed by a simple adjustment of the instructions where repeated assessments of affect are made,

i.e., weeks or months. It is assumed that the scoring keys will be valid regardless of the time set (Zuckerman & Lubin, 1965).

Scoring: To obtain the respective scores on the MAACL, the appropriate key is placed over the answer sheet and the number of + items checked and the number of 0 items not checked are counted. The total score is the number of + items checked plus the number of 0 items not checked (Zuckerman & Lubin, 1965).

Limitations of the Study

There are a number of limitations to this study which may limit generalizability, in spite of efforts to keep them at a minimum. The most important limitation is the exclusion of wives from the study. The wife's perspective, along with the expectant father's, could enrich the findings and encourage a better understanding of the expectant father's reaction to pregnancy. This investigator does not intend to deemphasize the wife's role in the life of the expectant father; however, resources which would be required for such an undertaking indicated the limitation of the sample to expectant fathers.

In addition, self-administered questionnaires will be used to collect data instead of interviews. Interviews are preferable because they would allow for greater probing and clarification of questionable responses. Due to the number of contacts required for each subject and the busy schedules of expectant fathers which made interviews less practical, questionnaires seemed to be a reasonable alternative.

As indicated earlier, only men whose wives received care from private obstetricians were included in the study. No expectant fathers whose wives attended clinics for prenatal care were included in the sample. This exclusion is deliberate, in order to control for the possible effects that this factor may have indirectly on the prospective father.

The sample was limited to men whose wives had winter and spring deliveries. The effect that the time and seasons of the year have on the reactions of expectant fathers is not known. Because time and financial resources do not allow for a study of this variable, the question of seasonal differences will not be explored here.

Finally, the sample size is smaller than preferred, the sample was self-selected, and only expectant fathers from the Greensboro, North Carolina area were included in the study. When samples are small, in addition to being self-selected, it increases the likelihood that representativeness will be compromised. Since cultural norms and expected role behaviors tend to vary somewhat by geographical regions, there is no way of knowing how well the results of the study may be extrapolated to similar expectant fathers from other areas of the country.

Analysis of Data

The data was analyzed by using the catalogued procedure from the Statistical Analysis System (SAS) (Barr, Goodnight, Sall & Helwig, 1976).

The hypotheses in this study were tested by using a combination of the following statistical procedures: Multifactorial analysis of variance, multivariant analysis of variance, multifactorial repeated measures analysis of variance and Pearson product-moment correlation coefficient.

In order to test hypotheses 1 through 5, multifactorial analyses of variance were performed on each of the dependent measures with paternal experience, social class, race, and planned pregnancy as factors. In order to obtain a more global picture of the effects of selected independent variables on the dependent measures over time, multivariant analyses of variance with repeated measures analyses of variance were performed. Pearson product-moment correlation coefficients were used to test hypotheses 6 and 7.

CHAPTER IV

ANALYSIS OF THE DATA

The data which are presented in this chapter were obtained from 91 expectant fathers from the Greensboro, North Carolina area. The respondents were black and white, working-class and middle-class men whose wives received prenatal care at private obstetricians' offices.

Between June 1, 1976 and October 1, 1976 a total of 162 expectant fathers were contacted and requested to serve as respondents in the study. Excluding two men who were not included in the sample because of long-term illnesses, and 15 men who were dropped from the sample after their wives aborted spontaneously, the 91 expectant fathers who comprised the final sample represented a 63% return rate. Because each of the 91 respondents completed a questionnaire during early, middle, and late pregnancy, data collection was not completed until April 1977.

Statistical Approach to the Data

In order to investigate the first five hypotheses in the study, the General Linear Models Procedure of the Statistical Analysis System (SAS) (Barr, Goodnight, Sall & Helwig, 1976) computer package was used. The data were analyzed by three steps. First, multifactorial analyses

of variance were done with each of the dependent variables with data for each dependent variable combined or averaged from each subject across all of the three stages of pregnancy. Thus, fathering experience, social class, race, and whether the pregnancy was planned or not were independent variables in these multifactorial analyses. This approach was taken because it had the advantage of determining if there had been a significant main effect by any of the independent variables when data from all the stages of pregnancy were considered simultaneously for each dependent variable. This step in the analysis provided information on the general main effect of each independent variable during the entire course of pregnancy. Likewise, general interaction effects during the entire course of pregnancy could easily be identified.

Because the analysis of the combined data as previously discussed does not indicate whether a factor could have been significant at one stage of pregnancy and not at another, the second step in the statistical analysis was included. Again, all the independent variables--fathering experience, social class, race, and whether the pregnancy was planned or not--were included in the analyses; however, at this step in the analysis, multifactorial analyses of variance were done with the data from each stage of pregnancy separately. Therefore, separate multifactorial analyses of variance were performed on the data obtained during early, middle, and late pregnancy.

The third and final step in the statistical investigation included a combination of multifactorial repeated measures analyses

of variance and multivariant analyses of variance. The first two steps in the data analysis which have been discussed previously served as the bases for the selection of the factors which were included in this part of the data analysis. Those factors which had been shown to have significant main effects on a group of related dependent variables were selected for inclusion in that portion of the analysis. In those cases where no independent variable was significant for the dependent variable(s) under consideration, the two factors which more consistently came closer to significance were included in the analysis. Anxiety, depression, and hostility were considered simultaneously with social class and planned pregnancy as factors. Social class and planned pregnancy were also factors in the multifactorial repeated measures analysis of variance in which satisfaction with the situation (definition of the situation) was a dependent variable. The multifactorial repeated measures analyses of variance which considered symptoms as a dependent variable included race, social class, and planned pregnancy as factors. Multifactorial repeated measures analyses of variance provided the advantage of considering the effects of major factors over time in addition to determining if there had been significant changes in the dependent variables over time as pregnancy progressed.

Wilk's Criterion (1962) was used for the multivariant analyses of variance. Multivariant analyses provided the advantage of determining whether specific groups of dependent variables were significant in relation to the chosen factor(s) included in the analyses. Multivariant analyses were done with mood scores--anxiety, depression, and

hostility--as a group of dependent variables with social class and planned pregnancy as factors; and with psychiatric, somatic, and key symptoms as a group of dependent variables, and race, social class, and planned pregnancy as independent variables. Thus, a more global perspective of the effects of independent variables on the groups of dependent variables was provided by multivariant analyses.

Prior to the presentation of the specific results, a discussion of the categorization of symptoms is indicated. In all statistical analyses, the data for symptoms were analyzed in terms of the total number of symptoms reported. In addition, this data has been broken down into three categories--psychiatric, somatic, and key symptoms--based on the suggestions and findings of Trethowan (1972) and Trethowan and Conlon (1965). Psychiatric symptoms are symptoms which are generally not due to a physical disturbance and are likely to have an emotional derivation. In this study they included the following: Difficulty concentrating, difficulty sleeping, frequent headaches, heart palpitations, irritability, restlessness, and trembling. Symptoms of a more physical nature were categorized as somatic symptoms. Several somatic symptoms were found to occur significantly more in expectant fathers than in controls by Trethowan and Conlon (1965). They have dubbed this group of symptoms as key symptoms. Food cravings, increased appetite, loss of appetite, nausea, toothaches, and vomiting comprise the list of key symptoms. These categories of symptoms were delineated during the statistical analysis of the data because their

consideration further elucidated the nature of symptom manifestation in the sample.

Although the total number of respondents in this study is 91, this number will not be completely represented in some of the analyses. Respondents who had missing data were automatically dropped from certain analyses as this is the procedure when the SAS computer package is used for statistical analysis. When applicable, these adjustments have been represented in the related tables of the text.

In the presentation of the results of the correlational investigations for hypotheses 6 and 7, only correlations which had a probability level of .05 or less were considered statistically significant. For all analyses of variance that were performed, a similar approach was taken. Only differences between groups with a probability level of .05 or less were considered statistically significant. The F-values for each of the analyses of variance that were done are reported in this chapter in Tables 6 through 9 and Tables 14 and 15. Due to the large volume of information, the complete analysis of variance summary tables are presented in Appendices F, G, and H.

Results

Fathering Experience

There were 40 experienced fathers and 51 inexperienced fathers in the total sample. Hypothesis 1 predicted that inexperienced fathers would have higher mood scores, report more symptoms and define their situations as less satisfying than experienced expectant fathers.

According to the results of the data analyses, fathering experience had little impact on any of the dependent variables. This was the case when the data was combined from all the stages of pregnancy and when each dependent variable was considered during each separate stage of pregnancy (see Table 6-9 for F-values).

Although hypothesis 1 predicted that inexperienced expectant fathers would have higher mean scores, the data analyses revealed very little difference between mean scores of experienced expectant fathers and inexperienced expectant fathers for anxiety, depression, and hostility. With the data combined, experienced expectant fathers had a mean anxiety score slightly higher than the mean anxiety score for the inexperienced men. The mean anxiety score for experienced expectant fathers was 6.23 while the mean score for inexperienced expectant fathers was 5.94. Depression and hostility mean scores were almost identical for the two groups of men. Experienced expectant fathers had mean scores of 11.87 and 7.63 for depression and hostility, respectively; and inexperienced expectant fathers had corresponding mean scores of 11.88 and 7.57 for depression and hostility.

There were also no significant differences between the symptom manifestations of experienced and inexperienced expectant fathers according to the combined data analysis. However, experienced expectant fathers had means slightly higher than inexperienced fathers for total symptoms, psychiatric symptoms, somatic symptoms, and key symptoms. This is in the opposite direction of that predicted for symptoms by hypothesis 1.

TABLE 6

F-VALUES FOR MULTIFACTORIAL ANALYSIS OF VARIANCE;
 DATA COMBINED FROM THREE STAGES OF PREGNANCY¹
 N = 89

Factor (s)	Anxiety	Dep.	Host.	Total Sat.	Symptoms			
					Total	Psych.	Somatic	Key
Race	.02	.20	.44	.00	7.19**	6.07*	5.49**	18.28***
Social	1.30	.36	2.13	8.38**	14.51***	8.09**	13.18***	6.18*
Exp.	.06	.00	.00	3.37	.00	.38	.04	1.43
Plan	1.51	.81	.59	8.84**	7.99**	1.92	9.16**	6.04*
Race/Social	1.19	1.47	.29	.26	2.00	2.39	1.27	3.83
Race/Exp.	.02	.25	.00	1.18	.06	.95	.02	.96
Race/Plan	.06	.03	.03	.55	1.56	3.06	.66	.13
Social/Exp.	1.18	1.61	.83	.08	2.86	.94	3.05	.28
Social/Plan	.47	1.43	1.36	.19	.02	.08	.09	.12
Exp./Plan	1.66	.22	.60	.15	.43	.13	.46	.90
Race/Social/Exp.	.35	.53	.98	1.96	.77	.01	1.20	.37
Race/Social/Plan	.00	.32	.12	.20	.09	1.12	.01	.00
Race/Exp./Plan	.50	1.10	2.03	.25	.05	.35	.00	.55
Social/Exp./Plan	1.67	1.27	4.34*	.87	1.28	.26	1.52	.00
Race/Social/Exp./Plan	.12	.21	.24	.57	.39	1.46	.06	.01

KEY: Race = White vs. Black
 Social = Middle class vs. Working class

Exp. = Experienced vs. Inexperienced
 Plan = Planned vs. Unplanned Pregnancy

TABLE 6--continued

N = The number of subjects in analysis with complete data sets.

*Significant at .05 level.

**Significant at .01 level.

***Significant at .001 level.

¹See Appendix F for complete analysis of variance tables.

TABLE 7

F-VALUES FOR MULTIFACTORIAL ANALYSIS OF VARIANCE:
EARLY PREGNANCY¹
N = 91

Factor (s)	Anxiety	Dep.	Host.	Total Sat.	Symptoms			
					Total	Psych.	Somatic	Key
Race	.02	.22	.14	.00	13.08***	6.11*	12.89***	24.12***
Social	1.75	.01	1.59	9.09**	9.00**	6.23*	7.43**	7.69**
Exp.	.09	.05	.29	1.84	.20	.06	.56	.63
Plan	2.45	.17	.62	9.36**	3.86	1.26	4.30*	.29
Race/Social	1.54	.91	.32	.09	.97	.87	.69	3.85
Race/Exp.	.26	.90	.95	.45	.06	.10	.25	1.59
Race/Plan	.95	.67	.01	1.47	2.10	1.58	1.66	.13
Social/Exp.	.88	.94	.63	.27	1.45	.24	1.90	.31
Social/Plan	.01	.07	3.16	.30	.29	.13	.89	2.33
Exp./Plan	1.33	.09	.37	.64	.00	.00	.00	.06
Race/Social/Exp.	.37	.02	.28	5.09*	2.10	.09	3.36	1.65
Race/Social/Plan	.12	.59	.15	.05	.75	1.49	.25	.06
Race/Exp./Plan	.22	.36	1.30	.58	.93	.54	.84	.98
Social/Exp./Plan	.98	1.61	3.99*	.48	.33	.01	.54	.04
Race/Social/Exp./Plan	.20	.02	.05	1.89	.10	.83	.00	.46

KEY: Race = White vs. Black
Social = Middle class vs. Working class

Exp. = Experienced vs. Inexperienced
Plan = Planned vs. Unplanned Pregnancy

TABLE 7--continued

N = The number of subjects in the analysis with complete data sets.

*Significant at .05 level.

**Significant at .01 level.

***Significant at .001 level.

¹See Appendix G for complete analysis of variance tables.

TABLE 8

F-VALUES FOR MULTIFACTORIAL ANALYSIS OF VARIANCE:
MIDDLE PREGNANCY¹
N = 90

Factors (s)	Anxiety	Dep.	Host.	Total Sat.	Symptoms			
					Total	Psych.	Somatic	Key
Race	.31	.07	.90	.03	5.59*	4.60*	3.93	8.94*
Social	.83	.18	1.36	5.50*	12.71***	6.57*	10.87**	2.94
Exp.	.02	.01	.02	2.23	.04	.71	.02	.47
Plan	.83	.59	.12	11.48**	11.59**	5.50*	10.20**	10.00**
Race/Social	.36	1.20	.38	.15	2.23	1.16	1.90	4.00*
Race/Exp.	.48	.02	1.11	1.29	.06	4.58*	.44	.10
Race/Plan	.00	.01	.02	.20	1.42	4.02*	.34	.22
Social/Exp.	.84	2.25	.91	.35	3.53	1.64	3.13	.06
Social/Plan	.57	1.82	.30	.18	.00	.59	.15	.04
Exp./Plan	3.30	.71	.76	.10	2.44	1.33	2.05	4.16*
Race/Social/Exp.	1.64	1.07	1.22	.66	.62	.00	1.01	.53
Race/Social/Plan	.00	.08	.01	.08	.11	.02	.22	.14
Race/Exp./Plan	2.06	2.16	3.49	.42	.03	1.69	.14	.92
Social/Exp./Plan	3.88	1.76	4.56*	.39	1.06	.25	1.12	.25
Race/Social/Exp./Plan	.02	.12	.35	.13	.70	1.66	.21	.39

KEY: Race = White vs. Black
Social = Middle class vs. Working class

Exp. = Experienced vs. Inexperienced
Plan = Planned vs. Unplanned Pregnancy

TABLE 8--continued

N = The number of subjects in the analysis with complete data sets.

*Significant at .05 level.

**Significant at .01 level.

***Significant at .001 level.

¹See Appendix G for complete analysis of variance tables.

TABLE 9
 F-VALUES FOR MULTIFACTORIAL ANALYSIS OF VARIANCE
 LATE PREGNANCY¹
 N = 89

Factors (s)	Symptoms							
	Anxiety	Dep.	Host.	Total Sat.	Total	Psych.	Somatic	Key
Race	.00	.20	.13	.01	1.39	1.49	.75	2.43
Social	.59	1.43	1.56	6.21*	11.46**	2.72	12.36***	1.06
Exp.	.19	.00	.14	4.12*	.15	.17	.08	1.45
Plan	.56	1.40	.65	2.93	4.54*	.01	7.51**	3.26
Race/Social	1.05	1.27	.03	.48	1.48	2.23	.58	.13
Race/Exp.	.08	.21	.01	1.29	.38	.01	.56	.40
Race/Plan	.10	.15	.05	.13	.42	.89	.10	.00
Social/Exp.	1.03	.77	.28	.09	2.01	.36	2.32	.17
Social/Plan	.98	2.36	.40	.05	.02	.09	.13	.32
Exp./Plan	.27	.03	.25	.00	.11	.01	.26	.02
Race/Social/Exp.	.97	1.01	.74	.57	.01	.00	.03	.51
Race/Social/Plan	.14	.17	.29	.47	.08	.99	.03	.64
Race/Exp./Plan	.00	.58	.39	.00	.15	.14	.10	.09
Social/Exp./Plan	.25	.13	1.22	1.42	1.84	.31	2.16	.19
Race/Social/Exp./Plan	.29	.52	.19	.12	.21	.46	.05	.04

KEY: Race = White vs. Black
 Social = Middle class vs. Working class

Exp. = Experienced vs. Inexperienced
 Plan = Planned vs. Unplanned Pregnancy

TABLE 9--continued

N = The number of subjects in the analysis with complete data sets.

*Significant at .05 level.

**Significant at .01 level.

***Significant at .001 level.

¹See Appendix G for complete analysis fo variance tables.

TABLE 10

MARGINAL MEANS FOR DEPENDENT VARIABLES WITH FATHERING EXPERIENCE AS FACTOR

Data Analysis	Group	N*	Anxiety	Dep.	Host.	Total Sat.	Symptoms			
							Total	Psych.	Somatic	Key
Combined Data	Experienced	39	6.23	11.87	7.63	55.48	3.34	1.04	2.30	.48
	Inexperienced	50	5.94	11.88	7.57	60.20	2.61	.72	1.88	.45
Early Pregnancy	Experienced	40	6.20	11.68	7.20	56.23	2.83	.98	1.85	.48
	Inexperienced	51	5.73	11.53	7.51	59.96	2.33	.69	1.65	.37
Middle Pregnancy	Experienced	39	5.98	12.08	7.90	55.25	3.43	1.00	2.43	.60
	Inexperienced	51	6.10	12.29	7.80	60.53	2.53	.61	1.92	.53
Late Pregnancy	Experienced	39	6.49	11.87	7.79	54.99	3.79	1.15	2.64	.36
	Inexperienced	50	6.02	11.82	7.38	60.12	2.98	.88	2.10	.46

*Data sets with missing data were dropped from the analysis.

N = The number of expectant fathers in the analysis with complete data sets.

Experienced and inexperienced groups showed the most contrast in their general definitions of their situations as indicated by their mean total satisfaction scores. Experienced expectant fathers who had a mean total satisfaction score of 55.48, tended to define their situations as less satisfying than inexperienced expectant fathers who had a mean total satisfaction score of 60.20. Although this finding was not statistically significant, the difference between the two groups did have a probability level below .10. This finding is also in the opposite direction from that suggested by hypothesis 1.

There was only one significant finding which was yielded by analyses of the data for all three stages of pregnancy. Experienced expectant fathers had a significantly lower mean total satisfaction score than inexperienced expectant fathers in late pregnancy (see Tables 7, 8, and 9).

These findings do not support hypothesis 1 which suggested that inexperienced expectant fathers would report more symptoms; have lower total satisfaction scores; and would have higher anxiety, depression, and hostility scores than experienced fathers. None of the findings in the combined data analysis was statistically significant. Experienced expectant fathers reported a mean total satisfaction score which was significantly lower than inexperienced expectant fathers in late pregnancy. Hypothesis 1 predicted the opposite finding.

Planned and Unplanned Pregnancy

Of the 91 expectant fathers in the sample, 34 (37%) reported that pregnancy was unplanned, and 57 (63%) reported that pregnancy was

planned. According to hypothesis 2, it was expected that respondents who had reported that pregnancy was not planned would have higher scores for symptoms, anxiety, depression, and hostility; and would have lower total satisfaction scores than expectant fathers who reported that pregnancy was planned. Planned pregnancy was shown to affect several of the dependent variables under consideration.

When the respondents' data on each of the dependent measures were combined or averaged across the stages of pregnancy, anxiety, depression, hostility, and psychiatric symptom scores were not significantly different for the men who reported planned pregnancies and those who reported unplanned pregnancies (see Table 6). However, the means for each of these variables were slightly higher for expectant fathers who reported that pregnancy was unplanned than for those who reported planned pregnancies (see Table 11). The mean scores for the planned and unplanned groups for anxiety, depression, hostility, and psychiatric symptoms were all in the direction predicted by hypothesis 2.

Analysis of the combined data showed that mean scores for total satisfaction, total symptoms, somatic symptoms, and key symptoms were significantly different for the planned versus the unplanned group. A mean total satisfaction score of 53.72 was reported for expectant fathers with unplanned pregnancies, and a corresponding mean score of 60.75 was reported by fathers with planned pregnancies ($p < .01$). Consistent with hypothesis 2, this finding indicated that the men who reported unplanned pregnancies defined their personal situations as less satisfying than men with planned pregnancies. There was a mean

TABLE 11

MARGINAL MEANS FOR DEPENDENT VARIABLES WITH PLANNED PREGNANCY AS FACTOR

Data Analysis	Group	N*	Anxiety	Dep.	Host.	Total Sat.	Symptoms			
							Total	Psych.	Somatic	Key
Combined Data	Planned	56	5.68	11.49	7.34	60.75	2.05	.68	1.37	.30
	Unplanned	33	6.71	12.52	8.10	53.72	4.42	1.17	3.25	.74
Early Pregnancy	Planned	57	5.33	11.46	7.05	61.09	1.79	.61	1.18	.30
	Unplanned	34	6.94	11.82	7.91	53.68	3.82	1.15	2.68	.62
Middle Pregnancy	Planned	57	5.77	11.88	7.72	61.61	1.84	.51	1.33	.32
	Unplanned	33	6.50	12.74	8.06	52.50	4.74	1.24	3.50	.97
Late Pregnancy	Planned	56	5.95	11.14	7.25	59.52	2.54	.93	1.61	.29
	Unplanned	33	6.70	13.03	8.09	55.03	4.70	1.12	3.58	.64

*Data sets with missing data were dropped from the analysis.

N = The number of expectant fathers in the analysis with complete data sets.

score of 4.42 total symptoms for expectant fathers who reported unplanned pregnancies, and a mean score of 2.05 total symptoms for prospective fathers who indicated planned pregnancies ($p < .01$). Significantly higher somatic and key symptom scores were also found to be reported by the unplanned group. While the planned pregnancy group had a mean of 1.37 somatic and .30 key symptoms, men who reported unplanned pregnancies had a mean of 3.25 somatic symptoms and a mean of .74 key symptoms. The contrast in the two groups' reports of somatic symptoms was significant at the .01 level, while the contrast in reports of key symptoms was significant at the .05 level. The directions of the mean symptom scores were consistent with the prediction of hypothesis 2.

There were some variations in the appearance of significant differences between the planned and unplanned pregnancy groups for some dependent variables when data from each stage of pregnancy were analyzed separately. Anxiety, depression, and hostility scores for planned and unplanned pregnancy groups were not significantly different at any stage of pregnancy. However, as can be seen in Table 11, the men who reported unplanned pregnancies had slightly higher mean anxiety, depression, and hostility scores in all stages of pregnancy than men with planned pregnancies. The mean total satisfaction scores for the unplanned group were significantly lower than the mean scores for the planned group in early and middle pregnancy. Although not always significant, reported mean scores for all categories of symptoms were higher for the unplanned group during all stages of pregnancy. The mean

somatic symptom scores were significantly different for the planned and unplanned group in early pregnancy. During middle pregnancy, significant differences between the planned and unplanned groups were found for total symptoms and all the categories of symptoms--psychiatric, somatic, and key symptoms. In late pregnancy, significant differences were found for total symptoms and somatic symptoms.

Planned pregnancy was also entered as a factor in the multivariate analyses of variance. The overall effect of planned pregnancy on anxiety, depression, and hostility was not significant as indicated by a Wilk's lambda of .98 ($p = .65$). As when anxiety, depression, and hostility were analyzed separately, the multivariate analysis revealed that when they were analyzed as a group, planned pregnancy still had little effect. Pregnancy planning did have an overall effect on psychiatric, key, and somatic symptoms. For this group of symptoms a significant Wilk's lambda of .88 was found ($p = .02$). Therefore, as a group, psychiatric, somatic, and key symptoms were shown to have been significantly affected by pregnancy planning. On a whole, expectant fathers with unplanned pregnancies reported more of the group of symptoms than expectant fathers with planned pregnancies. The findings of the multivariate analyses are in agreement with the results of the previous analyses.

The results of analyses with planned pregnancy as a factor lend partial support to hypothesis 2. As projected by hypothesis 2, the men who reported unplanned pregnancies had mean anxiety, depression, and hostility scores higher than the group who indicated that pregnancies

were planned; however, none of these differences approached statistical significance. Men who reported unplanned pregnancies had lower total satisfaction scores than the group who reported planned pregnancies. This finding was significant for all of the analyses except for the one which utilized data from late pregnancy. This supports the contention of hypothesis 2 that expectant fathers who reported unplanned pregnancies define their personal situations as less satisfying than men with planned pregnancies. Hypothesis 2 was further supported by the analyses involving symptoms. Significantly more total symptoms were reported by the men in the unplanned pregnancy group than for the planned pregnancy group in all analyses except for those in early pregnancy. The multivariate analysis which considered the difference between the reports of psychiatric, somatic, and key symptoms, as a group of symptoms, indicated that the men who had reported unplanned pregnancies had significantly higher mean scores for this group of symptoms than the group of expectant fathers with planned pregnancies. This finding further supported hypothesis 2.

Social Class

Forty-four expectant fathers in the sample were middle class, and 47 expectant fathers were working class. Hypothesis 3 indicated that there would be differences in all of the dependent variables between social class groups. Statistical comparisons of the responses of the working-class men with those of the middle-class men revealed some striking differences between the social-class groups, except for the mood scores (anxiety, depression, and hostility).

The combined data analyses did not indicate any significant differences in the mean scores for anxiety, depression, or hostility; neither were any of these three variants significant when data from early, middle or late pregnancy were considered separately (see Tables 6-9). However, as can be seen by examining Table 12, working-class expectant fathers generally had slightly higher mean anxiety, depression, and hostility scores than middle-class respondents.

In every analysis where working-class and middle-class expectant fathers were compared on their total satisfaction scores, middle-class expectant fathers had defined their situations significantly more positively, based on the total satisfaction scores. When total satisfaction scores were combined across the stages of pregnancy, working-class respondents had a mean total satisfaction score of 55.31; 61.14 was the average score for the middle-class group.

Working-class and middle-class expectant fathers also reported striking differences for symptoms. Analyses of the combined data from the three stages of pregnancy revealed that working-class respondents reported significantly more somatic, psychiatric, and key symptoms along with more total symptoms. While middle-class respondents had a mean of 1.73 total symptoms, an average of 4.06 total symptoms was reported by the working-class men in the sample. This difference is significant at the .001 level. For psychiatric symptoms, an average of .54 was reported by the middle-class group versus a mean of 1.16 for the working-class group ($p < .01$). While 1.19 was the mean number of somatic symptoms reported by the middle-class respondents, a mean of

TABLE 12

MARGINAL MEANS FOR DEPENDENT VARIABLES WITH SOCIAL CLASS AS FACTORS

Data Analysis	Group	N*	Anxiety	Dep.	Host.	Total Sat.	Symptoms			
							Total	Psych.	Somatic	Key
Combined Data	Middle class	43	5.65	11.57	7.10	61.14	1.73	.54	1.19	.29
	Working class	46	6.46	12.16	8.06	55.31	4.06	1.16	2.89	.63
Early Pregnancy	Middle class	44	5.34	11.68	6.86	61.48	1.48	.45	1.02	.16
	Working class	47	6.49	11.51	7.85	55.36	3.55	1.15	2.40	.66
Middle Pregnancy	Middle class	44	5.73	12.00	7.41	61.25	1.68	.45	1.23	.39
	Working class	46	6.34	12.38	8.26	55.36	4.09	1.09	3.00	.72
Late Pregnancy	Middle class	43	5.88	11.02	7.02	60.67	2.05	.72	1.33	.33
	Working class	46	6.54	12.61	8.07	55.22	4.54	1.26	3.28	.50

*Data sets with missing data were dropped from the analysis.

N = The number of expectant fathers in the analysis with complete data sets.

2.89 was reported by the working-class men ($p < .001$). Working-class expectant fathers had an average key symptom score of .63 as compared to .29 for the middle-class group.

In early pregnancy, working-class expectant fathers had significantly more psychiatric, somatic, key, and total symptoms than the middle-class group. The differences in symptoms reported by working-class and middle-class respondents remained significant during middle pregnancy except for key symptoms. However, by late pregnancy there were not significant differences between the two social-class groups for psychiatric or key symptoms although somatic and total symptom manifestation remained significant at the .01 level.

The multivariate analysis of variance which included anxiety, depression, and hostility as variants indicated that social class did not have a significant overall effect on the group of dependent variables. The analysis yielded a Wilk's lambda of .95 which had a probability of .27. As one might expect from the data previously presented, psychiatric, somatic, and key symptoms as a group of dependent variables were influenced by the overall effect of social class. A Wilk's lambda of .84 ($p = .003$) was found for the social-class effects on the group of symptoms. Thus, results of the multivariate analyses further supported the previous findings related to the social-class factor--that working-class respondents reported significantly more symptoms than middle-class respondents.

The results for this section partially support the predictions of hypothesis 3--that there would be a difference in symptoms, anxiety

depression, and hostility scores, and in total satisfaction scores (definition of the situation) between working-class and middle-class expectant fathers. In general, both total satisfaction scores and symptom scores were significantly different for the two social-class groups. Working-class respondents, as a group, had significantly lower total satisfaction scores and significantly higher symptom scores. However, differences in psychiatric and key symptoms were not significantly different for working-class and middle-class respondents during each stage of pregnancy. The analyses did not yield any significant differences between working-class and middle-class expectant fathers for anxiety, depression, and hostility scores.

Race

The racial composition of the sample consisted of 21 black expectant fathers and 70 white expectant fathers. Hypothesis 4 predicted a difference between the scores of black and white expectant fathers for all of the dependent variables. The results of data analyses denote that there were no statistically significant differences between black and white respondents on the following variants: Anxiety, depression, hostility, and total satisfaction with one's situation. None of these dependent variables were significantly different for black and white expectant fathers when the two groups were compared during each stage of pregnancy, nor when combined data were analyzed. The means for each of the racial groups were amazingly similar for all dependent variables except for symptoms (see Table 13).

TABLE 13

MARGINAL MEANS FOR DEPENDENT VARIABLES WITH RACE AS FACTOR

Data Analysis	Group	N*	Anxiety	Dep.	Host.	Total Sat.	Symptoms			
							Total	Psych.	Somatic	Key
Combined Data	White	68	6.09	12.01	7.72	58.06	2.53	.73	1.80	.34
	Black	21	5.98	11.43	7.17	58.35	4.27	1.30	2.97	.89
Early Pregnancy	White	70	5.90	11.76	7.46	58.29	1.94	.64	1.30	.21
	Black	21	6.05	11.05	7.10	58.43	4.57	1.38	3.19	1.10
Middle Pregnancy	White	69	6.16	12.27	8.06	58.11	2.56	.66	1.90	.44
	Black	21	5.67	11.95	7.14	58.52	4.14	1.19	2.95	.95
Late Pregnancy	White	68	6.22	12.01	7.65	57.78	3.10	.90	2.21	.35
	Black	21	6.24	11.29	7.29	58.10	4.10	1.33	2.76	.61

*Data sets with missing data were dropped from the analysis.

N = The number of expectant fathers in the analysis with complete data sets.

As indicated previously, black and white expectant fathers were contrasted most by their reports of symptom manifestation. According to the analyses of combined data, black respondents reported significantly more total symptoms, psychiatric symptoms, somatic symptoms, and key symptoms than white respondents. The actual means for black and white groups for each symptom category and total symptoms are presented in Table 13. The mean score differences between black and white groups for total symptoms were significant at the .01 level, mean score differences for somatic and psychiatric symptoms were significant at the .05 level, and the mean score difference for key symptoms was significant at the .001 level.

When the data from the different stages of pregnancy were analyzed separately, some interesting results were found. Black respondents had significantly higher mean symptom scores in all symptom categories during early pregnancy. While white expectant fathers had a mean score of 1.94 total symptoms during early pregnancy, black expectant fathers reported a mean of 4.57 ($p < .001$). Significant differences for the three categories of symptoms were also reported in early pregnancy. White respondents reported a mean of .64 psychiatric symptoms as compared to 1.38 for black respondents ($p < .05$). While white respondents reported an average of 1.30 somatic symptoms, a mean of 3.19 was reported by black expectant fathers ($p < .001$). An average of .21 key symptoms were reported by white expectant fathers while black respondents reported a mean of 1.10 key symptoms ($p < .001$). By middle pregnancy, the mean differences between black and white respondents were still statistically significant for

total, psychiatric, and key symptoms, but not for somatic symptoms. There were no statistically significant differences between the reports of symptoms by the two racial groups by late pregnancy.

Race as a factor was found to have an overall effect on the group of three categories of symptoms--psychiatric, somatic, and key symptoms--when multivariate analysis of variance was performed. A Wilk's lambda of .81 was yielded by the analysis, which had a probability level of .0007. Thus black expectant fathers had higher mean scores for the group of symptoms than white expectant fathers.

Hypothesis 4 suggested that there would be racial differences in symptom scores, total satisfaction scores, and mood (anxiety, depression and hostility) scores. Relevant statistical analyses only partially supported the predictions of hypothesis 4. Anxiety, depression, hostility, and total satisfaction scores were not significantly different for black and white expectant fathers. However, black expectant fathers reported significantly more symptoms than white expectant fathers. As pregnancy progressed the differences between the mean symptom scores of the two racial groups waned.

Significant Interactions among Factors for Multifactorial Analyses of Variance

In this section, the significant interactions from the combined data analyses and the separate analyses which were done with data from each stage of pregnancy is presented. Race, social class, fathering experience, and planned pregnancy were multifactors in each

of these analyses. Results of the interactions are presented for the reader's information with little further discussion of the findings.

When more than two means are compared at one time, it is most appropriate to identify which means are significantly higher than one or more of the others. The Scheffé test (Keppel, 1973) for all possible comparisons between means was applied with each of the significant interactions to identify the truly significant means.

Only one significant interaction resulted from the analysis of data which had been combined across the stages of pregnancy. This interaction occurred between social class, fathering experience, and planned pregnancy. The Scheffé procedure revealed that middle-class inexperienced expectant fathers, who had reported unplanned pregnancies, had a mean hostility score significantly lower than working-class inexperienced expectant fathers with unplanned pregnancies.

Analyses of data from early pregnancy revealed a significant interaction between race, social class, and fathering experience. The Scheffé procedure indicated that white, middle-class, inexperienced expectant fathers had a significantly higher mean total satisfaction score than white, working-class, inexperienced expectant fathers; and white, working-class, experienced fathers. One significant interaction was found for hostility in early pregnancy. As found in the combined data analysis, working-class, inexperienced expectant fathers, who reported unplanned pregnancies, had a significantly higher mean hostility score than middle-class, inexperienced expectant fathers who reported unplanned pregnancies.

More significant interactions occurred for middle pregnancy than at any other stage. Four two-way interactions occurred.

(a) Black respondents who had reported unplanned pregnancies had a mean psychiatric symptom score significantly higher than the mean scores of black respondents with planned pregnancies, white respondents with planned pregnancies, and white respondents with unplanned pregnancies. (b) White inexperienced expectant fathers had a lower mean psychiatric symptom score than the mean scores of white experienced expectant fathers, black experienced expectant fathers, and black inexperienced expectant fathers. (c) Experienced fathers who had reported unplanned pregnancies had higher mean key symptom scores than inexperienced expectant fathers with unplanned pregnancies, and experienced and inexperienced expectant fathers with planned pregnancies. (d) Black inexperienced fathers reported a significantly higher mean key symptom score than white experienced, white inexperienced, and black experienced expectant fathers.

One significant three-way interaction was found during middle pregnancy. Middle-class inexperienced expectant fathers with unplanned pregnancies had a mean hostility score significantly lower than working-class inexperienced expectant fathers with unplanned pregnancies. This interaction effect was also found for the combined data analysis and for early pregnancy.

No significant interactions occurred during late pregnancy.

Stages of Pregnancy

Hypothesis 5 asserted that the stage of pregnancy would be related to the expectant father's symptom manifestation; his total satisfaction scores; and his anxiety, depression, and hostility scores. Differences in each of the dependent variables for the three stages of pregnancy were analyzed by multifactorial repeated measures analyses of variance. Social class and planned pregnancy were included as factors in the analyses for anxiety, depression, hostility, and total satisfaction scores. These factors were selected because they were consistently significant in the multifactorial analyses for total satisfaction scores, and they came closer to significance more consistently than race and fathering experience in the analyses for anxiety, depression, and hostility scores. Because race, social class, and planned pregnancy had been significant factors for total, psychiatric, somatic, and key symptoms, the multifactorial repeated measures analyses for symptoms included these three factors. An inspection of Tables 14 and 15 will show that race, social class, and planned pregnancy were significant factors for the same dependent variables which were significant in the combined data analyses as discussed in previous sections.

As indicated by the relevant F-values in Table 14, there were no significant variations in the mean anxiety, depression, hostility, and total satisfaction scores as pregnancy progressed. Additionally, there were no significant interactions between stage of pregnancy and the other independent variables for any of the mood scores or total

TABLE 14

F-VALUES FOR MULTIFACTORIAL REPEATED MEASURES ANALYSES OF VARIANCE
WITH SOCIAL CLASS AND PLANNED PREGNANCY AS FACTORS¹
N = 89

Factor (s)	Anxiety	Dep.	Host.	Total Satisfaction
Social Class (Social)	1.27	.28	1.95	8.35**
Planned Pregnancy (Plan)	1.33	.62	.41	7.45**
Social/Plan	.98	2.22	1.92	.06
Stage of Pregnancy	.23	.77	.86	.65
Social/Stage	.37	1.45	.06	.50
Plan/Stage	.83	.45	.28	2.50
Social/Plan/Stage	.47	1.46	.98	.08

*Probability .05

**Probability .01

***Probability .001

N = The number of subjects in the analyses. Data sets with missing data were dropped from the analyses.

¹See Appendix H for complete analysis of variance tables.

TABLE 15

F-VALUES FOR MULTIFACTORIAL REPEATED MEASURES ANALYSIS OF VARIANCE
WITH RACE, SOCIAL CLASS, AND PLANNED PREGNANCY AS FACTORS¹
N = 91

Factor (s)	Total Symptoms	Psychiatric Symptoms	Somatic Symptoms	Key Symptoms
Race	6.94*	6.37*	5.13*	17.39***
Social Class (Social)	15.87***	8.63**	14.61***	7.42**
Planned Pregnancy (Plan)	8.72**	1.83	10.26**	7.77**
Race/Social	1.89	2.51	1.13	3.48
Race/Plan	1.37	3.08	.52	.01
Social/Plan	.02	.07	.09	.42
Race/Social/Plan	.06	.36	.35	.09
Stage of Pregnancy (Stage)	4.45*	1.13	5.22**	1.81
Race/Stage	3.50*	.37	4.39*	5.16**
Social/Stage	.84	.13	2.19	.94
Plan/Stage	1.55	1.72	1.82	3.24*
Race/Social/Stage	.14	.41	.28	1.60
Race/Plan/Stage	.32	.06	.58	.21
Social/Plan/Stage	.32	.20	1.02	1.79
Race/Social/Plan/Stage	.58	.78	.22	1.02

*Probability < .05

**Probability < .01

***Probability < .001

N = The number of subjects in the analyses. Data sets with missing data were dropped from the analyses.

¹See Appendix H for complete analysis of variance tables.

satisfaction scores. Table 16 shows the means for anxiety, depression, hostility, and total satisfaction--along with means for the other dependent variables--for the three stages of pregnancy.

There were significant changes in the total symptom scores and somatic symptom scores of expectant fathers for the different stages of pregnancy; however, no significant stage effects were found for psychiatric and key symptoms (see Table 15). During early pregnancy expectant fathers reported an average of 2.55 total symptoms. As pregnancy progressed the respondents, on a whole tended to report a larger number of total symptoms. A mean of 2.92 total symptoms was reported during middle pregnancy. However, by late pregnancy the average number of symptoms reported by the total sample was 3.34. These variations in total symptoms were significant at the .05 level. As in the case of total symptoms, the number of somatic symptoms reported during each stage of pregnancy increased as pregnancy progressed. The mean number of somatic symptoms reported increased from 1.74 in early pregnancy to 2.14 in middle pregnancy, then to 2.36 in late pregnancy. This finding was significant at the .01 level.

Stages of pregnancy interacted with race to yield significant F-values for total symptoms ($p < .05$), somatic symptoms ($p < .05$), and key symptoms ($p < .01$) (see Table 15). Illustrated in the figures which follow are differences in total, somatic, and key symptom scores between black and white respondents during early, middle, and late pregnancy. Figures 1 and 2 clearly show that as pregnancy progressed the mean total and somatic symptom scores for black expectant fathers

TABLE 16

MEANS FOR DEPENDENT VARIABLES DURING EARLY, MIDDLE, AND LATE PREGNANCY

Stage of Pregnancy	Anxiety	Dep.	Host.	Total Sat.	Symptoms			
					Total	Psych.	Somatic	Key
Early Pregnancy	5.93	11.59	7.37	58.32	2.55	.81	1.74	.42
Middle Pregnancy	6.04	12.20	7.85	58.21	2.92	.78	2.14	.56
Late Pregnancy	6.22	11.84	7.56	56.58	3.34	.98	2.36	.43

decreased; whereas scores on these same variables increased for white expectant fathers. Although mean total and somatic symptom scores were highest for black expectant fathers during early pregnancy, and lowest during late pregnancy, the opposite trend occurred for white expectant fathers. For key symptoms, black respondents reported a decline as pregnancy progressed. However, white respondents reported the fewest number of key symptoms during early pregnancy, the number peaked at middle pregnancy, and a slight drop occurred in late pregnancy. Despite the differences in the trends between black and white expectant fathers, total, somatic, and key symptom scores for black respondents remained consistently higher than those of white respondents for each stage of pregnancy. The significant differences in the symptom scores for black versus white respondents, during the three stages of pregnancy, have been discussed previously (see section on race as a factor).

Stage of pregnancy also interacted with planned pregnancy and yielded an F-value significant at the .05 level for key symptoms. Figure 4 shows that expectant fathers with unplanned pregnancies consistently had higher key symptom scores than expectant fathers with planned pregnancies. Scores for both groups were highest during middle pregnancy; however, the rise during middle pregnancy for the group of fathers with planned pregnancies was slight as compared to the rise for the unplanned pregnancy group.

The multivariate analysis with anxiety, depression and hostility did not indicate a significant effect by stage of pregnancy alone

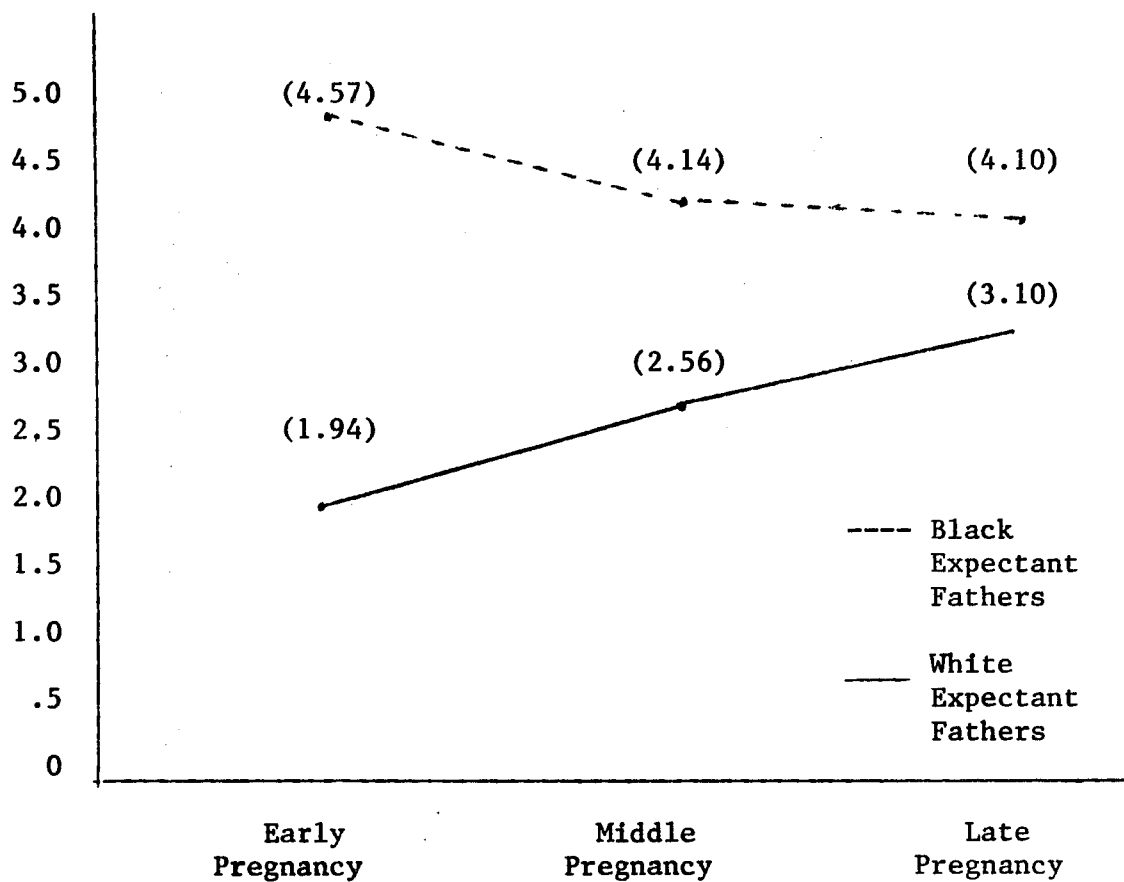


Figure 1. Mean total symptoms scores for black and white expectant fathers for the three stages of pregnancy.

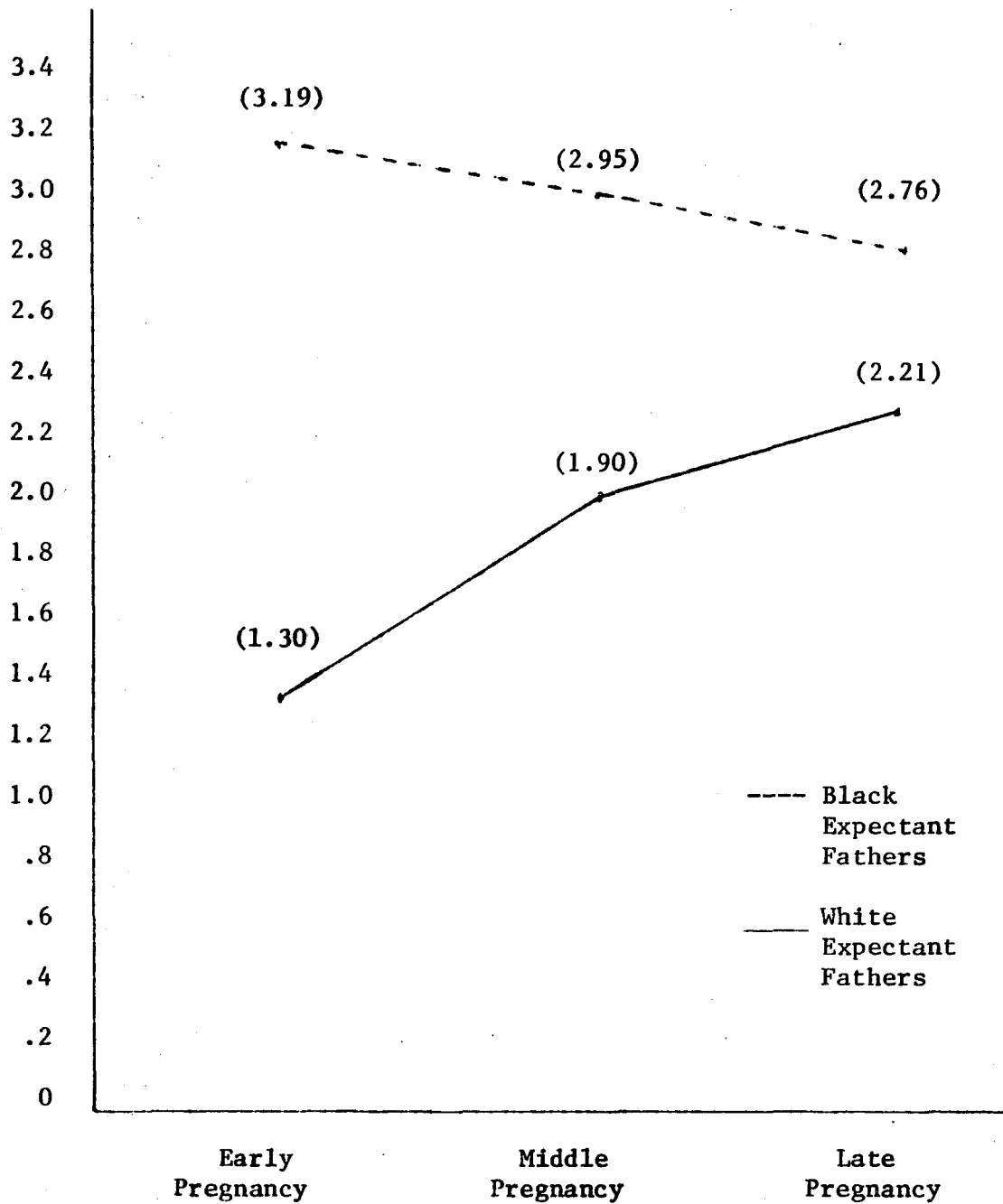


Figure 2. Mean somatic symptoms scores for black and white expectant fathers for the three stages of pregnancy.

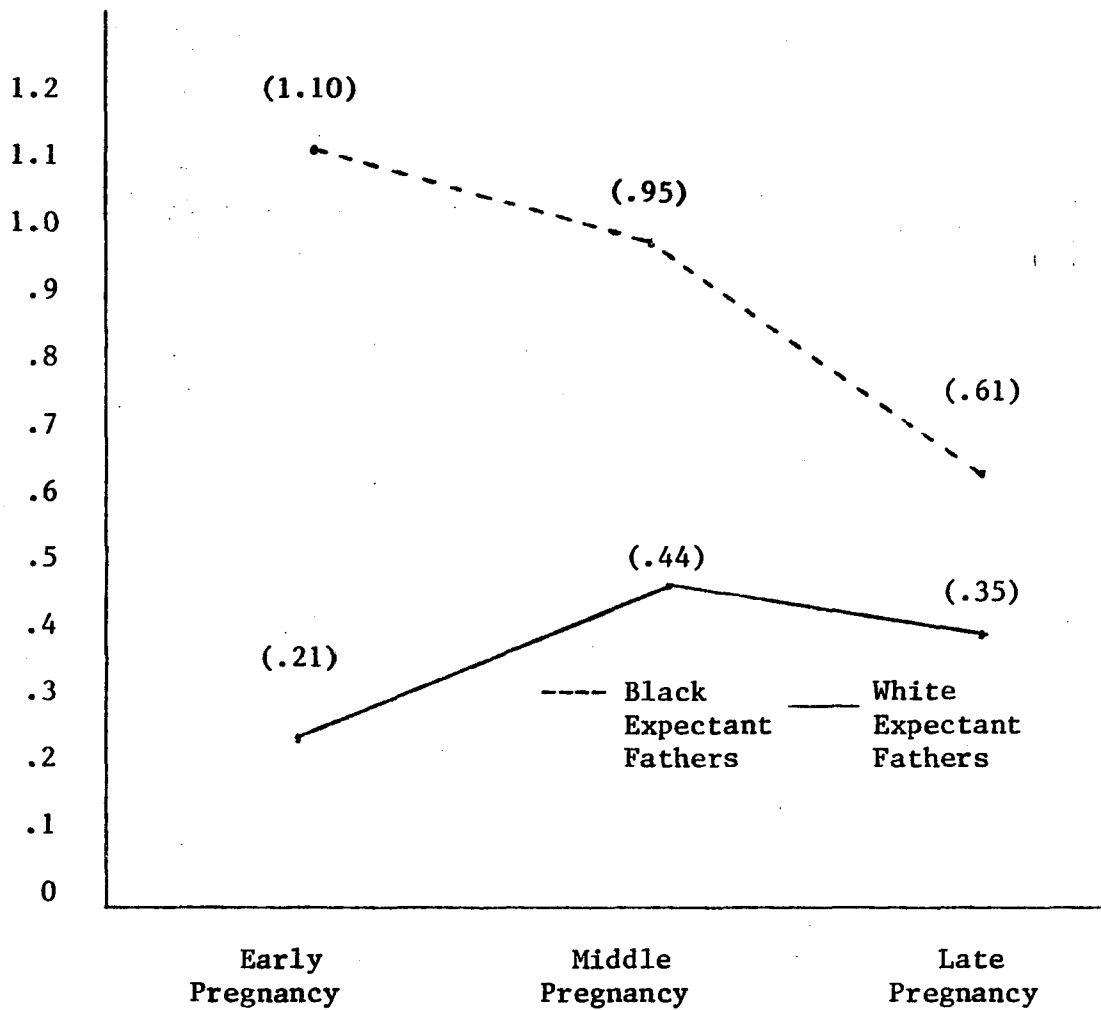


Figure 3. Mean key symptom scores of black and white expectant fathers for the three stages of pregnancy.

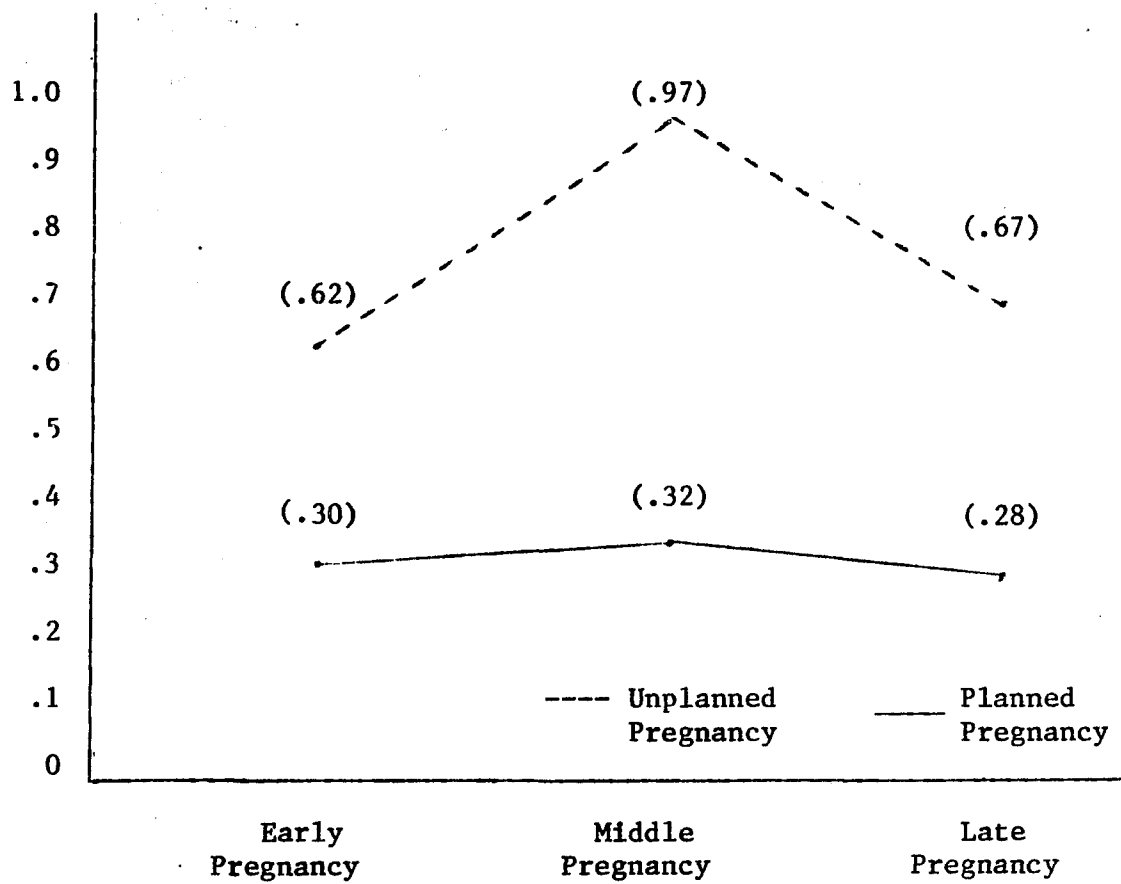


Figure 4. Mean key symptom scores for expectant fathers with planned and unplanned pregnancies.

on this group of variants. A Wilk's lambda of .97 ($p = .50$) resulted from the analysis. The multivariant analysis did yield a significant interaction between social class, planned pregnancy, and stage of pregnancy. The Wilk's criterion for this interaction was .92 ($p = .02$). As a total group, the scores for anxiety, depression, and hostility increased as pregnancy progressed for working-class expectant fathers who had unplanned pregnancies. However, the group of scores for middle-class expectant fathers who had unplanned pregnancies was highest in early pregnancy and decreased as pregnancy progressed. The group of scores were highest in middle pregnancy for working-class and middle-class expectant fathers who had planned pregnancies. Working-class expectant fathers with unplanned pregnancies also had higher total group scores in early, middle and late pregnancy as compared to middle-class expectant fathers who had reported unplanned pregnancies, and middle-class and working-class expectant fathers who had planned pregnancies, although differences were not significant. The interaction of social class with stage of pregnancy resulted in a Wilk's lambda of .93 ($p = .05$) for the group of anxiety, depression, and hostility scores. The total group of anxiety, depression, and hostility scores were lowest in early pregnancy for working-class expectant fathers and increased in both middle and late pregnancy. However, the total group of scores for middle-class expectant fathers peaked in middle pregnancy and decreased in late pregnancy. The total group of scores for anxiety, depression, and hostility was generally higher for working-class respondents than for middle-class respondents. These differences were not significant, however.

The multivariant analysis which considered the effects of stage of pregnancy on the group of key, somatic, and psychiatric symptoms revealed a Wilk's lambda of .90, which was significant at the .05 level. Additionally, the interaction of race and stage of pregnancy was significant ($p < .05$) with a Wilk's lambda of .92. As in the stage effects on total symptoms, there were increases in the scores for the group of psychiatric, somatic, and key symptoms during middle and late pregnancy. White expectant fathers reported their lowest mean scores for the group of symptoms during early pregnancy, with a steady increase in middle and late pregnancy. The group of scores for black expectant fathers was highest in early pregnancy and steadily declined in middle and late pregnancy.

The results of the data analysis partially substantiated hypothesis 5. Expectant fathers' definitions of their situations were not affected by the stage of pregnancy. Anxiety, depression, and hostility scores were not singly affected by stage of pregnancy. However, when considered as a group in multivariant analyses, there were significant variations over time in mood scores according to interactions between social class and stage of pregnancy; and social class, planned pregnancy, and stage of pregnancy. Total symptoms and somatic symptoms varied significantly as pregnancy progressed. There was also a significant stage variation in the group of psychiatric, key, and somatic symptoms. Also, the nature of the variance of total, key, and somatic symptoms were different for black expectant fathers as compared to white expectant fathers.

Correlational Investigations

Hypothesis 6 predicted that the symptomatic complaints of expectant fathers would be related to the scores for anxiety, depression, hostility, and total satisfaction (definition of the situation). The relationship of symptoms to each of these variables was tested by Pearson product-moment correlation coefficients. Total symptoms and each of the three categories of symptoms--psychiatric, somatic, and key symptoms--were each correlated with anxiety, depression, hostility, and total satisfaction scores. All of the observations available from each of the respondents were included in the analyses.

Total symptoms were found to be significantly correlated with anxiety, depression, and total satisfaction scores. The correlations of anxiety, depression, hostility, and total satisfaction with total symptoms were .21, .15, .10, and $-.41$ respectively. Anxiety was significantly correlated with total symptoms at the .0004 level, and depression was significantly correlated with total symptoms at the .01 level. Thus, as anxiety and depression scores increased, so did the total number of symptoms reported. Hostility was also positively correlated with total symptoms, but the correlation was not significant at the .05 level. Total satisfaction scores and total symptoms were negatively correlated at the .0001 level of significance. Therefore, as the expectant father's satisfaction with his situation decreased, the total number of symptoms reported increased.

Anxiety, depression, hostility, and total satisfaction scores were all significantly correlated to reports of psychiatric symptoms.

TABLE 17

CORRELATION COEFFICIENTS AND CORRESPONDING PROBABILITY LEVELS FOR HYPOTHESIS SIX
 TOTAL NUMBER OF OBSERVATIONS = 271

Variable	Anxiety		Depression		Hostility		Total Satisfaction	
	Corr. Coef.	Prob. Level	Corr. Coef.	Prob. Level	Corr. Coef.	Prob. Level	Corr. Coef.	Prob. Level
Total Symptoms	.21	.0004	.15	.01	.10	.07	-.41	.0001
Psychiatric Symptoms	.35	.0001	.25	.0001	.20	.001	-.36	.0001
Somatic Symptoms	.10	.07	.07	.23	.05	.44	-.36	.0001
Key Symptoms	.09	.15	-.01	.92	.03	.58	-.20	.0008

Correlations were .35 for anxiety ($p = .0001$), .25 for depression ($p = .0001$), .20 for hostility ($p = .001$), and $-.36$ for total satisfaction ($p = .0001$). As might be expected, a rise in anxiety, depression, and hostility scores of the expectant fathers occurred along with an increase in the number of psychiatric symptoms expressed. Somatic symptoms and key symptoms were not significantly correlated with anxiety, depression, and hostility scores. As in the case of total symptoms and psychiatric symptoms, somatic and key symptoms were negatively and significantly correlated with total satisfaction scores. Somatic symptoms and total satisfaction had a correlation of $-.36$ ($p = .0001$). The correlation coefficient for key symptoms and total satisfaction was $-.20$ ($p = .0001$). Table 17 shows the correlation coefficients and probability levels for all variables.

In summarizing the correlation of symptoms with anxiety, depression, hostility, and total satisfaction scores, the results of the analyses reveal that anxiety and depression scores increased as the total number of symptoms increased. However, the total number of symptoms increased as total satisfaction scores decreased. When the three categories of symptoms were considered separately, only psychiatric symptom scores were significantly related to anxiety, depression, and hostility scores. Neither somatic symptoms nor key symptoms were significantly related to anxiety, depression, and hostility scores. All the categories of symptoms--psychiatric, somatic, and key symptoms--were negatively and significantly correlated with total satisfaction scores.

Correlational analyses were also performed to determine whether expectant fathers' total satisfaction scores (definitions of the situation) were related to anxiety, depression, and hostility scores. Hypothesis 7 predicted that total satisfaction would decrease as anxiety, depression, and hostility increased. The correlational analyses supported this prediction. The respective correlations of anxiety, depression, and hostility scores with total satisfaction scores were $-.35$, $-.28$, and $-.26$. Each of these correlations were significant at the $.0001$ level. Each of the eight components of the total satisfaction scores was also correlated separately with anxiety, depression, and hostility. Anxiety was found to be negatively and significantly correlated with all of the eight components except satisfaction with one's house or apartment. Depression and hostility scores were found to be negatively and significantly correlated with all of the components except satisfaction with one's financial situation and satisfaction with one's house or apartment. A presentation of these correlation coefficients and significance levels is given in Table 18. In general, the correlation coefficients indicate that anxiety, depression, and hostility scores increased as the expectant father's satisfaction with his situation decreased.

Although several of the correlation coefficients were highly significant, it should be noted that none of the correlation coefficients were above $.41$. Therefore, only low to moderate relationships were found.

TABLE 18

CORRELATION COEFFICIENTS AND CORRESPONDING PROBABILITY LEVELS FOR HYPOTHESIS SEVEN
TOTAL NUMBER OF OBSERVATIONS = 270

Variable	Anxiety		Depression		Hostility	
	Corr. Coef.	Prob. Level	Corr. Coef.	Prob. Level	Corr. Coef.	Prob. Level
Total satisfaction with situation	-.35	.0001	-.28	.0001	-.26	.0001
Satisfaction with:						
Work	-.22	.0002	-.15	.01	-.17	.005
House or apartment	-.05	.41	-.00	.96	.03	.68
Financial situation	-.16	.01	-.11	.08	-.07	.28
Relationship with wife	-.29	.0001	-.24	.0001	-.23	.0001
Wife's health and physical condition	-.25	.0001	-.20	.0008	-.22	.0002
Sexual adjustment	-.31	.0001	-.20	.0008	-.22	.0003
Involvement in household tasks	-.26	.0001	-.25	.0001	-.25	.0001
Relationship with parents	-.29	.0001	-.27	.0001	-.24	.0001

TABLE 19

SIGNIFICANT FINDINGS FOR EACH DEPENDENT VARIABLE

Dependent Variable	Findings
Anxiety	Positively correlated with total symptoms and psychiatric symptoms. Negatively correlated with total satisfaction scores.
Depression	Positively correlated with total symptoms and psychiatric symptoms. Negatively correlated with total satisfaction scores.
Hostility	Significant interaction between social class, fathering experience, and planned pregnancy in early pregnancy, middle pregnancy, and combined data analysis. Middle-class inexperienced expectant fathers, who had reported unplanned pregnancies, had a mean hostility score significantly lower than working-class inexperienced expectant fathers with unplanned pregnancies. Positively correlated with psychiatric symptoms; negatively correlated with total satisfaction scores.
Anxiety, depression, and hostility as multivariants.	The group of scores were lowest in early pregnancy and increased as pregnancy progressed for working-class expectant fathers. For middle-class expectant fathers the group of scores peaked in middle pregnancy and dropped in late pregnancy. The group of scores increased as pregnancy progressed for working-class expectant fathers who had unplanned pregnancies. The group of scores were highest in early pregnancy for middle-class expectant fathers with unplanned pregnancies, but declined as pregnancy progressed. Working-class and middle-class men with planned pregnancies reported a slight peak in the group of scores during middle pregnancy.

TABLE 19--continued

Dependent Variable	Findings
Total satisfaction (Definition of the situation).	Experienced expectant fathers defined their situations as less satisfying than inexperienced expectant fathers during late pregnancy. Men who reported unplanned pregnancies defined their situations as less satisfying in early and middle pregnancy and for the three stages of pregnancy combined. Working-class expectant fathers defined their situations as less satisfying than middle-class expectant fathers in early, middle, and late pregnancy. In early pregnancy, white middle-class, inexperienced expectant fathers had a higher mean total satisfaction score than white, working-class inexperienced expectant fathers; and white working-class, experienced expectant fathers. Negatively correlated with anxiety, depression, hostility, total symptoms, psychiatric symptoms, somatic symptoms and key symptoms.
Total Symptoms	Men who reported unplanned pregnancies had significantly more symptoms than those who had planned pregnancies in middle and late pregnancy, and when data from all three stages were combined. Working-class expectant fathers reported more total symptoms for all stages of pregnancy, and for combined data. Black expectant fathers reported more total symptoms than white expectant fathers for early pregnancy, middle pregnancy and when data from all stages of pregnancy were combined. Total symptom scores for black expectant fathers decreased as pregnancy progressed, but increased for white expectant fathers as pregnancy progressed. For the entire sample, a larger number of total symptoms were reported as pregnancy progressed. Total symptoms correlated positively with anxiety and depression; negatively correlated with total satisfaction scores or definition of the situation.

TABLE 19--continued

Dependent Variable	Findings
Psychiatric Symptoms	<p>During middle pregnancy, men with unplanned pregnancies had higher mean psychiatric symptom scores than men with planned pregnancies. Working-class expectant fathers had mean scores higher than middle-class men in early and middle pregnancy, and for data combined from the three stages of pregnancy. Black expectant fathers had higher mean psychiatric symptom scores than white expectant fathers, except in late pregnancy. In middle pregnancy, black respondents who reported unplanned pregnancies had higher mean psychiatric symptom scores than black respondents with planned pregnancies and white respondents with planned and unplanned pregnancies. White inexperienced expectant fathers had lower mean psychiatric symptom scores than white experienced expectant fathers and black respondents during middle pregnancy. Psychiatric symptoms were positively correlated with anxiety, depression, and hostility; negatively correlated with total satisfaction scores.</p>
Somatic Symptoms	<p>For entire pregnancy men who reported unplanned pregnancies had higher mean scores than men with planned pregnancies. Black expectant fathers had higher mean somatic symptom scores than white expectant fathers in early pregnancy and when data was combined for all three stage of pregnancy. The number of somatic symptoms reported increased as pregnancy progressed for the total sample. However, somatic symptom scores decreased for black fathers as pregnancy progressed, and increased for white expectant fathers as pregnancy progressed. Somatic symptoms were negatively correlated with total satisfaction scores.</p>
Key Symptoms	<p>Black expectant fathers indicated more key symptoms than white expectant fathers for early and middle pregnancy, and when the</p>

TABLE 19--continued

Dependent Variable	Findings
Key Symptoms-- <u>continued</u>	<p>stage data was combined. More key symptoms were reported in early pregnancy by working-class men than middle-class expectant fathers. More key symptoms were reported by working-class expectant fathers than middle-class subjects when data from the three stages of pregnancy were combined. Expectant fathers who reported unplanned pregnancies had higher mean key symptoms scores than those with planned pregnancies during middle pregnancy and when data from all stages of pregnancy were combined. In middle pregnancy, experienced fathers with unplanned pregnancies had higher mean key symptom scores than inexperienced expectant fathers with unplanned pregnancies and respondents with planned pregnancies. Black inexperienced fathers reported higher mean key symptom scores than black experienced expectant fathers and white experienced and inexperienced expectant fathers. Black respondents reported a decline in mean key symptom scores as pregnancy progressed. White expectant fathers reported their lowest number of key symptoms in early pregnancy, with an increase in middle pregnancy and a slight decrease in late pregnancy. Men who reported unplanned pregnancies reported a large peak in key symptoms during middle pregnancy, whereas the increase reported by men with planned pregnancies was minimal during middle pregnancy. Key symptoms were negatively correlated with total satisfaction scores.</p>
Psychiatric, somatic, and key symptoms as multivariants.	<p>Working-class respondents reported mean scores higher than middle-class expectant fathers for the group of symptoms. Men with unplanned pregnancies reported mean scores higher than men with planned pregnancies. Black expectant fathers had</p>

TABLE 19--continued

Dependent Variable	Findings
Psychiatric, somatic, and key symptoms as multivariants-- <u>continued</u>	higher mean scores for the group of symptoms than white expectant fathers. The scores for the group of symptoms increased as pregnancy progressed.

Other Findings

Symptom Manifestation

This section of the data analysis will provide descriptive information on the occurrence of symptoms in expectant fathers during pregnancy. A presentation of the frequencies for the numbers of symptoms reported, and frequencies for specific symptoms is reported.

When all of the three stages of pregnancy were considered for each respondent, 79 (87%) of the sample had reported at least one symptom. However, 28 (31%) had reported two symptoms or less during the entire study. When somatic symptoms alone were considered, 75 (82.4%) of the expectant fathers indicated that they had at least one somatic symptom during the course of the study. Thirty-two percent reported one somatic symptom or less; and 36% reported two somatic symptoms or less as indicated when data from the three stages of pregnancy were combined for each subject.

When the frequencies of total symptoms which were reported in each stage were studied, an interesting trend emerged. The number of total symptoms reported by any one respondent ranged from 0 to 14 in early pregnancy; 0 to 17 in middle pregnancy; and 0 to 16 in late pregnancy. In early and middle pregnancy 64 (70%) of the expectant fathers reported symptoms. However, in late pregnancy 69 (76%) reported symptoms. Therefore, the number of men reporting symptoms was higher in late pregnancy than in the two earlier stages. Similarly, each expectant father tended to report more total symptoms as pregnancy

progressed. Whereas, only 30 (33%) of the respondents reported three or more symptoms in early pregnancy; 37 (41%) reported three or more in middle pregnancy; and 42 (46%) reported three or more in late pregnancy. This increase in the number of symptoms reported during the progression of pregnancy is more apparent from the total number of symptoms reported by all respondents during each stage of pregnancy. A total of 232 symptoms were reported in early pregnancy, 266 in middle pregnancy, and 295 in late pregnancy.

More expectant fathers reported somatic symptoms as pregnancy progressed. Fifty-four (59%) of the sample reported somatic symptoms in early pregnancy. Corresponding numbers were 58 (64%) for middle pregnancy, and 65 (71%) for late pregnancy. The most somatic symptoms reported by an expectant father at any stage of pregnancy was 14 during middle pregnancy. While 24% of the men reported three or more somatic symptoms in early pregnancy, 35% and 34% reported three or more somatic symptoms in middle and late pregnancy respectively.

For key symptoms, 22 (24%) of the respondents reported key symptoms in early pregnancy; 36 (40%) in middle pregnancy; and 29 (32%) in late pregnancy. The respondents reported slightly more psychiatric symptoms in late pregnancy than in early and middle pregnancy. Thirty-eight (42%) of the expectant fathers reported psychiatric symptoms in early and middle pregnancy; 40 (44%) reported psychiatric symptoms in late pregnancy.

Tables 20 through 23 present the frequencies for the number of total symptoms, somatic symptoms, key symptoms, and psychiatric symptoms reported during each stage of pregnancy.

TABLE 20
 FREQUENCIES FOR THE NUMBER OF TOTAL SYMPTOMS
 REPORTED DURING EACH STAGE OF PREGNANCY

Number of Total Symptoms	Early Pregnancy		Middle Pregnancy		Late Pregnancy	
	N	%	N	%	N	%
0	27	30	27	30	22	24
1	21	23	12	13	17	19
2	13	14	12	16	10	11
3	8	9	8	9	8	9
4	4	4	3	3	8	9
5	6	7	7	8	5	6
6	1	1	9	10	3	3
7	1	1	2	2	4	4
8	2	2	2	2	2	2
9	4	4	2	2	6	7
10	1	1	1	1	2	2
11	1	1	1	1	2	2
12	0	0	1	1	1	1
13	0	0	0	0	0	0
14	2	2	0	0	0	0
15	0	0	0	0	0	0
16	0	0	0	0	1	1
17	0	0	1	1	0	0

Note: Percentages have been rounded to the nearest whole number.

TABLE 21

FREQUENCIES FOR THE NUMBER OF SOMATIC SYMPTOMS
REPORTED FOR EACH STAGE OF PREGNANCY

Number of Somatic Symptoms	Early Pregnancy		Middle Pregnancy		Late Pregnancy	
	N	%	N	%	N	%
0	37	41	33	36	26	29
1	21	23	15	16	24	26
2	11	12	11	12	10	11
3	4	4	11	12	7	8
4	7	8	4	4	7	8
5	4	4	9	10	5	6
6	3	3	2	2	3	3
7	0	0	4	4	2	2
8	2	2	0	0	4	4
9	0	0	0	0	0	0
10	1	1	1	1	2	2
11	1	1	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	1	1
14	0	0	1	1	0	0

Note: Percentages have been rounded to the nearest whole number.

TABLE 22

FREQUENCIES FOR THE NUMBER OF KEY SYMPTOMS
REPORTED DURING EACH STAGE OF PREGNANCY

Number of Key Symptoms	Early Pregnancy		Middle Pregnancy		Late Pregnancy	
	N	%	N	%	N	%
0	69	76	55	60	62	68
1	10	11	23	25	19	21
2	8	9	11	12	10	11
3	4	4	2	2	0	0

Note: Percentages have been rounded to the nearest whole number.

TABLE 23

FREQUENCIES FOR THE NUMBER OF PSYCHIATRIC SYMPTOMS
 REPORTED DURING EACH STAGE OF PREGNANCY

Number of Psychiatric Symptoms	Early Pregnancy		Middle Pregnancy		Late Pregnancy	
	N	%	N	%	N	%
0	53	58	53	58	51	56
1	19	21	17	19	17	19
2	9	10	13	14	6	7
3	4	4	6	7	9	10
4	5	6	0	0	7	8
5	1	1	2	2	1	1

Note: Percentages have been rounded to the nearest whole number.

TABLE 24

NUMBER OF EXPECTANT FATHERS REPORTING EACH
SYMPTOM DURING EACH STAGE OF PREGNANCY

Symptom	Early Pregnancy	Middle Pregnancy	Late Pregnancy	Total
Abdominal Pain (S)	8	7	12	27
Backaches (S)	12	21	23	56
Body aches (S)	9	13	16	38
Constipation (S)	6	6	9	21
Diarrhea (S)	6	3	9	18
Difficulty concentrating (P)	10	7	17	34
Difficulty sleeping (P)	22	22	22	66
Dizziness (S)	4	3	8	15
Faintness (S)	1	0	1	2
Fatigue (S)	20	20	19	59
Food Cravings (K, S)	11	14	11	36
Frequent headaches (P)	5	7	7	19
Frequent urination (S)	8	11	16	35
Heart palpitations (P)	2	3	0	5
Heartburn (S)	8	11	14	33
Increased appetite (K, S)	12	21	16	49

K = Key Symptom

P = Psychiatric Symptom

S = Somatic Symptom

TABLE 24--continued

Symptom	Early Pregnancy	Middle Pregnancy	Late Pregnancy	Total
Indigestion (S)	9	13	16	38
Irritability (P)	14	12	22	48
Leg aches (S)	7	8	12	27
Loss of appetite (K, S)	5	4	2	11
Muscle cramps (S)	3	2	3	8
Nausea (K, S)	5	3	1	9
Nosebleeds (S)	2	2	1	5
Numbness of skin (S)	2	2	1	5
Profuse perspiration (S)	5	4	2	11
Restlessness (P)	20	18	20	58
Shortness of breath (S)	1	3	1	5
Tingling of the skin (S)	0	2	1	3
Toothaches (K, S)	3	9	9	21
Trembling (S)	1	2	1	4
Vomiting (K, S)	2	0	0	2
Weight gain (S)	9	13	12	34
TOTAL	232	266	295	793

S = Key Symptom

P = Psychiatric Symptom

S = Somatic Symptom

Frequencies of each of the symptoms reported by the expectant fathers are presented in Table 24. The symptom most frequently reported during pregnancy was difficulty sleeping. Twenty-two men reported this psychiatric symptom during each of the three stages of pregnancy. The four most common complaints submitted by expectant fathers during each stage of pregnancy were: Difficulty sleeping, fatigue, restlessness, and irritability in early pregnancy; difficulty sleeping, backaches, increased appetite, and fatigue in middle pregnancy; and backaches, difficulty sleeping, irritability and restlessness in late pregnancy. Among the key symptoms, increased appetite was the most frequent complaint offered.

Difficulties, Concerns, and Support Agents of Expectant Fathers

During the period of expectant fatherhood, many adjustments are required. In order to obtain a better understanding of the impact of expectant fatherhood on the respondents, each respondent was asked to provide information regarding the concerns of difficulties faced by him during pregnancy.

In early pregnancy, respondents provided information about their initial reactions to their wives' pregnancies. The majority of the men expressed pleasure in their initial reactions. Nineteen (21%) of the men said that they were exuberant, and 59 (65%) of the men said they were pleased when informed of the pregnancy. Although 37% of the sample reported that pregnancy was unplanned, only 13% of the respondents said they were surprised by the pregnancy. Four of the

expectant fathers said their reactions were neutral. Only about 8% of the respondents indicated negative reactions upon being informed of their wives' pregnancies. Two men said that they became depressed, 1 respondent indicated that he was horrified, and 4 men said that they were displeased.

In late pregnancy, respondents provided information about their concerns and support agents during pregnancy. In an attempt to discern if a large number of the men in the sample considered their experiences during their wives' pregnancies as unique, each respondent was asked: "Do you think that your experiences during your wife's pregnancy have been similar to those of most other expectant fathers?" The majority of the sample--85% to be exact--felt that their experiences were common to expectant fatherhood. Twelve of the men felt that their experiences had been different. Two respondents did not reply.

Of the 12 men who felt that their experiences had been different, 8 elaborated on their opinions. Two expectant fathers felt that complications that their wives had with their pregnancies made their experiences different from others. One respondent said that he had become unemployed, and had to "look for a job" during his wife's pregnancy. Another respondent felt that his wife had an unusually negative and "fatalistic" attitude during the entire pregnancy. Three expectant fathers explained that their personal situations had been unusually positive. Several of the men's quotations are given:

- Quotation 1: "I know far more than most (expectant fathers) about what is taking place and why."
- Quotation 2: "Our situation has been excellent and pregnancy has been very easy for my wife."
- Quotation 3: "I think my experiences are very different. I say this because most fathers I talked with say their wives were irritable. My wife is still very darling."
- Quotation 4: "I don't feel like anyone else could feel exactly like me."

From the comments that were provided by these expectant fathers, it seems that interferences with pregnancy and one's personal situation, as well as the belief that one's personal circumstances were unusually positive contributed to the men's attitudes that their experiences during pregnancy were unique.

Because pregnancy may have quite an impact on those most intimately affected by it, it is not surprising that expectant fathers might have some difficulties while they are awaiting the arrival of their newborns. Sixty-five expectant fathers, or 71% of the respondents, indicated that they had difficulty coping with certain factors since their wives became pregnant. Several of the respondents pointed out, however, that they did not experience much difficulty coping although these factors did raise special concern. Fifteen of the 91 respondents conveyed that they did not have any special difficulties during pregnancy. Eleven respondents chose not to comment.

The difficulties communicated by the 65 respondents fell into five major categories: (a) Difficulties related to the expectant

TABLE 25
 DIFFICULTIES EXPRESSED BY EXPECTANT FATHERS
 DURING PREGNANCY

Problem or Difficulty	Number of Respondents	% of Sample
Difficulties related to relationship with wife:		
Wife's moodiness	11	12.1
Wife's irritability	9	9.9
Wife's complaining	4	4.4
Difficulty communicating with wife	4	4.4
Wife's lack of patience	2	2.2
Totals	30	33.0
Difficulties related to the protector and provider aspects of role:		
Increased financial responsibilities	15	16.5
Wife's need for more attention and care	3	3.3
Loss of job	2	2.2
Work schedule does not allow adequate time for wife	1	1.1
Lack of adequate space for baby	1	1.1
Totals	20	24.2
Difficulties related to wife and/or unborn baby:		
Wife's sleepiness and decreased activity level	6	6.6

TABLE 25--continued

Problem or Difficulty	Number of Respondents	% of Sample
Wife's health	6	6.6
Unborn baby's health and condition	3	3.3
Wife's overactivity	2	2.2
Wife's worrying	1	1.1
Wife's increased appetite	1	1.1
Rh factor difference in the parents which could affect the baby	1	1.1
	20	22.0
Totals		
Difficulties related to sexual adjustments during pregnancy:		
Lack of sexual intercourse	3	3.3
Decrease in sexual activity	12	13.2
	15	16.5
Totals		
Difficulties related directly to self:		
Difficulty sleeping	3	3.3
Difficulty controlling own emotions	2	2.2
Increased household responsibilities	2	2.2
Difficulty concentrating	1	1.1
	8	8.8
Totals		

father's relationship with his wife, (b) difficulties related to the protector and provider aspects of the husband-father role, (c) difficulties or concerns related to the wife's and/or unborn baby's welfare, (d) difficulties related to sexual adjustments during pregnancy, and (e) difficulties related directly to self.

The problems reported most frequently by the expectant fathers were related to their relationships with the pregnant spouse. Thirty-three percent of the sample indicated difficulties in this area. Among those reported were the wife's moodiness, irritability, complaining, and lack of patience, and difficulty communicating with the wife.

Difficulties related to the protector and provider aspects of the husband-father role were communicated by 24% of the sample. The most common problem in this area was the increased financial responsibilities brought about by the pregnancy. Fifteen expectant fathers listed increased financial responsibilities as a concern. Other problems which were expressed include the wife's need for more attention and care, lack of adequate space for the baby, inadequate time allowed for the wife due to a heavy work schedule, and loss of job.

Twenty-two percent of the total sample listed difficulties related to their wife's and/or baby's welfare. The wife's health, the wife's sleepiness and decreased activity level were the major concerns in this area. Others included the wife's worrying, the wife's overactivity, Rh factor differences in the parents, the baby's health and condition, the wife's increased appetite, and the wife's worrying.

Sixteen percent of the sample listed changes in sexual activity during pregnancy as a concern. More specifically, these concerns included lack of sexual intercourse, and a decrease in sexual activity.

About 9% of the men indicated difficulties related directly to themselves. Difficulty sleeping, difficulty concentrating, difficulty controlling own emotions, and increased household responsibilities were among the concerns expressed.

Several other difficulties were also expressed. A list of the problems and difficulties communicated by the expectant fathers are given in Table 25.

The expectant fathers were also queried as to the support agents utilized when they had questions, or concerns relating to their wives' pregnancies. The majority of the men (77%) communicated that their wives were usually consulted. Health professionals were more likely to be consulted next to the wife. The nurse and/or nurse-childbirth educator was consulted by 33% of the men, and 31% had consulted a physician. Next to health professionals, some family member was likely to be talked with. Sixteen percent of the men said they had talked with their own mothers, and 12% had consulted their mothers-in-law. Only 3 of the men indicated that they had consulted with their own fathers, and only 2 men had consulted their fathers-in-law. Two of the men had talked with their sisters regarding their concerns, and 1 talked with a brother-in-law. Twenty-three (25%) of the men had consulted a close friend. Two of the expectant fathers replied that

TABLE 26
SUPPORT AGENTS UTILIZED BY EXPECTANT FATHERS

Support Agent	N	% of Sample
No one	7	8
Wife	70	77
A close friend	23	25
Mother	15	16
Mother-in-law	11	12
Father	3	3
Father-in-law	2	2
Sister	2	2
Brother	0	0
Nurse or Nurse-childbirth Educator	30	33
Medical doctor	28	31
Others:		
Had wife to ask doctor questions	2	2
Brother-in-law	1	1

Note: Percentages have been rounded to the nearest whole number.

they had their wives ask their obstetrician questions for them since they had no direct contact with him. Only 7 of the men indicated that they had not talked with anyone (see Table 26).

Briefly summarizing the findings of this study, 6 of the 7 hypotheses were not completely supported. Fathering experience, pregnancy planning, social class, racial background, nor stage of pregnancy directly affected anxiety, depression, or hostility levels singly. Total satisfaction scores or definition of the situation were most affected by social class and pregnancy planning. Symptom manifestation in expectant fathers was most affected by the factors of race, social class, and stage of pregnancy.

Eighty-seven percent of the sample reported at least 1 symptom during the course of pregnancy. Expectant fathers tended to report more symptoms as pregnancy progressed.

In general, most expectant fathers were pleased upon hearing about their wives' pregnancies, and felt that their experiences during pregnancy were common to expectant fatherhood. Seventy-one percent of the expectant fathers indicated that they had difficulty coping with some factor during their wives' pregnancies. The expectant fathers consulted their wives most often when they had special concerns which related to the pregnancy.

CHAPTER V

DISCUSSION OF THE RESULTS

This study was designed to investigate symptom manifestation and variations in the general emotional state of expectant fathers during the course of pregnancy. Assumptions underlying crisis theory were used to formulate the hypotheses in order to help determine which expectant fathers were more likely to experience increased emotional stress and symptom manifestation during pregnancy.

The application of crisis theory to the empirical investigation of expectant fatherhood is a method of scientific inquiry not previously taken, although much speculation has been made about the crisis nature of expectant fatherhood (Arnstein, 1972; Hogenboom, 1967; Hott, 1976; Colman, 1969). The nature of the study indicated the statistical comparison of several groups of expectant fathers in order to test the applicability of crisis theory to the phenomenon of expectant fatherhood. Hence, the major focus of this discussion is centered on the interpretation of the statistical findings presented in the previous chapter. Where indicated, the discussion will extend to include descriptive findings which have been reported. For consistency in the discussion of the results, this chapter will proceed in the order in which the hypotheses have been written and the findings have been presented in the preceding chapter. For ease of presentation, each

hypothesis will be restated, and the related discussion will follow.

Fathering Experience

Hypothesis 1. Inexperienced expectant fathers will complain of more symptoms; will have higher anxiety, depression, and hostility scores on the MAACL; and will define their situations as less satisfying than experienced expectant fathers.

Crisis theory assumes that the role transitions may threaten an individual's functional capacity. In addition, maturational crisis theorists posit that the individual is faced with stress-producing transition points as he matures and moves into a novel role (Rapoport, 1963). Stress is expected to occur at these transition points because of inner conflicts as the individual moves into a new status or role. If an individual has faced a crisis of a similar nature previously, then he is not expected to experience the degree of stress as he would if he had not had the experience. These are the basic theoretical bases for the statement of Hypothesis 1.

The findings of this study do not support Hypothesis 1. Inexperienced expectant fathers did not indicate more stress during pregnancy than experienced expectant fathers based on their mood scores. Had inexperienced expectant fathers reported significantly higher mean anxiety, depression, and hostility scores than experienced men, then this would have been support for Hypothesis 1. There was no statistical difference between the mood scores of inexperienced expectant fathers and experienced expectant fathers. Therefore, from

the data provided, neither of the groups of men had a stress level higher than the other.

Since a basic assumption of crisis theory is that one's definition of the situation may determine whether an event is perceived as a crisis or not, it was expected that prior experience with fatherhood would bring about a contrast in the definitions of personal situations. Again, no consistent statistical differences were found between experienced and inexperienced expectant fathers. In the one case where statistical differences was found, it was in the opposite direction of that predicted by Hypothesis 1. It was expected that experienced expectant fathers would define their situations more positively because of their prior experience with expectant fatherhood and fatherhood. Additionally, the experience with expectant fatherhood was not novel, and neither was the experienced father being socialized into a new role or status. The findings indicated that experienced expectant fathers tended to define their situations as less satisfying than inexperienced expectant fathers. Two explanations are offered for the discrepancy between the prediction and the direction of the findings. It is possible that the lack of or decreased novelty in the expectant father role for the experienced fathers may have contributed to their generally lower definitions of their situations. An alternative explanation is that simultaneous functioning in the expectant father role in addition to the father role could have placed additional strains on experienced fathers which could have affected their definitions of their situations negatively.

Although experienced expectant fathers were predicted to have fewer symptoms than inexperienced expectant fathers, this portion of Hypothesis 1 was also not supported. There were no significant differences between experienced and inexperienced expectant fathers' symptom scores. This finding is in agreement with the findings of Trethowan and Conlon (1965) who found that men who were expecting their first child were no more liable to symptoms than men who were expecting a later child.

Planned and Unplanned Pregnancy

Hypothesis 2. Expectant fathers who report that pregnancy was not planned will complain of more symptoms; will have higher anxiety, depression, and hostility scores on the MAACL; and will define their situations as less satisfying than expectant fathers who report that pregnancy was planned.

Hill (1958, p. 140) has defined a stressor or crisis-precipitating event as "a situation for which the family has had little or no prior preparation and must therefore be viewed as problematic." If a major event is unexpected or unplanned, then it is more likely to be stress-producing, particularly if the event requires adjustments and has long-range implications.

Expectant fathers who reported that pregnancy was not planned were likely not to have as much prior preparation for the pregnancy as men who reported planned pregnancies; and, therefore, were expected to experience more stress. Although the mean scores for anxiety, depression, and hostility for the group of men who reported unplanned pregnancies were slightly higher than for the group with planned

pregnancies, none of the differences reached statistical significance. One possible explanation for the lack of statistical differences between the group of men with unplanned pregnancies and the group of men with planned pregnancies is that the men with unplanned pregnancies may not have generally viewed the pregnancies as problematic, and thus did not experience significantly greater stress. This contention is supported by the descriptive data which indicated that only 8% of the sample had negative initial responses upon being informed of their wives' pregnancies although 37% of the sample reported unplanned pregnancies.

Men who report unplanned pregnancies are more likely not to be prepared for pregnancy than men with planned pregnancies. Therefore men with unplanned pregnancies were predicted to report that their situations were less satisfying than men with planned pregnancies. The findings of this study were consistent with this prediction since men with unplanned pregnancies defined their situations as less satisfying in early and middle pregnancy than expectant fathers with planned pregnancies.

The following is a possible explanation for the outcome of the findings. First, due to their lack of preparation for pregnancy, men with unplanned pregnancies could have perceived their situations as less satisfying because of the impact of the unexpected pregnancies on their immediate lives. However, by late pregnancy the men who had reported unplanned pregnancies may have recovered substantially from the impact of the unexpected pregnancies. Therefore, the definitions

of personal situations of men with planned and unplanned pregnancies were not statistically different in late pregnancy. This is a likely explanation since the men with unplanned pregnancies did report a mean satisfaction score in late pregnancy which was somewhat higher than their mean scores in early and middle pregnancy.

As predicted by Hypothesis 2, the expectant fathers with unplanned pregnancies had significantly higher mean symptom scores than men with planned pregnancies. In middle pregnancy, the group of men with unplanned pregnancies had higher mean scores for all the categories of symptoms. However, in early pregnancy somatic symptom scores were significantly higher for the men with unplanned pregnancies, and in late pregnancy total and somatic symptom scores were significantly higher. Although other explanations have been offered to explain symptom manifestation during pregnancy (Van Leeuwen, 1966; Jessner, Weigert & Foy, 1970), the explanations offered by Trethowan (1972) seem most applicable in explaining why men with unplanned pregnancies reported significantly more symptoms than men with planned pregnancies. Symptoms may be precipitated by anxiety and concern over the pregnancy. Since the pregnancies were not planned, then it is only natural that additional concern could have been felt by the men with unplanned pregnancies. The second explanation offered by Trethowan (1972) suggests that feelings of ambivalence toward the unborn child and spouse may precipitate symptom manifestation, due to the expectant father's unconscious use of reaction-formation against

concealed or repressed hostility. It is likely that men who reported unplanned pregnancies might have felt more ambivalence than men with planned pregnancies who had better prepared themselves for the impact of expectant fatherhood.

Social Class

Hypothesis 3. There will be a difference in the definitions of situations; complaints of symptoms; and the anxiety, depression, and hostility scores on the MAACL between working-class and middle-class expectant fathers.

The assumptions underlying crisis theory imply that one's reaction to a crisis-precipitating event will be influenced by his definition of the situation. Social factors are assumed to influence one's perception of an event, his reaction to a situation, and his definition of the situation. If this is the case, then middle-class and working-class expectant fathers are likely to react differently to pregnancy and expectant fatherhood.

The results of this study showed that working-class expectant fathers generally had mean anxiety, depression, and hostility scores which were slightly higher than those of middle-class expectant fathers. Contrary to the prediction of Hypothesis 3, these differences were not statistically significant. It is likely that any social-class differences in the emotional reactions to pregnancy were not great enough to be detected in the mood scores of the Multiple Affect Adjective Check List. As indicated by the results of the study, there may not have been any actual differences in the mood states of the two social class groups during pregnancy.

The findings of the study support the contention that there are social-class influences on the way that an expectant father defines his personal situation during pregnancy. Throughout pregnancy, working-class men defined their personal situations as significantly less satisfying than middle-class expectant fathers. This finding may have resulted because the personal situations of working-class men were actually less satisfying than those of the middle-class men. Hill (1971) posits that one's definition of the situation is affected by the degree of hardships created by an event, and the family resources available. It is not surprising that working-class men defined their situations as less satisfying, since generally, working-class families have fewer financial resources and pregnancy is more likely to be a hardship.

Working-class expectant fathers had significantly higher symptom scores than middle-class expectant fathers. Hypothesis 3 predicted that there would be a difference in the number of symptoms reported by middle-class and working-class respondents. One explanation for this difference between the two social-class groups is that social heritage may dictate appropriate paternal behavior during pregnancy. It may be that identification with the pregnant spouse via symptom manifestation in the male during pregnancy is expected and thus more readily expressed in working-class expectant fathers than in middle-class expectant fathers. Definitely, this is a question worth further scientific investigation.

Racial Background

Hypothesis 4. There will be a difference in the definitions of situations; complaints of symptoms; and the anxiety, depression, and hostility scores on the MAACL between black and white expectant fathers.

Just as social factors are assumed to affect one's perception of an event, his reaction to a situation, and his definition of a situation, one assumption of crisis theory is that cultural factors may have the same affect. Blacks or Afro-Americans comprise a sub-culture in American society. Therefore, racial differences in the reactions to pregnancy would not be surprising.

The results of this investigation did not reveal any racial differences in expectant fathers' anxiety, depression, and hostility scores, nor in their definitions of personal situations. This finding is likely due to convergence in black and white cultural experiences. Therefore, cultural commonalities might have dictated similar emotional reactions by black and white expectant fathers, and similar definitions of personal situations in relation to pregnancy. The cultural experiences of the black and white expectant fathers in this study may not have been divergent enough to bring about significant differences in their mood states and definitions of personal situations.

Cultural divergence was indicated in the symptom manifestation of black and white expectant fathers. Black expectant fathers reported significantly more symptoms than white expectant fathers during pregnancy. Cultural heritage may explain this difference in findings. Identification with the pregnant spouse via symptom

manifestation may be a cultural expectation, or at least not a cultural prohibition, in the black subculture. Black expectant fathers also had significantly higher psychiatric symptom scores in early and middle pregnancy than white expectant fathers. This points to another possibility in the explanation of the higher levels of symptoms reported by black expectant fathers. More concern during their wives' pregnancies may have precipitated more expression of symptoms by black expectant fathers.

Stages of Pregnancy

Hypothesis 5. The stage of his wife's pregnancy will be related to the expectant father's complaints of symptoms; his definition of his situation; and his anxiety, depression, and hostility scores on the MAACL.

As pointed out earlier, expectant fatherhood has been dubbed as a crisis period. If expectant fatherhood is truly a crisis period, then adjustments to the crisis, which would lead to alterations in the reactions of expectant fathers, can be expected during the course of pregnancy. Therefore, it was expected that these alterations would be reflected by variations in mood scores, definitions of the situation, and possibly symptoms as pregnancy progressed.

When anxiety, depression, and hostility scores were considered separately, no significant variations in either of the mood scores were detected during the course of pregnancy. A multivariate analysis which considered the effects of stage of pregnancy on mood scores as a group also did not reveal any significant variations over the stages of pregnancy. Thus, when all expectant fathers' mood scores were

examined over the course of pregnancy, no variations in mood were detectable by anxiety, depression, and hostility scores on the MAACL. This finding may have been due to lack of actual variation, or variations may not have been detected by the MAACL.

Multivariant analyses did indicate a significant variation in the group of mood scores for working-class and middle-class expectant fathers. The group of scores for working-class expectant fathers increased as pregnancy progressed, whereas the group of scores peaked in middle pregnancy for middle-class respondents and dropped in late pregnancy. If expectant fatherhood is truly a crisis period, and if higher mood scores are indicators of stress, then this finding implies that the stress of working-class expectant fathers is more lasting than for middle-class expectant fathers. The drop in the group of mood scores for middle-class expectant fathers in late pregnancy may be indicative of a recovery process. The continued increases in the group of mood scores are likely to be indicative of increasing general stress in working-class expectant fathers as delivery approaches.

Multivariant analysis with the group of mood scores also revealed an interaction for social class, planned pregnancy, and stages of pregnancy. The group of scores for anxiety, depression, and hostility increased with the progression of pregnancy for working-class expectant fathers with unplanned pregnancies. The group of scores for middle-class expectant fathers with unplanned pregnancies was highest during early pregnancy and declined with the progression

of pregnancy. Working-class and middle-class expectant fathers who had planned pregnancies reported their highest scores in middle pregnancy, and a decline in mood scores in late pregnancy. As previously indicated, these findings implicate variation in the adjustment pattern to expectant fatherhood by middle-class and working-class expectant fathers with unplanned pregnancies. It appears from these findings that middle-class expectant fathers with unplanned pregnancies tend to recover from the stresses associated with unplanned expectant fatherhood more readily than working-class men with unplanned pregnancies. Stress associated with expectant fatherhood increased as pregnancy progressed for working-class men with unplanned pregnancies. Working-class and middle-class men with planned pregnancies seemed to have had a delayed stress reaction to expectant fatherhood in middle pregnancy, followed by a recovery period which was already underway by late pregnancy. A social-class factor which may have influenced the reactions of these expectant fathers may have been the differences between financial, educational, and material resources of working-class and middle-class men. Greater hardships may have been posed by pregnancy on working-class men due to fewer resources from which to draw upon. The factor of an unplanned pregnancy may have further increased the stress on the working-class expectant father. Because middle-class expectant fathers are likely to have more resources to deal with an unprepared-for pregnancy, recovery from the initial stresses of the unexpected event may have been less difficult. In the

cases of middle-class and working-class expectant fathers with planned pregnancies, it is possible that the impact of expectant fatherhood may not have been felt as much in early pregnancy, but the mild impact felt by the men with planned pregnancies was somewhat delayed.

There were no significant variations in the expectant fathers' definitions of their personal situations during early, middle, and late stages of pregnancy. Therefore, the expectant fathers, as a group, did not experience common variations in their satisfaction with their personal situations as pregnancy progressed. This finding does not imply that individual variations at different stages of pregnancy did not occur, but indicates that any variations which did occur were not characteristic of the group or any specific group of expectant fathers.

The reports of total symptoms and somatic symptoms by expectant fathers increased as pregnancy progressed. Because somatic symptoms is a component of total symptoms, the variations in total symptoms during pregnancy were probably actually due to the increase in somatic symptoms. This finding is in agreement with the prediction of Hypothesis 5, but is somewhat contradictory to the findings of Trethowan and Conlon (1965). The findings of this investigation revealed a peak incidence of total and somatic symptoms in late pregnancy, whereas Trethowan and Conlon found a peak incidence of symptoms in the third month of pregnancy (early pregnancy) which steadily diminished thereafter until a slight secondary rise in late pregnancy.

The differences in the findings of this study in comparison to the Trethowan and Conlon study may be due to the different methods of data collection employed. Whereas this study collected data at three different data points during pregnancy, the Trethowan and Conlon study was retrospective in nature and included a smaller list of symptoms.

The nature of the variations of total, somatic, and key symptoms, along with the group of psychiatric, somatic, and key symptoms were influenced by race. The group of symptoms, and total and somatic symptoms were higher for black respondents in comparison to whites. These scores for black expectant fathers decreased as pregnancy progressed, but increased for white expectant fathers as pregnancy progressed. Black expectant fathers reported a decline in key symptoms as pregnancy proceeded; however, white expectant fathers reported an increase in key symptoms in middle pregnancy with a subsequent decline in late pregnancy. All of these differing patterns between symptom manifestation in black and white expectant fathers may well be due to cultural diversity in the expectations and circumstances of black and white expectant fathers which precipitate these differences.

Men with unplanned pregnancies reported greater variation in key symptoms as compared to men with planned pregnancies. Although key symptoms for the men who reported unplanned pregnancy and those who had planned pregnancies peaked during middle pregnancy, the increase in key symptoms was much more exaggerated for the men with unplanned pregnancies. The researcher is not able to offer a plausible explanation for this phenomenon.

Correlational Investigations

Hypothesis 6. Symptomatic complaints of expectant fathers will be related to their definitions of their situations; and their anxiety, depression, and hostility scores on the MAACL.

In an attempt to bring about a better understanding of the roots of symptom manifestation in expectant fathers during pregnancy, correlations of symptom scores with mood scores and total satisfaction scores were done.

As indicated in a previous section, Trethowan (1972) maintains that symptom manifestation is likely due to a state of anxiety due to concern over the pregnancy. This supposition is strengthened by the present findings as total symptom scores were positively and significantly correlated with anxiety and depression scores. Psychiatric symptom scores were even more highly correlated with anxiety, depression, and hostility scores. Thus, as mood scores increased so did the number of symptoms. Thus stress appears to be related somewhat to the symptom manifestation of expectant fathers.

Somatic and key symptom scores were not significantly correlated with anxiety, depression, and/or hostility scores. Therefore, it is not likely that stress and anxiety alone are adequate explanations for the occurrence of physical symptoms in expectant fathers.

Total, psychiatric, somatic, and key symptoms were all negatively and significantly correlated with satisfaction with one's situation. Trethowan (1970) also suggested that feelings of ambivalence about pregnancy and/or the unborn child felt by the expectant

father may encourage symptom manifestation. Since these findings reveal that symptom manifestation is likely to go up as the expectant father's satisfaction with his situation goes down, some ambivalence about the expected arrival of a baby or about the pregnancy itself may be partly responsible for symptom manifestation.

Hypothesis 7. The lower the expectant father's satisfaction with his personal situation, the higher will be his anxiety, depression, and hostility scores on the MAACL.

An assumption of crisis theory is that one's definition of the situation affects an individual's response to a stressor. Therefore, if this is truly the case, expectant fathers who define their situations as less satisfying should have relatively higher anxiety, depression, and hostility scores than the expectant fathers who define their situations more positively.

The findings of this study supported Hypothesis 7 and thus partially supported crisis theory. The mood scores were all significantly and positively correlated with definitions of personal situations. Anxiety, depression, and hostility scores increased as the prospective father's satisfaction with his situation decreased. Thus, this finding supports the assumption of crisis theory--that one's definition of the situation influences the individual's response to a stressor, and influences whether that stressor will result in a crisis for the individual. However, because of the low magnitude of the correlation coefficients, there is the implication that there are

other factors also influencing whether a stressor will result in a crisis for the individual.

Discussion of Other Findings

The descriptive statistics on symptom manifestation point to the fact that 87% of the sample reported at least one symptom during pregnancy. Liebenberg (1969) reported that 65% of the expectant fathers in her study developed symptoms. Unlike the Liebenberg sample which included white middle-class men, the sample for this study included black and working-class respondents. Since black respondents and working-class respondents were found to have significantly more symptoms, this may explain why the percentage of men reporting symptoms in this study is substantially higher than for the Liebenberg study.

Thirty-seven percent of the sample reported unplanned pregnancies, but only 8% reported negative initial reactions to pregnancy. Results of this study imply that unplanned pregnancies are not necessarily unwelcomed or unwanted since 83% of the men indicated that they were either pleased or exuberant upon hearing about the pregnancy.

Most of the expectant fathers in this study reported some difficulty or special concern encountered during their wives' pregnancies. Many of the difficulties dealt with problems in the relationship and/or communication of the expectant couple due to changes in the wife's behavior. This finding further emphasizes the impact of the pregnant spouse's behavior on the adjustment of the expectant father. The list of concerns of expectant fathers also

points to the importance of the protector and provider aspects of the expectant father's role along with the difficulties in sexual adjustment which may be faced by some expectant fathers. Furthermore, several of the expectant fathers indicated concerns related to the impact of pregnancy upon themselves. These concerns point out the impact of pregnancy upon expectant fathers and the adjustments required of them. However, since about 16% of the respondents said they had no special concerns during pregnancy, there are indications that pregnancy does not place special demands on all expectant fathers, and is not stressful to all men.

The fact that 71% of the sample utilized their wives for support emphasizes the importance of the wife to the expectant father's emotional support during pregnancy. The wife's need for the husband's support during pregnancy has been well recognized and emphasized; however, little emphasis has been given to the expectant father's need for his wife's support. The fact that health professionals were consulted by a large portion of the sample may indicate the degree of accessibility of nurses and physicians to expectant fathers. This finding also points to the need for more inclusion of expectant fathers in the prenatal regimen.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Three major purposes served as the basis for conducting this research: (a) To explore the general emotional state of expectant fathers during early, middle, and late pregnancy by studying changes in the levels of anxiety, depression, and hostility as pregnancy progressed. (b) To explore the occurrence of symptoms in expectant fathers during early, middle, and late pregnancy. (c) To determine which expectant fathers are more likely to experience symptoms and increased levels of anxiety, depression, and hostility during pregnancy by using assumptions underlying crisis theory to guide the investigation.

The purposes of this research dictated the use of the longitudinal panel design. After an initial personal contact with each subject to solicit participation, a questionnaire was mailed to each participant in early, middle, and late pregnancy. Respondents provided information on symptoms manifested and their satisfaction with their personal situations (definitions of the situation) at each data point. The Today Form of the Multiple Affect Adjective Check List was also completed by each expectant father at each data point to obtain anxiety, depression, and hostility scores.

The respondents for this research included men whose wives had received prenatal care in the offices of private obstetricians in the

Greensboro, North Carolina area. Potential respondents were contacted after their wives completed consent forms in their obstetricians' offices and provided the names, addresses, and telephone numbers of the men. Of the 162 men initially contacted, 145 were eligible for participation in the entire study. The 91 men who comprised the final sample represented 63% of the expectant fathers contacted who were eligible to participate. The sample included black and white men of working-class and middle-class social status.

The data obtained were analyzed with the assistance of the General Linear Models Procedure of the Statistical Analysis System (Barr, Goodnight, Sall & Helwig, 1976) computer package. The first five hypotheses of the study were tested by a combination of multifactorial analyses of variance, multivariate analyses of variance, and/or multifactorial repeated measures analyses of variance. The last two hypotheses were tested by Pearson product-moment correlation coefficients. A probability level of .05 was set as the level of significance for associations between variables and differences between group means.

Hypothesis 1 was not supported by the findings of this study. Hence, it was found that inexperienced fathers did not report more symptoms, were not less satisfied with their situations, nor did they have higher anxiety, depression, and hostility scores than experienced fathers. Contrary to Hypothesis 1, experienced expectant fathers reported significantly less satisfaction with their situations in late pregnancy than inexperienced expectant fathers.

Hypothesis 2 was partially supported. Men who reported unplanned pregnancies defined their personal situations as significantly less satisfying than men with planned pregnancies, except in late pregnancy. Men who reported unplanned pregnancies also reported significantly more symptoms during middle and late pregnancy, and for the entire pregnancy, in general, than men who had planned pregnancies. Expectant fathers with unplanned pregnancies consistently reported significantly more somatic symptoms than men with planned pregnancies. Although men with unplanned pregnancies had slightly higher anxiety, depression, and hostility scores, there were no significant differences between the men with planned and unplanned pregnancies as far as mood states were concerned.

As predicted by Hypothesis 3 a difference was found between working-class and middle-class expectant fathers in their reports of symptoms and in their satisfaction with their personal situations during pregnancy. Working-class expectant fathers indicated significantly less satisfaction with their personal situations than middle-class expectant fathers in every stage of pregnancy. Significantly more symptoms were reported by working-class than by middle-class expectant fathers during the course of pregnancy. However, in middle and late pregnancy, differences were not significant between working-class and middle-class men's reports of key symptoms; and differences were not significant between the reports of the two social class groups for psychiatric symptoms in late pregnancy. Although Hypothesis 3 indicated that there would be significant differences in the mood states of working-class and middle-class

expectant fathers, this was not the case. However, working-class expectant fathers generally had higher anxiety, depression, and hostility scores than middle-class expectant fathers.

In contradiction to the suggestions of Hypothesis 4, there were no significant differences between black and white expectant fathers in respect to their satisfaction levels with their personal situations, nor in their anxiety, depression, and hostility scores. In agreement with the prediction of Hypothesis 4, there were significant differences between black and white expectant fathers' reports of symptoms. Black expectant fathers reported significantly more symptoms than white expectant fathers during the course of the study. Differences between black and white expectant fathers' reports of symptoms were significant for total symptoms and all categories of symptoms in early pregnancy. There were no significant differences between the reports of black and white respondents for somatic symptoms during middle pregnancy; and there were no significant differences for total symptoms, psychiatric, somatic, or key symptoms in late pregnancy.

Although Hypothesis 5 predicted that the stage of pregnancy would affect the expectant fathers' level of satisfaction with their personal situations, and their scores for anxiety, depression, and hostility, this assertion was not supported by the findings. Stage of pregnancy did affect the group of anxiety, depression, and hostility scores for working-class and middle-class respondents. For working-class expectant fathers, the group of scores increased as

pregnancy proceeded. The group of scores peaked slightly in middle pregnancy for middle-class expectant fathers. When the factor of planned pregnancy was considered along with social-class and stage of pregnancy, the group of anxiety, depression, and hostility scores increased as pregnancy progressed for working-class expectant fathers who had unplanned pregnancies. However, the group of scores were highest in early pregnancy for middle-class expectant fathers with unplanned pregnancies, but the scores declined as pregnancy progressed. The scores peaked slightly in middle pregnancy for working-class and middle-class men with planned pregnancies. As predicted by Hypothesis 5, stage of pregnancy was shown to influence symptom manifestation. The number of total symptoms and somatic symptoms that were reported increased as pregnancy progressed. For black expectant fathers, reports of total symptoms and somatic symptoms were highest in early pregnancy, but declined in middle and late pregnancy. White expectant fathers reported the fewest total symptoms and somatic symptoms in early pregnancy; however, the numbers increased as pregnancy progressed. Black respondents reported a decline in key symptoms as pregnancy proceeded. White expectant fathers reported the fewest number of key symptoms during early pregnancy, the number increased in middle pregnancy, and dropped slightly in late pregnancy.

As asserted by Hypothesis 6, the total number of symptoms reported by expectant fathers were found to be significantly correlated with anxiety and depression scores, and the expectant fathers'

satisfaction with their personal situations. Anxiety and depression were positively correlated with total symptoms, and the expectant fathers' satisfaction with their personal situations were negatively correlated with the total number of symptoms reported. Contrary to Hypothesis 6, hostility scores were not significantly correlated with total symptoms. The number of psychiatric symptoms reported was positively and significantly correlated with anxiety, depression, and hostility scores, but negatively and significantly correlated with the expectant fathers' satisfaction with their situations. Somatic and key symptoms were negatively and significantly correlated with the fathers' satisfaction with their personal situations, but were not significantly correlated with anxiety, depression, and hostility scores.

Hypothesis 7 projected that anxiety, depression, and hostility scores would increase as the expectant fathers' satisfaction with their situation decreased. Hypothesis 7 was completely supported by correlational analyses.

Other findings of the study were: (a) Eighty-seven percent of the sample reported at least one symptom during pregnancy. (b) The symptoms most frequently reported by expectant fathers were difficulty sleeping, fatigue, restlessness, backaches, increased appetite, and irritability. (c) Eighty-three percent of the men expressed pleasure upon being informed of their wives' pregnancies, although 37% reported that pregnancy was unplanned. (d) Most

difficulties expressed by expectant fathers fell into one of the following areas--difficulties related to the expectant father's relationship with his wife; difficulties related to the protector and provider aspects of the husband-father role; concerns related to the wife's and/or unborn baby's welfare; difficulties related to sexual adjustment during pregnancy; and difficulties related directly to self. (e) Seventy-one percent of the men indicated that their wives were support agents when they had questions or concerns about the pregnancy. (f) Next to the wife, health professionals were more likely to be consulted when the expectant fathers had concerns relating to their wives' pregnancies.

Based on the findings of this study, several conclusions regarding the applicability of crisis theory to the phenomenon of expectant fatherhood are apparent.

First, as indicated by mood scores, inexperienced expectant fathers do not experience greater stress during pregnancy than experienced expectant fathers. Thus, there is no support given to the assumption that expectant fatherhood is a maturational crisis for inexperienced expectant fathers in general; nor to the assumption that inexperienced expectant fathers face more stress due to their transition to another developmental stage or role. Since experienced expectant fathers tended to define their situations as less satisfying than inexperienced expectant fathers, findings imply that experienced fathers may have been under more strain during pregnancy. Simultaneous functioning in the father role in addition to the expectant father

role by experienced expectant fathers may have affected their satisfaction with their personal situations negatively.

Second, an unplanned pregnancy negatively effects an expectant father's definition of his personal situation. Thus men with planned pregnancies are generally more satisfied with their personal situations during pregnancy than men with unplanned pregnancies.

Third, an unplanned pregnancy is not necessarily more stressful for an expectant father than a planned pregnancy. Although men who reported unplanned pregnancies had slightly high mood scores, they were not significantly higher than those of men with planned pregnancies.

Fourth, social-class factors do influence expectant fathers' definitions of their situations during pregnancy, and working-class expectant fathers define their situations as less satisfying than middle-class expectant fathers. This is likely due to the generally lower financial, educational and material resources of working-class expectant fathers.

Fifth, racial background factors do not significantly differentiate the general mood states nor definitions of personal situations of black and white expectant fathers.

Sixth, in general, expectant fathers do not experience significant common variations in levels of anxiety, depression, and hostility as pregnancy progresses.

Seventh, there is variation in the adjustment of middle-class and working-class expectant fathers to the impact of unplanned

expectant fatherhood. As indicated by the group of mood scores, working-class men with unplanned pregnancies experienced increasing stress levels as pregnancy progressed, while middle-class men with unplanned pregnancies experienced decreasing stress levels as pregnancy progressed. Hence, middle-class men begin a more rapid recovery process when faced with an unplanned pregnancy than working-class men.

Eighth, the expectant father's mood state is related to his perception of his personal situation; as his satisfaction with his situation decreases, his levels of anxiety, depression, and hostility increase.

Several conclusions about the nature of symptom manifestation in expectant fathers during pregnancy have been drawn from the findings of this research. They are as follows: (a) Fathering experience does not affect symptom manifestation in expectant fathers. (b) Men reporting unplanned pregnancies experience more symptoms than men reporting planned pregnancies. (c) Working-class expectant fathers have more symptoms than middle-class expectant fathers. (d) Black expectant fathers have more symptoms than white expectant fathers. (e) In general, the number of symptoms experienced by expectant fathers increase as pregnancy progresses. (f) The number of symptoms experienced by black expectant fathers are highest in early pregnancy and decrease as pregnancy progresses; and the number of symptoms experienced by white expectant fathers are lowest in early pregnancy and increase as pregnancy progresses. (g) As levels of anxiety and

depression increase, the number of symptoms experienced by expectant fathers increase; as the expectant fathers' satisfaction with their personal situations decrease, the number of symptoms experienced increase.

Two other conclusions of this research are these: (a) Most expectant fathers have some concerns or difficulties during their wives' pregnancies. (b) Wives serve as major support agents to expectant fathers during pregnancy.

On the basis of the findings of this study, a number of recommendations are offers for future research and action.

First, more research on the psychobiology of expectant fatherhood should be conducted. Replications of this study with larger samples should be done. The use of personal interviews would likely yield more fruitful information about the psychobiology of expectant fatherhood.

Second, more research should be conducted with expectant couples to determine factors which encourage or hinder smooth adjustment during pregnancy.

Third, the effects of personality factors and sociocultural attitudes and expectations regarding male and female behavior during pregnancy should be studied further.

Fourth, more recognition should be given to the expectant father's need for informational and emotional support during pregnancy. The large number of expectant fathers reporting special concerns or difficulties during pregnancy point to the need for more inclusion of expectant fathers in the prenatal regimen.

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APPENDICES

APPENDIX A

INTRODUCTION OF STUDY TO OBSTETRICIANS

INTRODUCTION OF STUDY TO OBSTETRICIANS

I am . . . (name and institutional affiliation). . . . I am interested in carrying out a study of the effects of the childbearing experience on the husbands of women who are pregnant. Although we know a lot about the physical and emotional responses of women to their pregnancies, little research has been done on the physical and emotional responses of expectant fathers. However, there have been some studies that indicate that expectant fathers do become involved in their wives' pregnancies both physically and emotionally, and that the degree of involvement may vary from trimester to trimester. I hope to test this idea by examining the levels of anxiety, depression, and hostility of expectant fathers, and by studying the occurrence of symptoms in expectant fathers. I believe that this research will help obstetricians, nurses, and family specialists to better understand the impact of pregnancy on husbands and to more effectively meet the expectant couple's needs.

In order for this study to be carried out, I will need the cooperation of the obstetricians in this area so that contact can be established with expectant fathers early in pregnancy. I am aware of the confidential nature of your medical records and realize that you can not supply confidential information regarding any of your patients. If you do not feel you can supply me with a list of the names and addresses

of your patients' husbands, it is possible to obtain the necessary information about expectant fathers by contacting their wives and acquiring their permission to contact their spouses. This form (Appendix B) can facilitate this matter if it is given to prospective mothers in your office. I would like your cooperation and response to this idea, along with any suggestions that you may have which will aid in the successful completion of this research. . . .

APPENDIX B

WIFE'S FORM AUTHORIZING CONTACT WITH HUSBAND

THE UNIVERSITY OF NORTH CAROLINA AT GREENSBORO



School of Home Economics

Dear Expectant Mother:

This is a very special time in your life and for your husband. Because pregnancy and childbirth is such an important time for families, we would like to know more about its influence upon family members so that even better services can be provided in the future. We know a lot about mothers and their needs during this period, but we still need to know more about the impact of the childbearing experience upon expectant fathers.

The Department of Child Development and Family Relations at the University of North Carolina at Greensboro is supporting a study to increase our understanding of pregnancy and childbirth in the life of the expectant father. Questionnaires will be sent to expectant fathers for them to complete. All information received for the study is confidential and no identifying information will be disclosed.

Although you might not be able to say whether or not your husband will complete the questionnaires, we would like your permission to contact him. If we have your consent, please fill in the information below.

Your name: _____

Your expected date of delivery: _____

Is this your first pregnancy? Yes _____ No _____

Your husband's name: _____

Address: _____

City	State	Zip code
------	-------	----------

Race: White _____ Phone No. _____

Black or Afro-American _____

Other _____

Thank you for your cooperation.

GREENSBORO, NORTH CAROLINA/27412

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APPENDIX C

INTRODUCTORY LETTER TO EXPECTANT FATHERS



THE UNIVERSITY OF NORTH CAROLINA
AT GREENSBORO

School of Home Economics

Dear Prospective Father:

Although we know a lot about the needs of women during pregnancy, little research has been done on the concerns of expectant fathers. Many people have been talking about some of the concerns and responses of expectant fathers; however, we really have little concrete information from a wide range of expectant fathers as to their real situation and needs. It is only with the cooperation of men like you, who are in the midst of experiencing expectant fatherhood, that we can better understand this very special time in a man's life.

In a few days, you will be contacted at your residence and asked to participate in a study which will help us to better understand expectant fatherhood. This research will help obstetricians, nurses, and family specialists to better understand the experiences of prospective fathers and to more effectively meet their needs. This will require a small amount of your time but your cooperation is very important to us.

Let me assure you that your replies will be kept completely confidential and that this information will not lead to further contacts by other organizations. The responses from all the participants will be combined to give an overall picture of expectant fatherhood rather than of any particular expectant father.

Your cooperation in helping to gather this information will be greatly appreciated. It is only through your cooperation that we can get the facts we need about expectant fatherhood.

Sincerely yours,

(Mrs.) Ora S. Davis, M. S., R. N.
Principal Investigator
Expectant Fathers' Study

GREENSBORO, NORTH CAROLINA/27412

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APPENDIX D

QUESTIONNAIRE FORMS FOR EXPECTANT FATHERS

Form A

QUESTIONNAIRE FOR EXPECTANT FATHERS

Please complete each of the following items fully and accurately. Where provided, please check the appropriate spaces. Remember you responses will be kept strictly confidential.

1. Today's date: _____
2. Your race. () 1. White
() 2. Black or Afro-American
() 3. Other
3. What is the date of your birth? _____
4. Age at last birthday. _____
5. How many years of school did you complete? (Circle appropriate number.)
1 2 3 4 5 6 7 8 9 10 11 12 13 14
15 16 17 18 19 20 21
6. What is your occupation? _____
7. What is the expected date of your baby's birth? _____
8. Is this your wife's first pregnancy? () 1. Yes
() 2. No
9. Will this be your first child? () 1. Yes
() 2. No
10. If you have other children, please give their ages. _____

11. When you were first informed of your wife's present pregnancy, what was your reaction?
() 1. exuberant () 5. depressed
() 2. pleased () 6. displeased
() 3. surprised () 7. horrified
() 4. neutral () 8. other _____
(explain)

12. Was this pregnancy planned? () 1. Yes
() 2. No
13. Do you have any known health problems? (Such as diabetes, cancer, alcoholism, mental or emotional illness, drug addiction, heart disease, etc.)
() 1. Yes
() 2. No
14. What was your general state of health prior to your wife's pregnancy?
() 1. Chronic ill-health
() 2. Temporary ill-health
() 3. Average health
() 4. Very healthy

QUESTIONNAIRE

Date _____

Form A-2

1. Have you sought the care of a physician with in the past four weeks?

1. Yes

2. No

If yes, please explain. _____

2. Have you been confined to bed or to your home for health reasons during the past four weeks?

1. Yes

2. No

If yes, please explain. _____

3. Are you now attending, or have attended a childbirth education program since your wife became pregnant?

1. Yes

2. No

If yes, what type of program?

1. Lamaze

2. Bradley Method

3. Red Cross

4. Other _____

Form B

We are interested in your health from the past four weeks until today. On this sheet you will find a list symptoms.

Mark a (✓) in the spaces beside all symptoms which you have experienced during the past four weeks .

- | | |
|---------------------------------|------------------------------|
| () 1. Abdominal pain | () 19. Leg aches |
| () 2. Backaches | () 20. Loss of appetite |
| () 3. Body aches | () 21. Muscle cramps |
| () 4. Constipation | () 22. Nausea |
| () 5. Diarrhea | () 23. Nosebleeds |
| () 6. Difficulty concentrating | () 24. Numbness of skin |
| () 7. Difficulty sleeping | () 25. Profuse perspiration |
| () 8. Dizziness | () 26. Restlessness |
| () 9. Faintness | () 27. Shortness of breath |
| () 10. Fatigue | () 28. Tingling of the skin |
| () 11. Food cravings | () 29. Toothaches |
| () 12. Frequent headaches | () 30. Trembling |
| () 13. Frequent urination | () 31. Vomiting |
| () 14. Heart palpitations | () 32. Weight gain |
| () 15. Heartburn | () 33. Others _____ |
| () 16. Increased appetite | _____ |
| () 17. Indigestion | _____ |
| () 18. Irritability | |

If you did not experience any of the above symptoms, please check here: () None

Form C

All of us want certain things out of life. Below is a list of some areas of life. Suppose we say that the number 0 represents the worst possible life for you in each area and 10 represents the best possible life for you.

Where do you think you stand today on a continuum or scale from 0 to 10 in each of the following areas? Circle the number on each continuum which reflects the level of your satisfaction with each area at the present time.

1. Your work.

0 1 2 3 4 5 6 7 8 9 10

2. Your house or apartment.

0 1 2 3 4 5 6 7 8 9 10

3. Your financial situation.

0 1 2 3 4 5 6 7 8 9 10

4. Your relationship with your wife.

0 1 2 3 4 5 6 7 8 9 10

5. Your wife's health and physical condition.

0 1 2 3 4 5 6 7 8 9 10

6. Your sexual adjustment at this stage of your wife's pregnancy.

0 1 2 3 4 5 6 7 8 9 10

7. Your amount of involvement in household tasks.

0 1 2 3 4 5 6 7 8 9 10

8. Your relationship with your parents.

0 1 2 3 4 5 6 7 8 9 10

Form D

1. Do you think that your experiences during your wife's pregnancy have been similar to those of most other expectant fathers?

1. Yes

2. No

If not, how do you think your experiences were different?

2. What have been some of the most difficult things to cope with since your wife became pregnant?

3. When you have had questions or concerns relating to your wife's pregnancy, whom have you consulted?

1. No one

10. Childbirth educator

2. Your wife

11. Nurse

3. A close friend

12. Medical doctor

4. Your mother

13. Other (explain)

5. Your mother-in-law

6. Your father

7. Your father-in-law

8. Your sister

9. Your brother

4. Which of the following have you done to help prepare yourself for expectant fatherhood or fatherhood?
(Check answers under appropriate columns.)

	Before Pregnancy	During Pregnancy
A. Nothing	()	()
B. Read books	()	()
C. Read magazines	()	()
D. Took a formal course	()	()
E. Talked with other fathers	()	()
F. Talked with other people	()	()
(Explain) _____ _____		
G. Other (explain) _____ _____	()	()

5. When you have family problems, which adults do you usually consult?
(Check all that apply.)

- | | |
|---|---------------------------------------|
| () 1. No one | () 5. Minister, priest or
rabbi |
| () 2. Your wife | () 6. Counselor |
| () 3. Friends | () 7. Other (explain) _____
_____ |
| () 4. Relatives (specify):

_____ | |

6. Was your wife employed when she became pregnant? () 1. Yes
() 2. No

7. Is your wife presently employed? () 1. Yes

() 2. No

8. How many years of school did your wife complete? (Circle number.)

1 2 3 4 5 6 7 8 9 10 11 12

13 14 15 16 17 18 19 20 21

9. What is your wife's date of birth? _____

(Month, day and year)

10. When were you and your wife married? _____

(Month, day and year)

APPENDIX E

FOLLOW-UP (REMINDER) LETTER

THE UNIVERSITY OF NORTH CAROLINA
AT GREENSBORO



School of Home Economics

Dear Mr. _____:

Recently you received a questionnaire for expectant fathers. Completion of this questionnaire is very important in our pursuit to better understand the needs of expectant fathers and how men react during expectant fatherhood. Thank you for agreeing to participate in this important study.

We are still awaiting your completed questionnaire and hope that you will return it as soon as possible. If you have already returned the questionnaire, please disregard this reminder and we thank you for your cooperation.

Completed questionnaires should be sent to:

Mrs. Ora S. Davis, M. S., R. N.
Dept. of Child Development and Family Relations
University of N. C. at Greensboro
Greensboro, North Carolina 27412

Sincerely,

(Mrs.) Ora S. Davis, M. S., R. N.
Principal Investigator
Expectant Fathers' Study

GREENSBORO, NORTH CAROLINA/27412

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APPENDIX F

**MULTIFACTORIAL ANALYSES OF VARIANCE SUMMARY TABLES:
DATA COMBINED FROM THREE STAGES OF PREGNANCY**

TABLE A

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
DATA COMBINED FROM THREE STAGES OF PREGNANCY

Dependent Variable: Anxiety

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	.66	.66	.02
Social Class (Social)	1	47.93	47.93	1.30
Experience (Exp.)	1	2.14	2.14	.06
Planned Pregnancy (Plan)	1	55.78	55.78	1.51
Race/Social	1	44.10	44.10	1.19
Race/Exp.	1	.92	.92	.02
Race/Plan	1	2.25	2.25	.06
Social/Exp.	1	43.72	43.72	1.18
Social/Plan	1	17.20	17.20	.47
Exp./Plan	1	61.36	61.36	1.66
Race/Social/Exp.	1	12.90	12.90	.35
Race/Social/Plan	1	.00	.00	.00
Race/Exp./Plan	1	18.42	18.42	.50
Social/Exp./Plan	1	61.71	61.71	1.67
Race/Social/Exp./Plan	1	4.27	4.27	.12
WITHIN	75	2768.50	36.91	

*Probability .05
**Probability .01
***Probability .001

TABLE B

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
DATA COMBINED FROM THREE STAGES OF PREGNANCY

Dependent Variable: Depression

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	17.98	17.98	.20
Social Class (Social)	1	32.38	32.38	.36
Experience (Exp.)	1	.05	.05	.00
Planned Pregnancy (Plan)	1	72.32	72.32	.81
Race/Social	1	131.64	131.64	1.47
Race/Exp.	1	22.29	22.29	.25
Race/Plan	1	3.07	3.07	.03
Social/Exp.	1	144.26	144.26	1.61
Social/Plan	1	120.34	120.34	1.43
Exp./Plan	1	19.72	19.72	.22
Race/Social/Exp.	1	47.23	47.23	.53
Race/Social/Plan	1	28.67	28.67	.32
Race/Exp./Plan	1	98.63	98.63	1.10
Social/Exp./Plan	1	113.44	113.44	1.27
Race/Social/Exp./Plan	1	18.56	18.56	.21
WITHIN	75	6709.84	89.46	

*Probability .05
**Probability .01
***Probability .001

TABLE C

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
DATA COMBINED FROM THREE STAGES OF PREGNANCY

Dependent Variable: Hostility

Source	Degrees of Freedom	Sum of Square	Mean Square	F-Value
BETWEEN:				
Race	1	14.36	14.36	.44
Social Class (Social)	1	69.91	69.91	2.13
Experience (Exp.)	1	.00	.00	.00
Planned Pregnancy (Plan)	1	19.38	19.38	.59
Race/Social	1	9.56	9.56	.29
Race/Exp.	1	.12	.12	.00
Race/Plan	1	1.08	1.08	.03
Social/Exp.	1	27.11	27.11	.83
Social/Plan	1	44.56	44.56	1.36
Exp./Plan	1	19.62	19.62	.60
Race/Social/Exp.	1	32.14	32.14	.98
Race/Social/Plan	1	3.87	3.87	.12
Race/Exp./Plan	1	66.37	66.37	2.03
Social/Exp./Plan	1	142.10	142.10	4.34*
Race/Social/Exp./Plan	1	7.87	7.87	.24
WITHIN	75	2457.29	32.76	

*Probability .05
**Probability .01
***Probability .001

TABLE D

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
DATA COMBINED FROM THREE STAGES OF PREGNANCY

Dependent Variable: Total Satisfaction with Situation (Definition of the Situation)

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	.00	.00	.00
Social Class (Social)	1	2012.03	2012.03	8.38**
Experience (Exp.)	1	808.85	808.85	3.37
Planned Pregnancy (Plan)	1	2122.36	2122.36	8.84**
Race/Social	1	62.75	62.75	.26
Race/Exp.	1	283.88	283.88	1.18
Race/Plan	1	131.06	131.06	.55
Social/Exp.	1	18.66	18.66	.08
Social/Plan	1	45.96	45.96	.19
Exp./Plan	1	35.29	35.29	.15
Race/Social/Exp.	1	469.81	469.81	1.96
Race/Social/Plan	1	48.33	48.33	.20
Race/Exp./Plan	1	60.54	60.54	.25
Social/Exp./Plan	1	211.05	211.05	.87
Race/Social/Exp./Plan	1	138.77	138.77	.57
WITHIN:	75	17044.46	240.06	

*Probability .05
**Probability .01
***Probability .001

TABLE E

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
DATA COMBINED FROM THREE STAGES OF PREGNANCY

Dependent Variable: Total Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	151.71	151.71	7.19**
Social Class (Social)	1	306.07	306.07	14.51***
Experience (Exp.)	1	.08	.08	.00
Planned Pregnancy (Plan)	1	168.55	168.55	7.99**
Race/Social	1	42.28	42.28	2.00
Race/Exp.	1	1.33	1.33	.06
Race/Plan	1	32.83	32.83	1.56
Social/Exp.	1	60.31	60.31	2.86
Social/Plan	1	.32	.32	.02
Exp./Plan	1	9.01	9.01	.43
Race/Social/Exp.	1	16.27	16.27	.77
Race/Social/Plan	1	1.94	1.94	.09
Race/Exp./Plan	1	1.06	1.06	.05
Social/Exp./Plan	1	27.04	27.04	1.28
Race/Social/Exp./Plan	1	8.24	8.24	.39
WITHIN	75	1582.35	21.10	

*Probability .05
**Probability .01
***Probability .001

TABLE F

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
DATA COMBINED FROM THREE STAGES OF PREGNANCY

Dependent Variable: Psychiatric Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	16.08	16.08	6.07*
Social Class (Social)	1	21.44	21.44	8.09**
Experience (Exp.)	1	1.01	1.01	.38
Planned Pregnancy (Plan)	1	5.09	5.09	1.92
Race/Social	1	6.33	6.33	2.37
Race/Exp.	1	2.52	2.52	.95
Race/Plan	1	8.11	8.11	3.06
Social/Exp.	1	2.50	2.50	.94
Social/Plan	1	.22	.22	.08
Exp./Plan	1	.34	.34	.13
Race/Social/Exp.	1	.02	.02	.01
Race/Social/Plan	1	2.96	2.96	1.12
Race/Exp./Plan	1	.93	.93	.35
Social/Exp./Plan	1	.68	.68	.26
Race/Social/Exp./Plan	1	3.88	3.88	1.46
WITHIN	75	198.53	2.65	

*Probability .05
**Probability .01
***Probability .001

TABLE G

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
DATA COMBINED FROM THREE STAGES OF PREGNANCY

Dependent Variable: Somatic Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	69.01	69.01	5.49*
Social Class (Social)	1	165.49	165.49	13.18***
Experience (Exp.)	1	.52	.52	.04
Planned Pregnancy (Plan)	1	115.07	115.07	9.16**
Race/Social	1	15.89	15.89	1.27
Race/Exp.	1	.19	.19	.02
Race/Plan	1	8.31	8.31	.66
Social/Exp.	1	38.25	38.25	3.05
Social/Plan	1	1.07	1.07	.09
Exp./Plan	1	5.83	5.83	.46
Race/Social/Exp.	1	15.10	15.10	1.20
Race/Social/Plan	1	.11	.11	.01
Race/Exp./Plan	1	.00	.00	.00
Social/Exp./Plan	1	19.15	19.15	1.52
Race/Social/Exp./Plan	1	.81	.81	.06
WITHIN	75	941.97	12.56	

*Probability .05
**Probability .01
***Probability .001

TABLE H

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
DATA COMBINED FROM THREE STAGES OF PREGNANCY

Dependent Variable: Key Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	15.17	15.17	18.28***
Social Class (Social)	1	5.13	5.13	6.18*
Experience (Exp.)	1	1.19	1.19	1.43
Planned Pregnancy (Plan)	1	5.01	5.01	6.04*
Race/Social	1	3.18	3.18	3.83
Race/Exp.	1	.80	.80	.96
Race/Plan	1	.11	.11	.13
Social/Exp.	1	.23	.23	.28
Social/Plan	1	.10	.10	.12
Exp./Plan	1	.75	.75	.90
Race/Social/Exp.	1	.31	.31	.37
Race/Social/Plan	1	.00	.00	.00
Race/Exp./Plan	1	.46	.46	.55
Social/Exp./Plan	1	.00	.00	.00
Race/Social/Exp./Plan	1	.01	.01	.01
WITHIN	75	62.60	.83	

*Probability .05
**Probability .01
***Probability .001

APPENDIX G

**MULTIFACTORIAL ANALYSES OF VARIANCE SUMMARY TABLES:
EARLY, MIDDLE, AND LATE PREGNANCY**

TABLE I

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
EARLY PREGNANCY

Dependent Variable: Anxiety

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	.35	.35	.02
Social Class (Social)	1	29.62	29.62	1.75
Experience (Exp.)	1	1.54	1.54	.09
Planned Pregnancy (Plan)	1	41.56	41.56	2.45
Race/Social	1	26.16	26.16	1.54
Race/Exp.	1	4.49	4.49	.26
Race/Plan	1	16.18	16.18	.95
Social/Exp.	1	14.89	14.89	.88
Social/Plan	1	.16	.16	.01
Exp./Plan	1	22.54	22.54	1.33
Race/Social/Exp.	1	6.32	6.32	.37
Race/Social/Plan	1	1.98	1.98	.12
Race/Exp./Plan	1	3.73	3.73	.22
Social/Exp./Plan	1	16.67	16.67	.98
Race/Social/Exp./Plan	1	3.31	3.31	.20
WITHIN	75	1272.11	16.96	

*Probability .05
**Probability .01
***Probability .001

TABLE J

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
EARLY PREGNANCY

Dependent Variable: Depression

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	8.13	8.13	.22
Social Class (Social)	1	.25	.25	.01
Experience (Exp.)	1	1.93	1.93	.05
Planned Pregnancy (Plan)	1	6.29	6.29	.17
Race/Social	1	33.98	33.98	.91
Race/Exp.	1	33.60	33.60	.90
Race/Plan	1	24.92	24.92	.67
Social/Exp.	1	35.26	35.26	.94
Social/Plan	1	2.55	2.55	.07
Exp./Plan	1	3.30	3.30	.09
Race/Social/Exp.	1	.57	.57	.02
Race/Social/Plan	1	22.05	22.05	.59
Race/Exp./Plan	1	13.54	13.54	.36
Social/Exp./Plan	1	59.92	59.92	1.61
Race/Social/Exp./Plan	1	.83	.83	.02
WITHIN	75	2798.84	37.32	

*Probability .05
**Probability .01
***Probability .001

TABLE K

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
EARLY PREGNANCY

Dependent Variable: Hostility

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	2.12	2.12	.14
Social Class (Social)	1	24.03	24.03	1.59
Experience (Exp.)	1	4.37	4.37	.29
Planned Pregnancy (Plan)	1	9.43	9.43	.62
Race/Social	1	4.89	4.89	.32
Race/Exp.	1	14.38	14.38	.95
Race/Plan	1	.17	.17	.01
Social/Exp.	1	9.55	9.55	.63
Social/Plan	1	47.85	47.85	3.16
Exp./Plan	1	5.55	5.55	.37
Race/Social/Exp.	1	4.24	4.24	.28
Race/Social/Plan	1	2.25	2.25	.15
Race/Exp./Plan	1	19.70	19.70	1.30
Social/Exp./Plan	1	60.42	60.42	3.99*
Race/Social/Exp./Plan	1	.77	.77	.05
WITHIN	75	1135.60	15.14	

*Probability .05
**Probability .01
***Probability .001

TABLE L

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
EARLY PREGNANCY

Dependent Variable: Total Satisfaction (Definition of the Situation)

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	.33	.33	.00
Social Class (Social)	1	864.62	864.62	9.09**
Experience (Exp.)	1	175.06	175.06	1.84
Planned Pregnancy (Plan)	1	890.48	890.48	9.36**
Race/Social	1	8.45	8.45	.09
Race/Exp.	1	42.97	42.97	.45
Race/Plan	1	139.47	139.47	1.47
Social/Exp.	1	25.26	25.26	.27
Social/Plan	1	28.26	28.26	.30
Exp./Plan	1	60.92	60.92	.64
Race/Social/Exp.	1	484.29	484.29	5.09*
Race/Social/Plan	1	4.63	4.63	.05
Race/Exp./Plan	1	55.32	55.32	.58
Social/Exp./Plan	1	45.97	45.97	.48
Race/Social/Exp./Plan	1	180.29	180.29	1.89
WITHIN	75	7135.43	95.14	

*Probability .05
**Probability .01
***Probability .001

TABLE M

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
EARLY PREGNANCY

Dependent Variable: Total Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	111.61	111.61	13.08***
Social Class (Social)	1	76.81	76.81	9.00**
Experience (Exp.)	1	1.72	1.72	.20
Planned Pregnancy (Plan)	1	32.92	32.92	3.86
Race/Social	1	8.28	8.28	.97
Race/Exp.	1	.48	.48	.06
Race/Plan	1	17.94	17.94	2.10
Social/Exp.	1	12.36	12.36	1.45
Social/Plan	1	2.48	2.48	.29
Exp./Plan	1	.00	.00	.00
Race/Social/Exp.	1	17.92	17.92	2.10
Race/Social/Plan	1	6.37	6.37	.75
Race/Exp./Plan	1	7.95	7.95	.93
Social/Exp./Plan	1	2.84	2.84	.33
Race/Social/Exp./Plan	1	.89	.89	.10
WITHIN	75	639.95	8.53	

*Probability .05

**Probability .01

***Probability .001

TABLE N

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
EARLY PREGNANCY

Dependent Variable: Psychiatric Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	8.80	8.80	6.11*
Social Class (Social)	1	8.97	8.97	6.23*
Experience (Exp.)	1	.08	.08	.06
Planned Pregnancy (Plan)	1	1.82	1.82	1.26
Race/Social	1	1.25	1.25	.87
Race/Exp.	1	.14	.14	.10
Race/Plan	1	2.27	2.27	1.58
Social/Exp.	1	.35	.35	.24
Social/Plan	1	.18	.18	.13
Exp./Plan	1	.00	.00	.00
Race/Social/Exp.	1	.13	.13	.09
Race/Social/Plan	1	2.14	2.14	1.49
Race/Exp./Plan	1	.78	.78	.54
Social/Exp./Plan	1	.02	.02	.01
Race/Social/Exp./Plan	1	1.20	1.20	.83
WITHIN	75	107.70	1.44	

*Probability .05
**Probability .01
***Probability .001

TABLE 0

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
EARLY PREGNANCY

Dependent Variable: Somatic Symptoms

Source	Degree of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	57.73	57.73	12.89***
Social Class (Social)	1	33.27	33.27	7.43**
Experience (Exp.)	1	2.52	2.52	.56
Planned Pregnancy (Plan)	1	19.27	19.27	4.30*
Race/Social	1	3.09	3.09	.69
Race/Exp.	1	1.12	1.12	.25
Race/Plan	1	7.44	7.44	1.66
Social/Exp.	1	8.54	8.54	1.90
Social/Plan	1	3.98	3.98	.89
Exp./Plan	1	.02	.02	.00
Race/Social/Exp.	1	15.04	15.04	3.36
Race/Social/Plan	1	1.13	1.13	.25
Race/Exp./Plan	1	3.76	3.76	.84
Social/Exp./Plan	1	2.42	2.42	.54
Race/Social/Exp./Plan	1	.02	.02	.00
WITHIN	75	336.31	4.48	

*Probability .05
**Probability .01
***Probability .001

TABLE P

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
EARLY PREGNANCY

Dependent Variable: Key Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	12.54	12.54	24.12***
Social Class (Social)	1	4.00	4.00	7.69*
Experience (Exp.)	1	.33	.33	.63
Planned Pregnancy (Plan)	1	.15	.15	.29
Race/Social	1	2.00	2.00	3.85
Race/Exp.	1	.83	.83	1.59
Race/Plan	1	.07	.07	.13
Social/Exp.	1	.16	.16	.31
Social/Plan	1	1.21	1.21	2.33
Exp./Plan	1	.03	.03	.06
Race/Social/Exp.	1	.86	.86	1.65
Race/Social/Plan	1	.03	.03	.06
Race/Exp./Plan	1	.51	.51	.98
Social/Exp./Plan	1	.02	.02	.04
Race/Social/Exp./Plan	1	.24	.24	.46
WITHIN	75	39.15	.52	

*Probability .05

**Probability .01

***Probability .001

TABLE Q

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
MIDDLE PREGNANCY

Dependent Variable: Anxiety

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	4.38	4.38	.31
Social Class (Social)	1	11.72	11.72	.83
Experience (Exp.)	1	.22	.22	.02
Planned Pregnancy (Plan)	1	11.70	11.70	.83
Race/Social	1	5.10	5.10	.36
Race/Exp.	1	6.68	6.68	.48
Race/Plan	1	.03	.03	.00
Social/Exp.	1	11.79	11.79	.84
Social/Plan	1	7.98	7.98	.57
Exp./Plan	1	46.37	46.37	3.30
Race/Social/Exp.	1	23.06	23.06	1.64
Race/Social/Plan	1	.01	.01	.00
Race/Exp./Plan	1	28.87	28.87	2.06
Social/Exp./Plan	1	54.50	54.50	3.88
Race/Social/Exp./Plan	1	.25	.25	.02
WITHIN	74	1038.95	14.04	

*Probability .05
**Probability .01
***Probability .001

TABLE R

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
MIDDLE PREGNANCY

Dependent Variable: Depression

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	2.52	2.52	.07
Social Class (Social)	1	6.65	6.65	.18
Experience (Exp.)	1	.27	.27	.01
Planned Pregnancy (Plan)	1	21.19	21.19	.59
Race/Social	1	43.08	43.08	1.20
Race/Exp.	1	.57	.57	.02
Race/Plan	1	.22	.22	.01
Social/Exp.	1	80.94	80.94	2.25
Social/Plan	1	65.60	65.60	1.82
Exp./Plan	1	25.57	25.57	.71
Race/Social/Exp.	1	38.34	38.34	1.07
Race/Social/Plan	1	2.99	2.99	.08
Race/Exp./Plan	1	77.72	77.72	2.16
Social/Exp./Plan	1	63.51	63.51	1.76
Race/Social/Exp./Plan	1	4.20	4.20	.12
WITHIN	74	2663.74	36.00	

*Probability .05
**Probability .01
***Probability .001

TABLE S

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
MIDDLE PREGNANCY

Dependent Variable: Hostility

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	13.48	13.48	.90
Social Class (Social)	1	20.33	20.33	1.36
Experience (Exp.)	1	.25	.25	.02
Planned Pregnancy (Plan)	1	1.82	1.82	.12
Race/Social	1	5.66	5.66	.38
Race/Exp.	1	16.63	16.63	1.11
Race/Plan	1	.28	.28	.02
Social/Exp.	1	13.57	13.57	.91
Social/Plan	1	4.49	4.49	.30
Exp./Plan	1	11.29	11.29	.76
Race/Social/Exp.	1	18.17	18.17	1.22
Race/Social/Plan	1	.10	.10	.01
Race/Exp./Plan	1	52.14	52.14	3.49
Social/Exp./Plan	1	68.10	68.10	4.56*
Race/Social Exp./Plan	1	5.18	5.18	.35
WITHIN	74	1104.34	14.92	

*Probability .05
**Probability .01
***Probability .001

TABLE T

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
MIDDLE PREGNANCY

Dependent Variable: Total Satisfaction (Definition of the situation)

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN				
Race	1	3.01	3.01	.03
Social Class (Social)	1	491.39	491.39	5.50*
Experience (Exp.)	1	218.71	218.71	2.23
Planned Pregnancy (Plan)	1	1024.85	1024.85	11.48**
Race/Social	1	13.20	13.20	.15
Race/Exp.	1	114.79	114.79	1.29
Race/Plan	1	18.01	18.01	.20
Social/Exp.	1	31.47	31.47	.35
Social/Plan	1	16.19	16.19	.18
Exp./Plan	1	8.65	8.65	.10
Race/Social/Exp.	1	58.97	58.97	.66
Race/Social/Plan	1	7.40	7.40	.08
Race/Exp./Plan	1	37.83	37.83	.42
Social/Exp./Plan	1	35.25	35.25	.39
Race/Social/Exp./Plan	1	11.77	11.77	.13
WITHIN	74	6605.63	89.27	

*Probability .05
**Probability .01
***Probability .001

TABLE U

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
MIDDLE PREGNANCY

Dependent Variable: Total Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	45.39	45.39	5.59*
Social Class (Social)	1	103.23	103.23	12.71***
Experience (Exp.)	1	.30	.30	.04
Planned Pregnancy (Plan)	1	94.13	94.13	11.59**
Race/Social	1	18.08	18.08	2.25
Race/Exp.	1	.48	.48	.06
Race/Plan	1	11.56	11.56	1.42
Social/Exp.	1	28.66	28.66	3.53
Social/Plan	1	.01	.01	.00
Exp./Plan	1	19.81	19.81	2.44
Race/Social/Exp.	1	5.02	5.02	.62
Race/Social/Plan	1	.90	.90	.11
Race/Exp./Plan	1	.23	.23	.03
Social/Exp./Plan	1	8.58	8.58	1.06
Race/Social/Exp./Plan	1	5.66	5.66	.70
WITHIN	74	601.09	8.12	

*Probability .05
**Probability .01
***Probability .001

TABLE V

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
MIDDLE PREGNANCY

Dependent Variable: Psychiatric Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	4.92	4.92	4.60*
Social Class (Social)	1	7.03	7.03	6.57*
Experience (Exp.)	1	.76	.76	.71
Planned Pregnancy (Plan)	1	5.89	5.89	5.50*
Race/Social	1	1.24	1.24	1.16
Race/Exp.	1	4.90	4.90	4.58*
Race/Plan	1	4.30	4.30	4.02*
Social/Exp.	1	1.76	1.76	1.64
Social/Plan	1	.63	.63	.59
Exp./Plan	1	1.42	1.42	1.33
Race/Social/Exp.	1	.00	.00	.00
Race/Social/Plan	1	.02	.02	.02
Race/Exp./Plan	1	1.81	1.81	1.69
Social/Exp./Plan	1	.27	.27	.25
Race/Social/Exp./Plan	1	1.78	1.78	1.66
WITHIN:	74	79.38	1.07	

*Probability .05
**Probability .01
***Probability .001

TABLE W

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
MIDDLE PREGNANCY

Dependent Variable: Somatic Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	20.42	20.42	3.93
Social Class (Social)	1	56.39	56.39	10.87**
Experience (Exp.)	1	.10	.10	.02
Planned Pregnancy (Plan)	1	52.92	52.92	10.20**
Race/Social	1	9.86	9.86	1.90
Race/Exp.	1	2.30	2.30	.44
Race/Plan	1	1.76	1.76	.34
Social/Exp.	1	16.22	16.22	3.13
Social/Plan	1	.77	.77	.15
Exp./Plan	1	10.62	10.62	2.05
Race/Social/Exp.	1	5.26	5.26	1.01
Race/Social/Plan	1	1.15	1.15	.22
Race/Exp./Plan	1	.75	.75	.14
Social/Exp./Plan	1	5.82	5.82	1.12
Race/Social/Exp./Plan	1	1.09	1.09	.21
WITHIN	74	383.85	5.19	

*Probability .05
**Probability .01
***Probability .001

TABLE X

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
MIDDLE PREGNANCY

Dependent Variable: Key Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	4.56	4.56	8.94**
Social Class (Social)	1	1.49	1.49	2.94
Experience (Exp.)	1	.24	.24	.47
Planned Pregnancy (Plan)	1	5.10	5.10	10.00**
Race/Social	1	2.04	2.04	4.00*
Race/Exp.	1	.05	.05	.10
Race/Plan	1	.11	.11	.22
Social/Exp.	1	.03	.03	.06
Social/Plan	1	.02	.02	.04
Exp./Plan	1	2.12	2.12	4.16*
Race/Social/Exp.	1	.27	.27	.53
Race/Social/Plan	1	.07	.07	.14
Race/Exp./Plan	1	.47	.47	.92
Social/Exp./Plan	1	.13	.13	.25
Race/Social/Exp./Plan	1	.20	.20	.39
WITHIN	74	37.42	.51	

*Probability .05
**Probability .01
***Probability .001

TABLE Y

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
LATE PREGNANCY

Dependent Variable: Anxiety

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	.00	.00	.00
Social Class (Social)	1	9.75	9.75	.59
Experience (Exp.)	1	3.08	3.08	.19
Planned Pregnancy (Plan)	1	9.24	9.24	.56
Race/Social	1	17.23	17.23	1.05
Race/Exp.	1	1.37	1.37	.08
Race/Plan	1	1.59	1.59	.10
Social/Exp.	1	16.95	16.95	1.03
Social/Plan	1	16.05	16.05	.98
Exp./Plan	1	4.50	4.50	.27
Race/Social/Exp.	1	15.88	15.88	.97
Race/Social/Plan	1	2.25	2.25	.14
Race/Exp./Plan	1	.06	.06	.00
Social/Exp./Plan	1	4.15	4.15	.25
Race/Social/Exp./Plan	1	4.77	4.77	.29
WITHIN	73	1200.60	16.45	

*Probability .05
**Probability .01
***Probability .001

TABLE Z

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
LATE PREGNANCY

Dependent Variable: Depression

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	8.53	8.53	.20
Social Class (Social)	1	61.73	61.73	1.43
Experience (Exp.)	1	.14	.14	.00
Planned Pregnancy (Plan)	1	60.10	60.10	1.40
Race/Social	1	54.86	54.86	1.27
Race/Exp.	1	9.10	9.10	.21
Race/Plan	1	6.61	6.61	.15
Social/Exp.	1	33.01	33.01	.77
Social/Plan	1	101.48	101.48	2.36
Exp./Plan	1	1.48	1.48	.03
Race/Social/Exp.	1	43.42	43.42	1.01
Race/Social/Plan	1	7.28	7.28	.17
Race/Exp./Plan	1	25.18	25.18	.58
Social/Exp./Plan	1	5.73	5.73	.13
Race/Social/Exp./Plan	1	22.51	22.51	.52
WITHIN	73	3142.65	43.05	

*Probability .05
**Probability .01
***Probability .001

TABLE AA

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
LATE PREGNANCY

Dependent Variable: Hostility

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	2.09	2.09	.13
Social Class (Social)	1	26.11	26.11	1.56
Experience (Exp.)	1	2.27	2.27	.14
Planned Pregnancy (Plan)	1	10.80	10.80	.65
Race/Social	1	.54	.54	.03
Race/Exp.	1	.15	.15	.01
Race/Plan	1	.88	.88	.05
Social/Exp.	1	4.69	4.69	.28
Social/Plan	1	6.68	6.68	.40
Exp./Plan	1	4.25	4.25	.25
Race/Social/Exp.	1	12.42	12.42	.74
Race/Social/Plan	1	4.81	4.81	.29
Race/Exp./Plan	1	6.44	6.44	.39
Social/Exp./Plan	1	20.35	20.35	1.22
Race/Social/Exp./Plan	1	3.18	3.18	.19
WITHIN	73	1220.24	16.72	

*Probability .05
**Probability .01
***Probability .001

TABLE BB

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
LATE PREGNANCY

Dependent Variable: Total Satisfaction (Definition of the Situation)

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	1.60	1.60	.01
Social Class (Social)	1	678.01	678.01	6.21*
Experience (Exp.)	1	449.13	449.13	4.12*
Planned Pregnancy (Plan)	1	320.19	320.19	2.93
Race/Social	1	52.32	52.32	.48
Race/Exp.	1	140.60	140.60	1.29
Race/Plan	1	14.32	14.32	.13
Social/Exp.	1	9.63	9.63	.09
Social/Plan	1	5.64	5.64	.05
Exp./Plan	1	.24	.24	.00
Race/Social/Exp.	1	61.90	61.90	.57
Race/Social/Plan	1	51.59	51.59	.47
Race/Exp./Plan	1	.02	.02	.00
Social/Exp./Plan	1	154.91	154.91	1.42
Race/Social/Exp./Plan	1	12.55	12.55	.12
WITHIN	73	7964.45	109.10	

*Probability .05
**Probability .01
***Probability .001

TABLE CC

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
LATE PREGNANCY

Dependent Variable: Total Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	15.80	15.80	1.39
Social Class (Social)	1	129.81	129.81	11.46**
Experience (Exp.)	1	1.74	1.74	.15
Planned Pregnancy (Plan)	1	51.40	51.40	4.54*
Race/Social	1	16.80	16.80	1.48
Race/Exp.	1	4.33	4.33	.38
Race/Plan	1	4.77	4.77	.42
Social/Exp.	1	22.75	22.75	2.01
Social/Plan	1	.26	.26	.02
Exp./Plan	1	1.29	1.29	.11
Race/Social/Exp.	1	.15	.15	.01
Race/Social/Plan	1	.94	.94	.08
Race/Exp./Plan	1	1.74	1.74	.15
Social/Exp./Plan	1	20.85	20.85	1.84
Race/Social/Exp./Plan	1	2.34	2.34	.21
WITHIN	73	826.90	11.33	

*Probability .05
**Probability .01
***Probability .001

TABLE DD

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
LATE PREGNANCY

Dependent Variable: Psychiatric Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN:				
Race	1	3.05	3.05	1.49
Social Class (Social)	1	5.58	5.58	2.72
Experience (Exp.)	1	.35	.35	.17
Planned Pregnancy (Plan)	1	.02	.02	.01
Race/Social	1	4.57	4.57	2.23
Race/Exp.	1	.03	.03	.01
Race/Plan	1	1.83	1.83	.89
Social/Exp.	1	.73	.73	.36
Social/Plan	1	.19	.19	.09
Exp./Plan	1	.03	.03	.01
Race/Social/Exp.	1	.01	.01	.00
Race/Social/Plan	1	2.02	2.02	.99
Race/Exp./Plan	1	.28	.28	.14
Social/Exp./Plan	1	.63	.63	.31
Race/Social/Exp./Plan	1	.94	.94	.46
WITHIN	73	149.74	2.05	

*Probability .05
**Probability .01
***Probability .001

TABLE EE

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
LATE PREGNANCY

Dependent Variable: Somatic Symptoms

Source	Degrees of Freedom	Sum of Square	Mean Square	F-Value
BETWEEN:				
Race	1	4.96	4.96	.75
Social Class (Social)	1	81.57	81.57	12.36***
Experience (Exp.)	1	.54	.54	.08
Planned Pregnancy (Plan)	1	49.55	49.55	7.51**
Race/Social	1	3.84	3.84	.58
Race/Exp.	1	3.68	3.68	.56
Race/Plan	1	.69	.69	.10
Social/Exp.	1	15.32	15.32	2.32
Social/Plan	1	.89	.89	.13
Exp./Plan	1	1.74	1.74	.26
Race/Social/Exp.	1	.21	.21	.03
Race/Social/Plan	1	.20	.20	.03
Race/Exp./Plan	1	.63	.63	.10
Social/Exp./Plan	1	14.24	14.24	2.16
Race/Social/Exp./Plan	1	.31	.31	.05
WITHIN:	73	481.51	6.60	

*Probability .05
**Probability .01
***Probability .001

TABLE FF

MULTIFACTORIAL ANALYSIS OF VARIANCE SUMMARY TABLE:
LATE PREGNANCY

Dependent Variable: Key Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value
BETWEEN				
Race	1	1.14	1.14	2.43
Social Class (Social)	1	.50	.50	1.06
Experience (Exp.)	1	.68	.68	1.45
Planned Pregnancy (Plan)	1	1.53	1.53	3.26
Race/Social	1	.06	.06	.13
Race/Exp.	1	.19	.19	.40
Race/Plan	1	.00	.00	.00
Social/Exp.	1	.08	.08	.17
Social/Plan	1	.15	.15	.32
Exp./Plan	1	.01	.01	.02
Race/Social/Exp.	1	.24	.24	.51
Race/Social/Plan	1	.30	.30	.64
Race/Exp./Plan	1	.04	.04	.09
Social/Exp/Plan	1	.09	.09	.19
Race/Social/Exp./Plan	1	.02	.02	.04
WITHIN	73	34.58	.47	

*Probability .05
**Probability .01
***Probability .001

APPENDIX H

**MULTIFACTORIAL REPEATED MEASURES ANALYSES OF VARIANCE
SUMMARY TABLES**

TABLE GG

MULTIFACTORIAL REPEATED MEASURES ANALYSIS OF VARIANCE SUMMARY TABLE
 WITH SOCIAL CLASS AND PLANNED PREGNANCY AS FACTORS
 N = 90

Dependent Variable: Anxiety

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value	Probability Level
BETWEEN:					
Social Class (Social)	1	44.21	44.21	1.27	.2623
Planned Pregnancy (Plan)	1	46.20	46.20	1.33	.2519
Social/Plan	1	33.87	33.87	.98	.3261
WITHIN:	87	3021.35	34.73		
BETWEEN:					
Stage of Pregnancy (Stage)	2	2.35	1.17	.23	.7918
Social/Stage	2	3.74	1.87	.37	.6898
Plan/Stage	2	8.35	4.17	.83	.4371
Social/Plan/Stage	2	4.73	2.36	.47	.6254
WITHIN:	172	864.00	5.02		

TABLE HH
 MULTIFACTORIAL REPEATED MEASURES ANALYSIS OF VARIANCE SUMMARY TABLE
 WITH SOCIAL CLASS AND PLANNED PREGNANCY AS FACTORS
 N = 90

Dependent Variable: Depression

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value	Probability Level
BETWEEN:					
Social Class (Social)	1	23.70	23.70	.28	.5976
Planned Pregnancy (Plan)	1	52.44	52.44	.62	.4327
Social/Plan	1	187.14	187.14	2.22	.1401
WITHIN:	87	7344.54	84.42		
BETWEEN:					
Stage of Pregnancy (Stage)	2	18.54	9.27	.77	.4635
Social/Stage	2	34.73	17.37	1.45	.2381
Plan/Stage	2	10.90	5.45	.45	.6357
Social/Plan/Stage	2	35.14	17.57	1.46	.2341
WITHIN:	172	2063.86	12.00		

TABLE II
 MULTIFACTORIAL REPEATED MEASURES ANALYSIS OF VARIANCE SUMMARY TABLE
 WITH SOCIAL CLASS AND PLANNED PREGNANCY AS FACTORS
 N = 90

Dependent Variable: Hostility

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value	Probability Level
BETWEEN:					
Social Class (Social)	1	62.10	62.10	1.95	.1666
Planned Pregnancy (Plan)	1	12.99	12.99	.41	.5252
Social/Plan	1	61.34	61.34	1.92	.1692
WITHIN:	87	2777.08	31.92		
BETWEEN:					
Stage of Pregnancy (Stage)	2	10.77	5.38	.86	.4250
Social/Stage	2	.74	.37	.06	.9424
Plan/Stage	2	3.47	1.74	.28	.7582
Social/Plan/Stage	2	12.26	6.13	.98	.3776
WITHIN:	172	1076.59	6.26		

TABLE JJ

MULTIFACTORIAL REPEATED MEASURES ANALYSIS OF VARIANCE SUMMARY TABLE
 WITH SOCIAL CLASS AND PLANNED PREGNANCY AS FACTORS
 N = 90

Dependent Variable: Total Satisfaction with situation (Definition of the Situation)

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value	Probability Level
BETWEEN:					
Social Class (Social)	1	1984.95	1984.95	8.35	.0049
Planned Pregnancy (Plan)	1	1770.28	1770.28	7.45	.0077
Social/Plan	1	13.11	13.11	.06	.8149
WITHIN:	87	20685.46	237.76		
BETWEEN:					
Stages of Pregnancy (Stage)	2	31.50	15.75	.65	.5251
Social/Stage	2	24.51	12.26	.50	.6055
Plan/Stage	2	121.89	60.95	2.50	.0849
Social/Plan/Stage	2	3.94	1.97	.08	.9223
WITHIN:	171	4165.32	24.36		

TABLE KK

MULTIFACTORIAL REPEATED MEASURES ANALYSIS OF VARIANCE SUMMARY TABLE
 WITH RACE, SOCIAL CLASS, AND PLANNED PREGNANCY AS FACTORS
 N = 91

Dependent Variable: Total Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value	Probability Level
BETWEEN:					
Race	1	145.33	145.33	6.94	.0101
Social Class (Social)	1	332.43	332.43	15.87	.0001
Planned Pregnancy (Plan)	1	182.59	182.59	8.72	.0041
Race/Social	1	39.68	39.68	1.89	.1724
Race/Plan	1	28.74	28.74	1.37	.2448
Social/Plan	1	.43	.43	.02	.8862
Race/Social/Plan	1	1.32	1.32	.06	.8027
WITHIN:	83	1738.75	20.95		
BETWEEN:					
Stage of Pregnancy (Stage)	2	28.51	14.26	4.45	.0131
Race/Stage	2	22.44	11.22	3.50	.0324
Social/Stage	2	5.38	2.69	.84	.4338
Plan/Stage	2	9.92	4.96	1.55	.2157
Race/Social/Stage	2	.88	.44	.14	.8721

TABLE KK--continued

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value	Probability Level
Race/Plan/Stage	2	2.03	1.02	.32	.7285
Social/Plan/Stage	2	2.05	1.03	.32	.7264
Race/Social/Plan/Stage	2	3.69	1.85	.58	.5631
WITHIN:	166	531.76	3.20		

TABLE LL

MULTIFACTORIAL REPEATED MEASURES ANALYSIS OF VARIANCE SUMMARY TABLE
 WITH RACE, SOCIAL CLASS, AND PLANNED PREGNANCY AS FACTORS
 N = 91

Dependent Variable: Psychiatric Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value	Probability Level
BETWEEN:					
Race	1	16.18	16.18	6.37	.0135
Social Class (Social)	1	21.92	21.92	8.63	.0043
Planned Pregnancy (Plan)	1	4.65	4.65	1.83	.1798
Race/Social	1	6.36	6.36	2.51	.1172
Race/Plan	1	7.81	7.81	3.08	.0831
Social/Plan	1	.17	.17	.07	.7979
Race/Social/Plan	1	.92	.92	.36	.5495
WITHIN:	83	210.76	2.54		
BETWEEN:					
Stage of Pregnancy (Stage)	2	2.04	1.02	1.13	.3251
Race/Stage	2	.66	.33	.37	.6930
Social/Stage	2	.23	.11	.13	.8801
Plan/Stage	2	3.11	1.55	1.72	.1816
Race/Social/Stage	2	.75	.37	.41	.6625

TABLE LL--continued

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value	Probability Level
Race/Plan/Stage	2	.12	.06	.06	.9379
Social/Plan/Stage	2	.36	.18	.20	.8181
Race/Social/Plan/Stage	2	1.42	.71	.78	.4585
WITHIN:	166	149.97	.90		

TABLE MM

MULTIFACTORIAL REPEATED MEASURES ANALYSIS OF VARIANCE SUMMARY TABLE
 WITH RACE, SOCIAL CLASS, AND PLANNED PREGNANCY AS FACTORS
 N = 91

Dependent Variable: Somatic Symptoms

Source	Degrees Freedom	Sum of Squares	Mean Square	F-Value	Probability Level
BETWEEN:					
Race	1	64.53	64.53	5.13	.0261
Social Class (Social)	1	183.64	183.64	14.61	.0003
Planned Pregnancy (Plan)	1	128.98	128.98	10.26	.0019
Race/Social	1	14.26	14.26	1.13	.2899
Race/Plan	1	6.58	6.58	.52	.4713
Social/Plan	1	1.14	1.14	.09	.7643
Race/Social/Plan	1	4.43	4.43	.35	.5544
WITHIN:	83	1043.33	11.99		
BETWEEN:					
Stage of Pregnancy (Stage)	2	18.38	9.19	5.22	.0063
Race/Stage	2	15.44	7.72	4.39	.0139
Social/Stage	2	7.70	3.85	2.19	.1153
Plan/Stage	2	6.42	3.21	1.82	.1646
Race/Social/Stage	2	.98	.49	.28	.7574

TABLE MM--continued

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value	Probability Level
Race/Plan/Stage	2	2.03	1.02	.58	.5621
Social/Plan/Stage	2	3.58	1.79	1.02	.3641
Race/Social/Plan/Stage	2	.78	.39	.22	.8010
WITHIN:	166	292.02	1.76		

TABLE NN

MULTIFACTORIAL REPEATED MEASURES ANALYSIS OF VARANCE SUMMARY TABLES WITH
RACE, SOCIAL CLASS, AND PLANNED PREGNANCY AS FACTORS

N=91

Dependent Variable: Key Symptoms

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Value	Probability Level
BETWEEN:					
Race	1	14.14	14.15	17.39	.0001
Social Class (Social)	1	6.16	6.16	7.42	.0079
Planned Pregnancy	1	6.45	6.45	7.77	.0066
Race/Social	1	2.89	2.89	3.48	.0657
Race/Plan	1	.01	.01	.01	.9317
Social/Plan	1	.35	.35	.42	.5188
Race//Social/Plan	1	.07	.07	.09	.7694
WITHIN	83	68.94	.83		
BETWEEN					
Stage of Pregnancy (Stage)	2	1.15	.58	1.81	.1664
Race/Stage	2	3.27	1.64	5.16	.0067
Social/Stage	2	.59	.30	.94	.3936
Plan/Stage	2	2.06	1.03	3.24	.0415
Race/Social/Stage	2	1.01	.51	1.60	.2053
Race/Plan/Stage	2	.13	.07	.21	.8128

TABLE NN--continued

Source	Degrees of Freedom	Sum of Squares	Mean Square		Probability Level
Social/Plan/Stage	2	1.13	.57	1.79	.1709
Race/Social/Plan/Stage	2	.65	.33	1.02	.3634
WITHIN	166	53.67	.32		