PARENTS' ATTITUDES AND BEHAVIOR CONCERNING FERTILITY DURING POSTPARTUM

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CHAPTER I

INTRODUCTION

Statement of the Problem

Although numerous researchers have investigated parenthood in the childbearing stage of the family life cycle, the postnatal phase of parenthood has received little attention in the research literature. This study attempted to provide needed information regarding the attitudes and behavior of parents, i.e., from the wife's perspective, concerning fertility in relation to selected background variables during postpartum. The broad dependent variable of fertility was operationally defined as parents' initial evaluation of first pregnancy and number of children desired. Throughout the study, the husband's attitudes and behavior concerning fertility were ascertained by way of the wife's opinion.

Need for Research

Himes (1936) found that the earliest history of man contains records of attempts to limit the size of family, and that during the intervening years he has sought to attain effective means of controlling both the number of children born and the timing of births. In 1898, Sigmund Freud aptly stated the perennial problem faced by parents who attempt to rationalize procreation:

> It cannot be denied that contraceptive measures become a necessity in married life at some time or other, and theoretically it would be one of the greatest triumphs of mankind, one of the most tangible liberations from the bondage of nature to which we are subject, were it possible to raise the responsible act of procreation to the level of a voluntary act, and to free it from its entanglement with an indispensable satisfaction of a natural desire (Freud, 1962, p. 277).

As efficient, coitus-independent methods of contraception and low-risk abortions have become available throughout the population, this historical goal has become more attainable for increasing numbers of American couples.

Reporting from the 1970 National Fertility Survey, Ryder and Westoff (1972) stated that approximately four out of every five couples using contraception were highly protected from the risk of unintentional conception. However, 26 percent of the couples who used contraception reported that within their first year of exposure to risk of unintentional conception, they failed to delay a pregnancy which they wanted to have at a later time; 14 percent of contraceptive users failed to prevent a pregnancy which they did not intend to have at all. Ryder and Westoff also found that those women who were relatively young at the beginning of exposure to risk (that is, younger than the national average for any specific pregnancy order) were much more likely to have an unwanted pregnancy than those who were older; 66 percent of those attempting to prevent a pregnancy altogether are successful for at least five years, but their success proportion ranges from 44 percent for the youngest to 84 percent for the oldest relative age category. For example, the 18 year-old woman has a 56 percent chance as opposed to the 40 year-old woman's 16 percent chance of having an unwanted child in the next five years.

Thus, it may be concluded from this finding that success in contraceptive use depends in large part on the degree of motivation of the couple concerned. Apparently the consequences of failure to postpone the birth of the next child are not perceived as sufficiently grave to elicit the strongest efforts of the couple, whereas the anticipated consequences of an unwanted child stimulates greater diligence. Perhaps this motivation is due in part to Reed and McIntosh's (1972) finding that an average United States family will spend about $40,000 in direct costs--from hospital delivery through college graduation--to raise its first child, and more than $98,000 if the mother's lost earnings due to withdrawal from the work force for childbearing and rearing are taken into account.

Based on the 1965 and 1970 National Fertility Surveys, Westoff (1972) concluded that the nation was within sight of replacement fertility as a consequence of declines in both wanted and unwanted fertility. On January 1, 1974, the Census Bureau reported that the United States birth rate was 2.08 or slightly below the "replacement level" of 2.11. Furthermore, fertility desires and achievement appear to be in about the same number range (2 ± 1 child) for most Americans throughout the socioeconomic status structure. Ryder and Westoff (1972) report that low-income couples have almost caught up to the level of contraceptive protection experienced by higher income couples.

Consequently, the demographic factors which previously had been the best predictors of fertility, i.e., income, education, occupation, residence, and religion, have been gradually decreasing in predictive power (Kiser, 1968 and Westoff, 1972). Taeuber (1966) and Pohlman (1969) maintain that more predictive success will be achieved through

using social psychological variables in fertility motivation studies. Declining fertility differentials have not, however, produced total homogeneity among all Americans with respect to (a) number of children desired or (b) timing of pregnancies. The overall purpose of this study will be to contribute to the explanation of continued variation in these two classic dependent variables of fertility research. Please see Figure 1 for a schematic diagram of selected traditional (demographic) and paranatal (social psychological) variables included in this study of fertility among postnatal parents.

These findings of a current zero population growth rate must be viewed in light of a United States history of fluctuating birth rates. In 1916, Hollingworth wrote an article on social devices to impel women to have more children; reflecting the nation's growing fear of a baby-less doomsday. In many ways the prophecies of the 1920's and 30's were a mirror image of the "Population Bomb" days in the late 1960's--but with too few babies instead of too many (Pohlman, 1973). Thus, Hoffman and Wyatt (1960) hypothesized that the motives for reproduction are not fixed but respond to social change. For example, Leslie (1967) stated that the position of the child in the family has shifted markedly in past decades; he is no longer an economic asset and is, for many families, an actual economic liability. In view of the fluctuating nature of the United States birth rate, it seems appropriate to conduct fertility research periodically to determine the current direction of change and to further ascertain relevant variables helpful in prediction.

The postnatum phase of the childbearing cycle of the family life cycle was chosen for this study due to the following major reasons. A precursory review of selected current family relationship textbooks

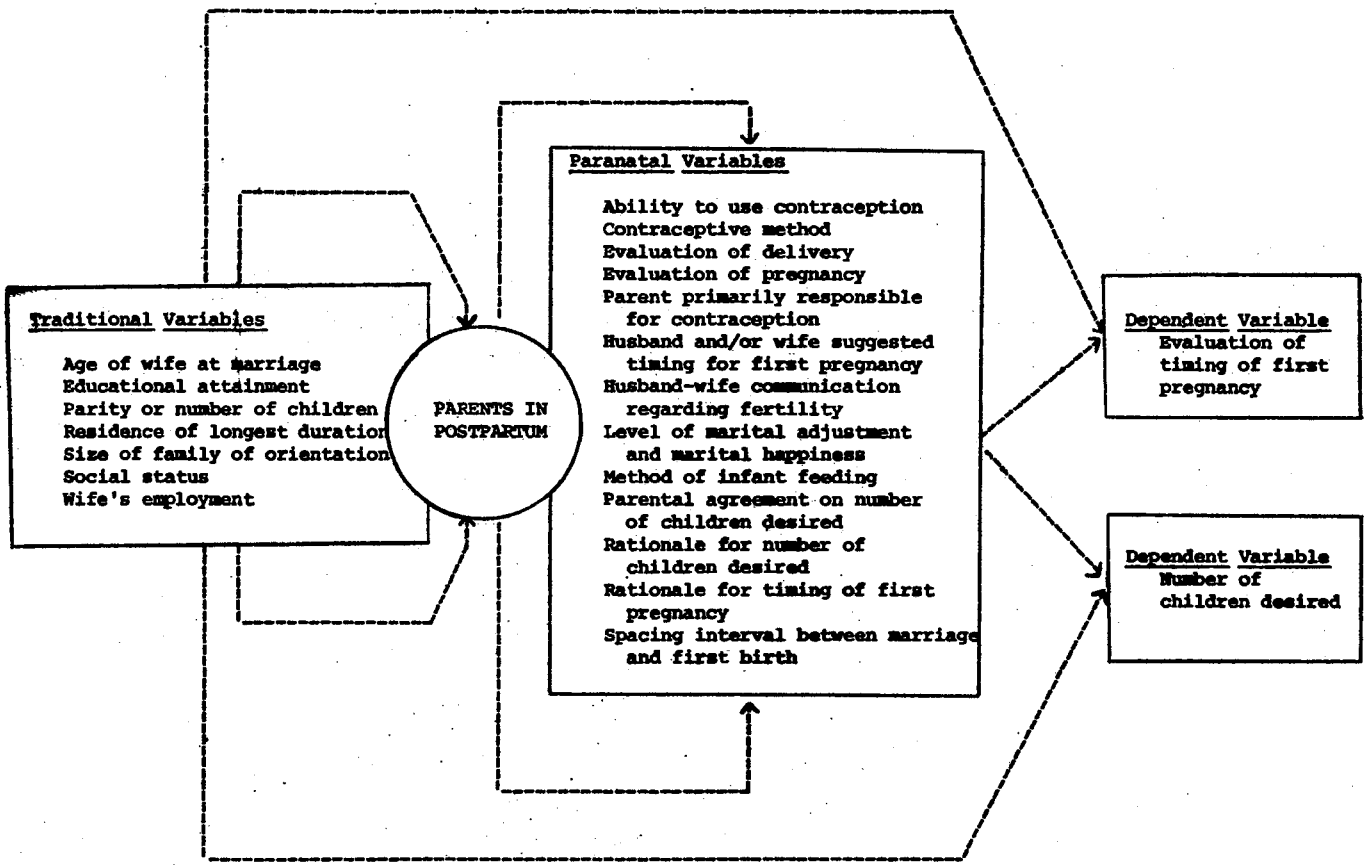

Figure 1. Schematic Diagram of Selected Variables Included in This Study of Parents' Fertility During Postpartum

revealed that sections regarding marital relationships during the postpartum period were without reference to empirical research (Leslie, 1967; Cavan, 1969; Blood, 1969; Klemer, 1970; Duvall, 1971; and Udry, 1971). Kirkpatrick (1955) and Rossi (1968) indicated that their logical explanation of husband-wife reactions to a new child in the family was merely speculation. Hill and Rodgers (1964) in discussing the characteristics of the family developmental conceptual framework concluded that relatively few empirical data are available on the characteristics of the family system during the expanding phase of the family life cycle. Although there are innumerable books with advice to new parents, most of the research findings for that period deal with the infant and young child as an individual and not with the family system.

Second, the postnatal period appears to be an appropriate time to study fertility in that there is a growing trend in medical and nursing practice to begin teaching about contraceptive methods during the postnatal period (Cornall, Gold, and Stone, 1967; Lumley and McDonald, 1968; Monteiro, 1974; and Zatuchni, 1971). Wishik (1969) suggested that ideally a National Population Control Policy would include routine family planning instruction during the three paranatal stages, i.e., antepartum, parturient, and postpartum periods. In 1972, the Michigan Department of Public Health and the University of Michigan School of Public Health sponsored the first national conference concerning ways to increase the number of hospitals including family planning services during postpartum.

Third, Sharman (1965) stated that the physiology of ovulation after delivery must be closely correlated to the practice of

contraception during the postpartum period. There is presumptive evidence that the earliest day for ovulation is the 42nd day postpartum. Finally, a review of related literature indicated that KAP (Knowledge, Action, and Practice) studies dealing with fertility during postpartum are few in number.

In conclusion, with increasing homogenization of the social classes, individual motivations for childbearing become more significant in predicting the number and timing of children for couples. Women recently pregnant seem to be an appropriate population to sample in 1974, the World Population Year, to ascertain their attitudes and behaviors concerning fertility.

Conceptual Framework

Hill (1966) defined the term "conceptual framework" in family study as "a cluster of interrelated, but not yet interdefined, concepts for viewing the phenomenon of marriage and family behavior and for describing and classifying its parts" (Hill, 1966, p. 11). Klein, Calvert, Garland and Poloma (1969) surveyed articles published in the 12 social science journals most active in publishing family materials from 1962 through 1968. They concluded that only the interactional, structure-functional, and family developmental conceptual frameworks have continued to generate new investigation throughout the 1960's. Of the three, Broderick (1971) reported that the symbolic interactional approach has been the most productive of research. However, the family developmental framework has also generated both research and further theoretical work. A considerable body of research has been reported which either compares families at various points in the family life cycle or focuses upon pivotal points in a family's development.

Of the various approaches to theory building, Hill (1971) proposed beginning with the viable conceptual frameworks and critically evaluating them with appropriate modifications. Gradually a unified family conceptual framework should emerge. In this case, Broderick (1971) concluded that the family developmental approach would provide the basic framework since it already represented an attempt by Hill and others to integrate the various approaches around the developmental dimension.

The study reported here attempted to assess parental attitudes and behavior with regard to fertility immediately after a new member was added to the family. Thus, the conceptual framework underlying the present study was essentially an integration of the interactional approach subsumed under the family developmental conceptual framework.

The interactional approach to study of the family strives to interpret family phenomena in terms of internal processes such as role playing, status relations, communication problems, decision-making, stress reactions, and socialization processes (Schvaneveldt, 1966). The developmental framework has borrowed parts of the interactional approach and includes such concepts as stages of the family life cycle, developmental needs and tasks, ideas of the family as a set of mutually contingent careers, and as a system of interaction actors (Hill and Hansen, 1960). By so doing, it combines into one approach an attempt to account for the societal-institutional, interactional-associational, and individual-personality variables of family phenomena. Furthermore, it directs its attention to the longitudinal career of the family system rather than focusing statically on the family at one point in time.

The present study appears to meet the following basic assumptions underlying interactional studies:

1. Human behavior can be understood by studying humans but not through studying nonhuman forms of life.
2. Behavior must be studied within the context of the society in which it is found.
3. Behavior is the result of responses to others and to self-stimulated responses.
4. The human infant at birth is neither social nor anti-social, but rather asocial (Stryker, 1969, p. 127-28).

Futhermore, the assumptions which underlie the research carried out within the developmental framework also appear to be applicable:

1. Human conduct is best seen as a function of the preceding as well as the current social mileau and individual conditions.
2. Human conduct cannot be adequately understood apart from human development.
3. The human is an actor as well as a reactor.
4. Individual and group development is best seen as dependent upon stimulation by a social mileau as well as on inherent (developed) capacities.
5. The individual in a social setting is the basic autonomous unit (Hill and Hansen, 1960, p. 309).

Hypotheses

1. There will be no significant relationship between initial evaluation of timing of first pregnancy and:

   (a) Traditional variables--(1) age of wife at marriage, (2) educational attainment of husband and wife, (3) parity or number of

children, (4) residence of longest duration for husband and wife, (5) size of family of orientation for husband and wife, (6) social status, (7) wife's employment during year prior to first pregnancy; (b) paranatal variables--(1) ability to use contraception, (2) contraceptive method used prior to first pregnancy, (3) evaluation of delivery experience, (4) evaluation of pregnancy experience, (5) parent primarily responsible for contraception, (6) husband and/or wife agreement on timing of sexual relations, (7) level of husband-wife suggested timing for first pregnancy, (8) level of husband-wife communication regarding fertility, (9) level of marital adjustment, (10) level of marital happiness, (11) method of infant feeding, (12) rationale for number of children desired, (13) rationale for timing of first pregnancy, (14) spacing interval between marriage and first birth - actual and ideal.

2. There will be no significant relationship between initial evaluation of timing of first pregnancy and actual spacing between marriage and first birth among parents classified according to:
   (a) husband's ideal spacing interval between marriage and first birth, (b) wife's ideal spacing interval between marriage and first birth, (c) parent's ideal spacing interval between marriage and first birth.
3. There will be no significant relationship between actual spacing interval between marriage and first pregnancy and ideal spacing interval between marriage and first birth among parents classified according to:
   (a) ability to use contraception, and (b) level of marital adjustment.

4. There will be no significant relationship between desired number of children among parents classified according to:

   (a) traditional variables--(1) age of wife at marriage, (2) educational attainment of husband and wife, (3) parity or number of children, (4) residence of longest duration for husband and wife, (5) size of family of orientation for husband and wife, (6) social status, (7) wife's employment during the year prior to first pregnancy.

   (b) paranatal variables--(1) ability to use contraception, (2) contraceptive method used prior to first pregnancy, (3) evaluation of delivery experience, (4) parent primarily responsible for contraception, (5) husband and/or wife suggested timing for first pregnancy, (6) level of husband-wife agreement on timing of sexual relations, (7) level of husband-wife communications regarding fertility, (8) level of marital adjustment, (9) level of marital happiness, (10) method of infant feeding, (11) rationale for number of children desired, (12) rationale for timing of first pregnancy, (13) spacing interval between marriage and first birth--actual and ideal.

5. There will be no significant relationship between number of children desired and selected background variables, e.g., parity and social status, among parents classified according to level of marital adjustment.

6. There will be no significant relationship between level of marital adjustment and number of children desired among parents classified according to:

   (a) age of wife at marriage, (b) husband's educational attainment, (c) wife's educational attainment.

7. There will be no significant relationship between number of children desired and selected background variables, e.g., level of marital adjustment and method of contraception used prior to first pregnancy, among parents classified according to spacing interval between marriage and first birth.
8. There will be no significant relationship between social status and parents classified according to:

   (a) traditional variables--(1) age of wife at marriage, (2) parity or number of children, (3) size of family of orientation for husband and wife;

   (b) paranatal variables--(1) ability to use contraception, (2) contraceptive method used prior to first pregnancy, (3) evaluation of delivery experience, (4) evaluation of pregnancy experience, (5) husband-wife discussion of side effects of contraception, (6) parent primarily responsible for contraception, (7) husband and/or wife suggested timing for first pregnancy, (8) level of husband-wife agreement on timing of sexual relations, (9) level of husband-wife communication regarding fertility, (10) level of marital adjustment, (11) method of infant feeding, (12) parental agreement on number of children desired, (13) rationale for number of children desired, (14) rationale for timing of first pregnancy, (15) spacing interval between marriage and first birth--actual and ideal.

CHAPTER II

REVIEW OF LITERATURE

Numerous fertility studies were reported which have been conducted within the past thirty years. Published material dealing with fertility preferences of parents during postpartum was scant, but many studies have been conducted which sought to ascertain fertility preferences of parents during other phases of the childbearing stage of the family life cycle. These studies were not unrelated to the present work, since both methodological lessons and theoretical clues may be gleaned from their results. Aside from giving information on parents' knowledge, attitudes, and practices in regard to fertility, these results were also related to many social, economic, and general cultural factors. These findings of subgroup differences in timing of pregnancies and family size preferences helped to guide research among women during postpartum on these questions. The review of literature will be divided into studies associated with the two dependent variables, i.e., parental evaluation of timing of first pregnancy and number of children desired. Under each of these main divisions, the research findings will be further divided according to their relationship to traditional or paranatal variables.

Parental Evaluation of Timing of First Pregnancy

Traditional Independent Variables

Age of Wife at Marriage. In the 1965 National Fertility Study, Ryder and Westoff (1971) interviewed a national probability sample of 4,810 women currently living with their husbands. As a general finding, marriages preceded by a premarital conception occurred earlier by age of wife and those preceded by a premarital birth occurred a little later than marriages which had been preceded by neither event. The overall proportion of marriages preceded at least by conception if not birth was 13 percent; the average proportion for the marriages beginning in 1961-1965 was 19 percent.

Ryder (1973) summarized the findings of the 1970 National Fertility Study concerning contraceptive failure and found that relative age (at completion of a pregnancy) was an important influence on the likelihood of failure. The proportion of women in the oldest relative age category failing to realize their intention to delay a wanted pregnancy was less than one-half of that in the youngest relative age category; for those intending to prevent an unwanted pregnancy, the comparable comparison is one-fifth.

The higher relative age for a given order of pregnancy may be caused by any one or a combination of the following factors: higher age at first marriage; lower fecundability (capacity to conceive) among those not using contraception, and greater efficacy in contraceptive use among those who use a method. The hypothesis underlying this inverse relationship between the proportion experiencing contraceptive

failure and relative age of wife at pregnancy is that future behavior tends to resemble past behavior. Westoff (1972) calculated the proportion experiencing an unwanted pregnancy within five years prior to 1970, differentiated by relative age, and found that the proportions failing within five years, from the youngest to the oldest relative age category, were 56 percent, 31 percent, 28 percent and 16 percent, respectively.

Thus, those who arrive at their wanted parity at a relatively young age were more likely than not to have at least one unwanted pregnancy within five years. Moreover, the shape of the time series of cumulative failure suggests that the eventual proportion with at least one unwanted pregnancy will be substantially higher than one-third.

Educational Attainment. Ryder (1973) reported from the 1970 National Fertility Study that there was apparently no significant relationship between education of the wife and the proportion failing to delay or prevent pregnancy, provided that relative age is controlled. It should be remembered that one consequence of greater education is to raise the relative age at each successive reproductive stage. Thus, provided relative initial age is controlled, the effect of education of wife on contraceptive failure vanishes, whereas the effect of relative age remains strong within each education category.

Westoff (1972) and Ryder (1973) both concluded that population researchers can abandon the conventional procedure of employing the wife's education as a cross-tabulation in discussions of differences by race and religion, for example, and employ relative age as a superior substitute. Note that this sense in which relative age conveys the

thrust of the influence of education is yet another part of the exploration for its powerful role as a variable in analysis of contraceptive failure.

Parity or Number of Children. Ryder (1973) reported that the data from the 1970 National Fertility Study indicated that there were no systematic variation according to order of pregnancy interval in the proportions of couples experiencing contraceptive failures once intention to delay or prevent pregnancy and relative age are controlled. The finding is a surprising one. It had been anticipated that the proportion experiencing contraceptive failure would be larger as the number of pregnancies increased, due to previous failure to prevent unwanted conception. Ryder further explains that this is due to an overlapping coding of age.

Clifford (1962) analyzed expressed attitudes of pregnant married and unwed primigravida and multigravida women. The proportion of accidental pregnancies increased with the number of children the mother had.

Bossard and Boll (1956) summed up their survey as follows: Small families have the advantage of more parental attention, but the possible disadvantage of too much intensive parenthood, pressure to achieve, and exaggerated feeling of importance in a group; large families tend to be less planned, with less intensive parenting, early acceptance of realities, more crises, more group emphasis with organization, discipline, conformity and specialization of function among children, whereas, the small family theme is planning, rationalism and prudence oriented toward achievement in a complex, changing society.

Newton (1963) surveyed relevant literature related to maternal emotions and concluded that women with no children were more likely to be pleased with the idea of the pregnancy. Space between children also appeared to influence the emotions with which a new pregnancy was greeted. Mothers expressed steady increase in remembered acceptance of pregnancy as the space between children lengthens. "Planned babies," however, are not always accepted babies, once the mother faces the reality of pregnancy; nor are "unplanned babies" always unwelcome.

Residence. Scanzoni and McMurry (1972) reported that social scientists have traditionally relied heavily on demographic variables in their attempts to explain reproductive behavior. However, the demographic factors which previously had been the best predictors of fertility (education, income, occupation, residence) have been gradually declining in predictive power as contraceptives became diffused throughout the population and as fertility desires seem to range between two and four children for most Americans throughout the status structure (Kiser, 1968).

Westoff (1972) concluded from the 1965 and 1970 National Fertility Studies that American couples have changed their reproductive behavior radically over the course of the past five years, adjusting their fertility goals sharply downward, and increasing substantially their ability to stop childbearing at the wanted level. All parts of the population have shared in these developments, particularly those whose performance previously deviated most from the national averages (e.g., rural residents).

Size of Family of Orientation. Rainwater (1960) found that lower class men who have had large families of orientation may try to have fewer children and give them a higher standard of living. Where such goals are strongly held, the lower-income couple is more likely to give serious attention to family planning and limitation.

Social Status. Coombs, et al. (1970) studied married women in the Detroit area over a five-year period and concluded that the couples' ability to plan the number and spacing of their children was closely correlated with their chances of economic improvement, as well as with their satisfaction--or dissatisfaction--with their economic position. Worst off economically--and most unhappy about it--were couples whose first child was premaritally conceived. These couples continued to have birth planning failures in the course of their marriages, and the economic gap between them and couples who were more successful planners widened with time. Best off economically were those couples who delayed the birth of their first child until a year or more after marriage, described by the authors as "long-spacers." "Short-spacers," those couples who were not premaritally pregnant but who had their first child within the first year of marriage, began childbearing at an economic disadvantage as compared with the "long-spacers," but tended to catch up over time. These couples, by and large, did not have birth planning failures, but wanted, expected, and had more children than the long-spacers.

Wife's Employment. Sears, et al. (1957) classic study entitled, "Patterns of Childbearing," conducted with a New England female sample, found that work attitudes made little difference in the acceptance of

pregnancy of working class mothers. However, among the upper-middle socioeconomic groups, delight in pregnancy was shown more often by women who enjoyed some things about their careers than by those who were indifferent about work, and by women who were eager to start having a family than by those so intense about their job that they did not want to give it up to have children. The investigators suggest that women's enjoyment of their jobs does not necessarily interfere with their acceptance of the maternal role. The woman who enjoys work may also enjoy motherhood, because this is her characteristic "style" of dealing with all of life's situations.

Paranatal Independent Variables

Ability to Use Contraception. Poffenberger, Poffenberger, and Landis (1952) interviewed 212 student wives in an ex-post facto study of their attitudes toward conception and the pregnancy experience. In response to a question which asked the wife to specify her emotional reaction to the knowledge that she had conceived, none of the wives who planned to have a child reacted unhappily, while 5.74 percent of those who tried to avoid pregnancy and 31.8 percent of those who had been apparently indifferent toward conception remarked that they were worried or unhappy at the knowledge they had conceived. The relationship found between planned pregnancies, happy reaction to the knowledge of conception, and marital happiness, suggest that the wife's satisfaction with her marriage may contribute to active planning of pregnancy.

Ryder (1973) concluded from the 1970 National Fertility Study data that one of the consequences of past contraceptive failure is an increase in the probability of future contraceptive failure. However,

when Ryder (1973) compared the 1965 and 1970 National Fertility Survey data, he found that the trend in proportion of couples experiencing contraceptive failure is downward. That is, smaller proportions of couples married during the 1960's have experienced contraceptive failure than of couples married during the 1950's. The decline was greatest for couples who were relatively young when they ended a pregnancy, but even among couples who were relatively old, those married in the 1960's experienced the least failure. Because of the tendency of couples with the passage of time to rationalize failures or successes, this estimation of decline in proportions of couples experienceing contraceptive failure is probably understated. In conclusion, couples who intend to delay a wanted pregnancy are generally less successful with whatever method they use than couples who seek to prevent an unwanted pregnancy.

Contraceptive Method Used Prior to First Pregnancy. Potter and Sakoda (1966); and Whelpton, Campbell, and Patterson (1966) all have made the point that, given present levels of contraceptive effectiveness, couples who wish to avoid unwanted births or abortions should start to contracept early.

Ryder (1973) reported from the 1970 National Fertility Survey that the failure proportions for each method of contraception were as follows: (a) pill, 6 percent; (b) IUD, 12 percent; (c) condom, 18 percent; (d) diaphragm, 23 percent; (e) foam, 31 percent; (f) rhythm, 33 percent; and (g) douche, 39 percent. These proportions reflect the characteristics of those who use each method, as well as of the method itself. Ryder noted that with all methods, couples whose goal was to

prevent further pregnancies had a lower failure rate than couples whose objective was to delay a wanted pregnancy.

Evaluation of Delivery Experience. Newton (1955) found that women who expressed negative feelings toward breast-feeding also tended to express them about birth and had longer labors during first births.

Evaluation of Pregnancy Experience. Landis, Poffenberger, and Poffenberger (1950) interviewed 212 married student couples and found a decline in the sexual instigation of both spouses for each three-month period of pregnancy, with a rise after childbirth, but not to the prepregnancy level. Masters and Johnson (1966) found somewhat different changes in female sexual response during pregnancy. Nulliparous women seemed to experience a reduction in sexual tension and in effectiveness of sexual performance during the first trimester of pregnancy. There was elevated sexuality in the second trimester with significant reduction during the third trimester. Approximately one half of the nulliparous women experienced low levels of sexuality in the third month after delivery and the other half experienced non-pregnant sexual tension levels or higher. The highest level of postpartum sexual interest in the three months after delivery was reported by the group of women nursing their babies. Blood and Wolf (1960) and Rainwater (1965) found that couples had less time for shared activities after the birth of a child in the family.

Poffenberger, and Landis (1952) stated that the highest ratings of emotional upset for the total sample occurred during the early part of pregnancy when 56.2 percent of the wives admitted to "some" or "frequent" upset, while the lowest (43.7 percent) ratings of such upset

occurred in the period before conception. This tension apparently abated somewhat as the midpoint of pregnancy was experienced, since the ratings decreased (12.0 percent) as much in the second trimester of pregnancy or in the period following the birth of the first child.

Davids, et al. (1963) investigated maternal anxiety during pregnancy and adequacy of mother and child adjustment eight months following pregnancy. They concluded that mothers who were greatly concerned about hurting their unborn children during pregnancy tended to have babies who behaved abnormally (in terms of crying, sleeping, fussing, etc.) during the first five days after birth, whereas mothers whose babies behaved normally in the first five days after birth either wanted their pregnancy very much or very much did not want the pregnancy. Similarly Ferreira (1960) concluded that the greater the time between the previous pregnancy and the new pregnancy, the greater was the proportion of mothers who were "delighted" with the current pregnancy.

Patterson, et al. (1960) administered questionnaires covering a wide range of information concerning pregnancy, delivery, and the first two years of the child's life to two groups of mothers: those of emotionally disturbed children and those with children without known emotional disturbance. The total sample of mothers included 18 mothers of schizophrenic children, 37 mothers of children with relatively mild behavior disturbances or neurotic symptomatology, and 28 mothers of children without known emotional disturbance. Their results showed that neither the question regarding planned versus unplanned pregnancy nor that on the number of listed symptoms showed any significant differences between the schizophrenic, normal, and neurotic groups. However, the average number of symptoms reported by the group of mothers

who stated that they had planned their pregnancies (N=48) was significantly less than the average number of symptoms reported by the mothers who stated that they had unintentionally become pregnant (N=35).

Previous investigators have attempted to relate symptoms during pregnancy to various kinds and degrees of psychopathology in the pregnant woman. Although some degree of emotional disturbance is likely to be present in the mothers in the sample who have disturbed children, it would seem from the data that emotional disturbance may not be as crucial in determining symptom formation during pregnancy as in the element of choice with regard to pregnancy (Patterson, et al., 1960).

Bibring (1959), from a psychoanalytic framework, viewed pregnancy as a crisis that affects all expectant mothers, no matter what their state of psychic health. Crises are turning points in the life of the individuals, leading to acute disequilibrium which under favorable conditions result in specific motivational steps toward new functions. Pregnancy as a major turning point in the life of the woman represents one of these normal crises, especially for the primigravida who faces the impact of this event for the first time.

Larsen (1966) found that mothers in their first childbearing year found the physical discomfort of pregnancy, labor, and the early puerperium more stressful than did the mothers with two or more children. Similarly, Zembick and Watson (1952) evaluated the primipara's adjustment to pregnancy during three periods: (a) at pregnancy, (b) at parturition, and (c) at one postpartum point. Anxiety, symptoms both pscyhological and somatic, and attitudes of rejection of pregnancy and motherhood, as measured respectively by the TAT, the Psychosomatic

Inventory, and the ZAR Pregnancy Attitude Scale, were shown to be positively related to independent clinical criteria of prenatal and parturient adjustment.

Level of Husband-Wife Communication Regarding Fertility. Rainwater (1960) interviewed lower-income women concerning their attitudes toward sex, contraception, and family planning and concluded that husband-wife communication regarding family planning becomes more effective after the couple has had as many children as they want. If the husband, wife, or husband and wife assume responsibility for contraception and if both know who assumes this role responsibility then there is more effective planning of births. Hill (1966) reported on Puerto Rican research which found that the "hub" variable through which other background variables were significantly correlated with fertility was the level of husband-wife communication.

Level of Marital Adjustment or Happiness. Christensen (1963) utilized record-linkage data on marriage, divorce, and birth records from Utah, Indiana, and Denmark to study the relationship of timing of first pregnancy to divorce. He found premarital pregnancy to be more frequently followed by divorce than was postmarital pregnancy, and early postmarital pregnancy was more frequently followed by divorce than delayed postmarital pregnancy. Christensen and Philbrick (1952) concluded that marital adjustment increases according to the ability of couples to control fertility in line with their desires. Christensen (1968) reviewed relevant literature related to spacing of children in the family and marital happiness to make the following generalizations: (1) overall negative relationship between length of interval to first

birth and subsequent divorce rate; (2) couples with unplanned children have below average marital adjustment; (3) early postmarital conceivers may be complicating their adjustments by having a child before there has been time for their own marital relationships to achieve stability; and (4) when planning is successful, child-spacing intervals tend to overshoot the couple's desires, whereas, when planning is unsuccessful, actual intervals turn out to be shorter than desired intervals.

Several studies have compared level of marital adjustment with the spacing of children in the family. Burgess and Cottrell (1939) found that happiness was associated with the desire for children, whether the couples had any or not at the time, and poorest adjustment was found among those with unwanted children. Reed (1947) found a significant correlation between marital adjustment and success in controlling fertility according to the desires of the couple. Hurley and Palonen (1967) found that among a college-age sample having more than one child early in marriage correlated with poorer marital adjustment.

Method of Infant Feeding. Adams (1959) found that premarital pregnancy was more likely among those who prefer to bottle feed their children than among those who prefer breast feeding. Pleshette, et al. (1956) found that 58 percent of the new mothers questioned chose bottle feeding, while 40 percent breast fed in the hospital. The sample came from a lower-income, clinic population in a large urban community. Ryder and Westoff (1971) found from the 1965 National Fertility Study data that nonlactators have uniformly higher pregnancy rates than lactators in the first six months; and uniformly lower rates in the second year after delivery.

Rationale for Number of Children Desired. Rindfuss (1971) compiled corresponding data from three major national studies to ascertain the trend in public opinion regarding family size. The three studies included were (a) the 1965 National Fertility Study, (b) the 1970 National Fertility Study, and (c) a 1971 public opinion survey sponsored by the U. S. Commission on Population Growth and the American Future. In both 1965 and 1970 there was an inverse relationship between a woman's concern for population growth and the number of children she desired. Furthermore, the difference in mean desired family size between those who were concerned and those who were not concerned has increased from half a child in 1965 to a full child in 1970.

Rationale for Timing of First Pregnancy. Flapan (1969) analyzed childbearing motivations of married women prior to birth of the first child. The paradigm outlined below consists of a set of perspectives derived from a content analysis of statements made by 82 volunteer women prior to the birth of their first child. The perspectives schematized for delineating the motivational considerations pertaining to childbearing are: (a) social expectation of childbearing and motherhood, (b) childbearing among peers, (c) identity implications of childbearing and motherhood, (d) identification with a fantasied child, (e) childhood memories of family life experiences and identification with own mother, (f) childrearing anticipations and expected relationship with children, (g) relationship with own parents as a childbearing consideration, (h) marital context of childbearing, (i) age and years childless as a childbearing consideration, (j) expected fertility as a childbearing consideration, (k) pregnancy anticipations, (l) childbirth

expectations, (m) fantasies pertaining to the newborn infant. The delineation of these individually listed but interrelated analytical perspectives is a step toward constructing a typology of childbearing motivations and conflicts.

Spacing Interval Between Marriage and First Birth. Cutright (1973) analyzed data from the 1967 Survey of Economic Opportunity, a national probability sample conducted by the U. S. Bureau of the Census. Ever-married mothers, aged 59 or less, were placed in one of five groups: mothers whose first birth was illegitimate, those who delivered within seven months of marriage (pregnant brides), mothers whose first birth arrived 8 to 14 months after marriage (short spacers); those whose first birth occurred 15 to 24 months after marriage (medium spacers), and those whose first birth was delayed 25 or more months after marriage. The results apply not to 1967 but to the period during which most mothers in the sample were in the early years of childbearing--approximately 1947. Cutright found that among whites the number of children ever born was larger among former unwed mothers than other women; brides pregnant at marriage with their first birth, however, have fewer children than mothers in the "short-spacer" interval.

When the differences among mothers in the various timing intervals are adjusted for education, residence, age at interview, and age at marriage, Cutright (1973) found that the adjusted number of children among the ever-married is virtually identical to the unadjusted number. For example, the mothers who control the timing of first birth to 15 or more months after marriage (about 53 percent of all whites) had appreciably fewer children than other mothers. Among the three groups of white mothers who failed to delay first births to 15 or more months

after marriage fertility is higher, but there is no systematic relationship among the three types of mothers.

Cutright (1973) explained the decline in white fertility with increasing intervals between marriage and first birth as a function of the effectiveness of the practice of birth control--that is, the mothers using effective control early in marriage will tend to use it later on, with the result that they will have fewer children than other mothers. One of the major findings of the 1965 and 1970 National Fertility Studies reported by Westoff (1972) was that the unwanted fertility rate decreased by 36 percent between these two years but was offset by the increase in exposure risk which, in turn, is due to the decrease in wanted fertility and earlier timing of births.

Number of Children Desired

Traditional Independent Variables

Age of Wife at Marriage. Physiologically, women are capable of bearing children between the ages of about fourteen and forty-nine. The age at marriage influences the age at which exposure to intercourse begins and subsequent potential fertility. Marriage, of course, does not always represent the beginning of reproductive exposure for a woman. There is a narrow age range within which most people marry. Sixty percent of all first marriages occur within a four- or five-year period and 75 percent of them occur within three or four years on either side of age 21 (Leslie, 1967).

Westoff, Sagi, and Kelly (1958) conducted a longitudinal study with 145 couples who were interviewed during engagement and a second

time after twenty years of marriage. They found a significant relationship between high fertility and early age at marriage. A number of studies have demonstrated that age at marriage is related to the happiness or adjustment subsequently achieved. Landis (1963) found lower marital adjustment scores for men who married before age 20 and women who married before age 18.

Educational Attainment of Husband and Wife. Ryder and Westoff (1971) found a small inverse relationship between number of children desired and the amount of education for their sample of white married women. Current parity for women with college education or more was 2.1 children; while women with grade school education had given birth to 3.5 children. When looking at the number of children desired, the inverse relationship was not as strong as for the expected number of children. College educated women desired 3.3 children and grade school educated women desired 3.8 children.

Grabill, Kiser, and Whelpton (1958) and Mitra (1966) indicated that a trend existed toward a lessening of educational differentials in relation to fertility. This narrowing down of fertility differentials was more visible in urban than in rural areas. Westoff (1972) reported from the 1970 National Fertility Study that the high level (approximately 80 percent) of contraceptive protection is being experienced pretty much uniformly by couples of varying educational levels.

Parity or Number of Children. LeMasters (1957), reasoning that the addition of a new member to the family could be expected to upset the existing adjustment between husband and wife, studied 46 couples who had had their first child within five years of the date of the interview. He found that 83 percent of the couples reported an "extensive" and "severe crisis" in adjusting to the birth of the child. Since 35 of the 38 children were "desired" or "planned," the crisis could not be attributed to the fact of unwanted pregnancy. Neither could the crisis be attributed to poor marital adjustment or psychiatric problems. Instead, LeMasters concluded that these parents had romanticized parenthood and were essentially unprepared for the reality of having a baby in the home. Feldman (1965) stated that in general his findings substantiated the finding of LeMasters concerning parenthood as a crisis event.

A later study confirmed LeMasters' findings but added some qualifications. Dyer (1963) studied 32 middle-class couples who had had their first child within two years of the time studied. Fifty-three percent of the couples experienced extensive or severe crisis after the birth of their first child. The crisis seemed to be related to (a) the state of marriage and family organization at the birth of the first child; (b) the couple's preparation for marriage and parenthood; (c) the couple's marital adjustment after the birth of the child; and (d) certain social background and situational variables such as the number of years married,

planned parenthood, and the age of the child, at the time of the study.

A third study, using somewhat more precise techniques, did not fully support the two earlier studies. Hobbs (1965) studied couples whose first child, was, on the average, 9.8 weeks old. At this early period, only 13 percent reported experiencing even moderate crisis and 87 percent were classified as falling into the slight-crisis category. Hobbs quoted Feldman (1965) as saying that the low proportion of couples experiencing crisis at this early period may be due to what he calls a "baby honeymoon." Feldman stated that couples experience early elation over parenthood, but that after four to six weeks a period of crisis begins to set in.

After an extensive review of literature related to initial parenthood, Rossi (1968) pinpointed the following factors which make the transition to parenthood more difficult than marital and occupational adjustment in American society: (a) lack of the cultural option to reject parenthood or to terminate a pregnancy when it is not desired, (b) the shift from marriage to the first pregnancy as the major transition point in adult women's lives, (c) abruptness of the transition at childbirth, and (d) lack of guidelines to successful parenthood.

Porter (1955) found a significant positive relationship between scores on marital adjustment and parental acceptance of children for 100 married couples with at least one child in the 6- to 10-year-age range. In both of the Growth of American Families Studies (Freedman, Whelpton, and Campbell, 1959; and Whelpton, Campbell, and Patterson, 1966), white mothers as a group reported having lowered their desired family size after the birth of the first child. But these cuts in

budgeted family size were later restored. Several studies show no evidence that having children permanently influences parents as a group to want either larger or smaller families (Westoff, Potter, and Sagi, 1963; and Goldberg, Sharp, and Freedman, 1959). However, these studies leave room for the probability that individual parents change their family size desires up or down after the experience of children.

In the 1955 Growth of American Families Study (Freedman, et al., 1959) almost all mothers claimed that they wanted at least some children, yet 13 percent of the entire sample, and 22 percent of those married 15 or more years, were classified as having excess fertility. "Excess fertility" means that the couple's most recent pregnancy was reported as unwanted before it occurred or at some later time by the husband or the wife or both. The implication is that many Americans may desire some of their children, but not all.

Residence. Ryder and Westoff (1971) found the highest desired fertility among white couples currently living on a farm, with little difference among regions of the United States. Couples living on farms desired 3.6 children, and couples never living on a farm desired 3.3 children.

Kiser, Grabill, and Campbell (1968) analyzed data from the 1950 and 1960 census and concluded that among both whites and nonwhites there was a diminution of fertility differentials by urban-rural residence. The concommitant shift in population from rural areas to predominantly urban areas may have influenced the reduction in fertility.

Size of Family of Orientation. Investigations have been made on the assumption that the size of family of orientation of husband and wife will influence their family size preferences for their own families of procreation. Gustavus' (1968) study of the formation of ideal family size norms utilized a sample of 1,123 sixth, ninth, and twelfth graders taken from public school classes in two southern counties. She reported the size of family of orientation to be directly related to ideal family size with the greatest differences at the extreme ends of the distribution, where children were the only ones in their family or where they came from families having eight or more children.

Westoff, Kelly, and Sagi (1958) analyzed data collected in a longitudinal study concerned with marital adjustment of 145 married couples. The size of family in which the wife was reared correlated positively with the number of children she herself had had after twenty years of marriage. The size of the mother's family of orientation appeared to affect her own fertility by directly influencing the number of children she wanted to have after she was married.

At least one foreign study has explored the relation of size of family of orientation to actual fertility. In England, Berent (1953) stated that a strong positive relation existed between family size in two generations where the couple had been married at least 15 years. The size of the wife's family of orientation seemed to have more relation than size of the husband's family.

Using data from the Indianapolis study (1941), Kantner and Potter (1954) also reported a positive relationship between size of family of orientation and size of family of procreation. This relationship was

strongest when it referred to size of wife's family as the family of orientation. Rainwater (1965) supported these findings in regard to a greater relationship between the wife's family of orientation than the husband's.

A study by Duncan, Freedman, Cable, and Slesinger (1965), using data from the 1955 Growth of American Families Study and 1962 Current Population Survey Data, attempted to relate size of family of orientation to actual fertility. The study found that while this background factor of respondents was not significant as the sole predictor of actual fertility, it was strongly related. The United Nations Population Division (1953) conducted a review of the literature related to determinants of population trends and found that the family size of the parents exerted a definite, although small, differentiating effect on fertility.

Hendershot (1969) in examining this same relationship, questioned unmarried college women and their mothers as to ideal family size preferences, as well as actual family size of the parental generation. The findings showed that the preferences of both mothers and daughters fall in the two-to-four-child range, but mothers more often preferred four children. Hendershot also suggested that the preferences of daughters are more similar to the actual fertility of the mother than mother's preferred family size. Neither variable was significantly related to daughter's preferences, however.

Bossard and Boll (1956) in reporting on the large family system stated that the desire for a large family is significantly not prominent among offspring of prolific parents. Only 30 percent of children from large families endorsed the idea wholeheartedly.

Social Status. Ryder and Westoff (1971) reported a small negative relationship between socioeconomic status and number of children desired. In 1965, white women in the white-collar classes and upper blue-collar class desired 3.3 children, while women in the lower blue-collar class desired 3.4 children and women with farm income desired 3.7 children. Westoff (1972) stated that the data from 1970 seemed to indicate that low-income couples have almost caught up to the level of contraceptive protection experienced by higher income groups.

Wife's Employment. Ryder and Westoff (1971) in the 1965 National Fertility Study found that women who were currently employed and women who were not currently employed but who had worked some time since marriage expect and desire fewer children than those who have never worked after marriage. Women who were working at the time of the interview were asked the reason for employment. The respondents who were working because they "liked to work," the closest to the "career woman" type, had the lowest fertility. Rainwater's (1960, 1965) studies with working class women provided further evidence for a relationship between women's family size preferences and their orientation to the women's role and to the parental role. There was a strong association between desired family sizes and how exclusively the wife saw herself as oriented to husband and outside interests as opposed to children.

Perhaps the change in fertility transpiring after the wife became employed was related to the concommitant change in the marital power structure. Maternal employment was positively related to equilitarian power structure in studies by Order and Bradburn (1969) and Blood (1965). However, Guinopulos and Mitchell (1957) and Nye (1961) found poorer

marital adjustment when the husband disapproved of the wife working. Axelson (1963) questioned 122 husbands of working and non-working wives concerning their marital adjustment and marital role definitions. Husbands of working wives indicated greater willingness to decrease their control of the sexual aspect of marriage.

Newton (1955) interviewed 123 postpartum women in an exploratory study of maternal emotions. Women who experienced negative attitudes toward pregnancy and the women's role in life desired smaller "ideal" numbers of children than women who expressed positive attitudes. Yarrow (1962) presented some research evidence to support the idea that the woman who wants to work will be a better mother for half a day with a part-time job and good help than a full day with no relief and no chance to exercise and replenish her adult capacities.

Paranatal Independent Variables

Ability to Use Contraception. From the 1970 National Fertility Survey, Ryder (1973) reported that one of the consequences of past contraceptive failure is increase in the probability of future contraceptive failure. Ryder (1973) posed the question of the extent to which the failure proportions associated with use of each method may be influenced by the characteristics of those who use such methods. Some methods may be associated with larger failure proportions because they are more likely to be used by those intending to delay or by those who become pregnant at relatively younger initial ages. When the failure rates were controlled, for the above two characteristics, it was found that the failure rate for the IUD was 50 percent higher than the

uncontrolled rate, because it was primarily a method used for prevention rather than delay.

Rainwater (1960) in his classic study entitled, "And the Poor Get Children," found four types of contraceptive users: (a) the early planners who start birth planning early in their childbearing histories, (b) the non-users who employ no contraceptive method even though there is no desire for additional children, (c) the sporatic users who are not effective contraceptive users even though they may be knowledgeable about various methods, and (d) the later "desperate" planners who practice contraception only after having all the children they want.

Contraceptive Method Used Prior to First Pregnancy. Landis, Poffenberger, and Poffenberger (1950) interviewed 212 couples to ascertain the effects of first pregnancy on sexual adjustment. Following first births, there was a significant increase in the use of mechanical and chemical contraceptives; the percentage jumped from 28.8 percent for the entire sample to 65.2 percent. Most of the couples reported using diaphragms. Those wives who reported distrusting their contraceptive methods, and did not want another pregnancy, had a significantly poorer sexual adjustment than those who trusted their method.

Westoff (1972) described changes in the distribution of types of contraceptive methods currently used by married couples of reproductive age between 1965 and 1970, based on data drawn from the two National Fertility Studies of the same years. In the United States in 1970, there were approximately 25 million married couples within the childbearing age group. Only 4 percent (about one million couples) were at risk of unintentional pregnancy due to never having used contraception

because of social or motivational reasons. However, more than one-third of married couples (nearly 9 million) were not using contraception, i.e., 34.9 percent. These non-contraceptors were classified into the following categories: (a) pregnant or trying to become pregnant, 14.5 percent; (b) sterile or subfecund, 12.9 percent; (c) and miscellaneous, 7.5 percent. Although there was little change in the overall proportion of couples using contraception--63.9 percent in 1965 and 65 percent in 1970--there were significant changes in the methods used.

Voluntary sterilization--typically, tubal ligation for women and vasectomy for men--has become the most popular method of contraception currently used by older couples (wife 30-44). The percentage of all older couples who had been sterilized was 16 percent in 1965 and 25 percent in 1970. This appears to reflect the unsuitability of other methods of contraception for many couples who had already had all the children they wanted to have (Westoff, 1972).

In 1970, the pill was by far the most popular method of contraception; it accounted for 34.2 percent of all contraceptive practice (1965-23.9 percent). Most of the increase can be attributed to its widespread acceptance by young women. In 1970 about half of all younger women (49.4 percent) using contraceptives were relying on the pill, compared with 21 percent of older women (Westoff, 1972).

The use of all the older methods declined over the five-year period: the condom declined in use from 21.9 percent of contraceptors in 1965 to 14.2 percent in 1970, the diaphragm from 9.9 percent to 5.7 percent, and rhythm from 10.9 percent to 6.4 percent. Thus, whereas 59.4 percent of the contraceptors were using conventional methods (other than foam) in 1965, this had declined to 36.2 percent by 1970. Westoff (1972)

concluded that the net consequences of changes in methods has been a significant increase in the use of more effective contraception, undoubtedly the main explanation for the decline in the rate of unwanted fertility between 1965 and 1970 and a major factor in the nation's lowered birthrate.

The Westoff studies tend to substantiate the following conclusion offered by Blake and Davis (1956) concerning factors related to levels and trends of fertility in a macro-level theory of fertility:

> Gradually, in the late stages of industrial development, contraception has gained such predominance that it has made low fertility-values on the other intermediate variables unnecessary (Davis and Blake, 1956, p. 235).

Westoff (1973) reported from the 1970 National Fertility Study that 53 percent of the decline in prevention failures and 57 percent of the decline in delay failures between cohorts of 1951-55 and 1961-65 were attributable to the adoption of the pill. In a time series sense, the pill was adopted first for the purpose of ending childbearing and only later for the purpose of childspacing (Westoff, 1973).

Evaluation of Delivery Experience. Hetzel, et al. (1961) interviewed women eight or nine days after delivery of their first child. They found a significant association between pregnant women with an unfavorable or indifferent reaction to pregnancy and prolonged labor and toxemia in pregnancy complications.

Larsen (1966) conducted an exploratory study of the stresses of childbearing for new mothers. During labor and delivery, the dominant stress was their unmet need of adequate help and comfort from nurses, doctors, and husbands. In the hospital after delivery, the most significant stresses were desire to see the baby and irritation of

mothers over routines and environmental conditions in the hospital. The early postpartum months (1-3) at home produced the greatest number of stresses. During the later postpartum months, there were no new stresses mentioned in the three-to-six month period, except for rare and contingent events.

Newton (1955) found that mothers who felt negative about birth also had fewer children, few completely normal births, and came from lower or higher than average income-occupation groups. Women who expressed positive feelings toward childbirth were significantly more likely to enjoy the care of their babies, and produce more children than women with negative feelings toward childbirth.

Evaluation of Pregnancy Experience. Hare and Shaw (1965) found more ill health--both physical and mental--in parents of larger families, especially mothers, which attributed to the increased strain imposed upon them by caring for a larger number of children. There was no association between family size and income and none between social class and health in the population sampled.

Caplan (1957) concluded after conducting numerous studies on emotional implications of pregnancy that pregnancy was to be regarded as a period of increased susceptibility to crisis. He was convinced that it was possible to predict during pregnancy the approximate type of relationship which the mother would have with her newborn baby. Since after delivery this relationship rapidly developed into a circular reverberating system, in which the way the mother related to her baby will be modified by her perceptions of his appearance and behavior, and the latter will be influenced in turn by her maternal handling.

Feldman (1965) found a significant association between an improvement in marital satisfaction for couples measured during the fifth month of pregnancy and fifth week of life for first child and negative attitudes toward pregnancy. Some of these attitudes were concern about appearance, feeling uncomfortable in public, and feeling that one's appearance was more attractive before pregnancy. Also associated with improvement in marital satisfaction were prepartum feelings of fatigue, nervousness, and "depression," and a tendency to state explicitly that one did not enjoy pregnancy.

Larsen (1966) found that during pregnancy, significant stresses of new mothers fell into six main categories: Physical discomfort (50 percent), medical complications (19 percent), fatigue and irritability (32 percent), depression (8 percent), fear of having an abnormal baby (12 percent), and fear for self (7 percent). Newton (1955) found that women who were negative toward pregnancy, though older, were slightly more likely to have small ideal family size preferences.

Newton (1963) summarized research related to maternal emotions and concluded that women's extreme resentment and dislike of pregnancy to the point of induced abortion was very common in United States culture. However, as pregnancy progresses, there was a tendency for the prospective mother to express more and more acceptance. Fears and anxieties tended to increase in pregnancy and decrease after delivery. Folklore probably influences pregnancy fears to a far greater extent than is commonly realized, particularly among the less well-educated portions of the population. The experience of childbirth in our culture appears to

frighten some women to an extent that it causes apprehension in the next pregnancy. Pregnancy was associated with a decrease in sexual desire in women.

Level of Husband-Wife Communication Regarding Fertility. More than eight of ten men in a recent survey of selected eastern United States communities believe that men and women should share the responsibility for contraception (Keith, 1973). Yet nearly one-quarter (23 percent) of the 438 respondents said that they or their partners never used any form of contraception during intercourse and another 12 percent said they seldom used a method. Less than half (46 percent) said they or their partners used contraception all of the time. In addition, 83 percent of the men said that they preferred female methods to condoms and withdrawal. This was not a cross-sectional sample and the respondents were younger, better educated, and had fewer children than the average adult male living in the United States. Fifty-nine percent were or had been married.

Rainwater (1960) stated that effective contraceptive action is made up of a series of separate, cooperative, and deliberate acts which involve both man and woman and which interfere with conception. Effective family planning involves a series of such acts properly performed over the wife's period of fecundity. The cooperative nature of contraceptive acts and the fact that they must be repeatedly performed if family limitation is to be achieved are of crucial importance in understanding couples' success or failure in carrying out their plans. Rainwater concluded that it seems that contraceptive failures at the interpersonal level are more common than technical failures of the method. Finally, Rainwater (1965) stated that

good communication between spouses was correlated significantly with effective family planning.

Level of Marital Adjustment or Happiness. Christensen (1968) surveyed relevant research to determine if marital success was dependent upon the number of children in the family. After finding contradictory results, Christensen concluded that the value parents held regarding the number of children must be taken into account when associating fertility with marital success. Perhaps the contradictory findings can be explained by the research of Terman (1938). He reported no correlation between presence of children and happiness in the marriage, but suggested that this may be because opposing influences tend to balance each other out in a large sample and that the presence of children may actually affect any given marriage either way. However, Christensen (1968) did suggest the following generalizations which need further research:

1. As the number of children of the couple increases, the husband and wife experience more interference with their sexual relationship, find less time for shared activities, and move toward greater role specialization, often including a shift in power from an equilitarian toward an authoritarian, or even patriarchal, base;
2. Marital adjustment increases according to the ability of couples to control fertility in line with their desires.

Christensen and Philbrick (1952) interviewed 346 married student couples and found an overall negative relationship between family size and marital adjustment. More specifically, lower marital adjustment scores were found for couples (a) desiring only one or two children,

(b) with unplanned children, and (c) desiring fewer children at the time of interview than if they could start over again.

Hurley and Palonen (1967) found a negative relationship between child density, defined as the number of living children divided by the number of years of marriage, and marital satisfaction among forty university couples. Lieberman (1970) reported that although divorce rates have remained relatively constant, the number of children affected (1.18 per divorce) has increased significantly since 1960, reflecting the rising proportion of couples with children.

Mower (1928) found that in discordant marriages, the chance for a successful long-term marriage decreases as the number of children increases. Similarly, Reed (1947) in summarizing social and psychological factors affecting fertility found that an inverse relationship existed between marital adjustment and family size, i.e., more children, less adjustment.

Feldman (1965) studied marriage and parenthood among 852 middle and upper middle class couples in an urban setting. Those couples with an infant had a significantly lower level of marital satisfaction than did those who were childless, when the length of marriage was controlled. With a further refinement of the sample and hypothesis, Feldman found that most couples have a lower level of marital satisfaction when the first child is five weeks old than during the fifth month of pregnancy with the same child.

Since some couples increased in satisfaction with the addition of parenthood, while others did not, Feldman (1965) decided to explore the reasons for improvement in marriage with parenthood. An increase in marital satisfaction after becoming a parent was positively correlated

with having a more differentiated, rather than a more companionate marriage before becoming a parent. Those whose prepartum marriage was characterized by a lower level of verbal communication with each other, lesser use of spouse as an interpersonal resource, less likely display of emotionality toward spouse during conflict and a belief system precluding husband's participation in household tasks were more likely to increase in marital satisfaction when the couple became parents.

Method of Infant Feeding. Masters and Johnson (1966) noted that nursing mothers, as a group, sought a more rapid return to sexual intercourse with their husbands than the non-nursing mothers. Feldman (1965) measured couples during their fifth month of pregnancy and fifth week of life for their first child and found a positive relationship between an increase in satisfaction with parenthood and several indices of maternalism, i.e., concern for the child's crying, preference for breast feeding, being child-centered in plans for feeding.

Adams (1959) found in interviews that women who planned bottle feeding responded to pregnancy with more dependency and showed more indications of disturbed behavior. Newton (1955) found new mothers who wanted to breast feed were more likely to have had very short labors. Second Newton (1963) found that an extended lactation period tended to reduce the fertility rate.

Rationale for Number of Children Desired. In a discussion of "wanted" and "unwanted" children, Pohlman (1969) organized conscious motivations of parents for children into:

1. Perceived advantages of a child's presence (e.g., the child may love me)

2. Perceived disadvantages of a child's presence (e.g., the child may make my house messy)
3. Perceived advantages of the child's absence, in terms of other competing possibilities (e.g., I may be able to work at a desired job if I do not have a birth)
4. Perceived disadvantages of a child's absence (e.g., I may be regarded as strange if I fail to produce at least one child).

The conscious desire to have or not to have a child can be thought of as some sort of compromise between such factors as these.

Westoff, et al. (1961) have stated a somewhat similar notion in what they call the "assumption of compatability":

> This states that a particular pattern of fertility performance and control depends on the extent to which having another child (or certain number of children) is compatible with other life values and interests. Although at the level of a truism, this serves to bring into prominence the notion that a fertility choice (whether implicit or explicit) involves a "cost" for the individual and for the family, that is, certain desires and interests are either yielded or compromised in preference to others (Westoff, et al., 1961, p. 167).

Pohlman (1969) reported that various factors pulling in different directions often result in ambivalence, i.e., the individual's feelings may represent a compromise in regard to fertility decisions. Similarly, Stycos (1958) stated that the same individual may have a number of conflicting attitudes, the salience of any one at any one time depending on the situation.

Even in cultures where planning is widely emphasized, many individuals never consciously decide whether a child is wanted. Westoff, et al. (1961) repeatedly imply that the rise in births in America during the 1950's may have been due, not only or primarily to

"wanting" more children, but to the lessening of the acuteness of "unwanting" them. In other words, if the negative "costs" of children are less severe, children may more easily be allowed to "just happen." They further noted that an "accidental" pregnancy occurring while officially contracepting but really taking chances "could be regarded as the unconscious solution to the uncomfortable alternative of having to make a deliberate decision to have another child."

Rainwater (1960) titles an early chapter in his study of working-class Americans, "Doing Nothing is the Easiest Way Out." After the birth occurs, many of the advantages and disadvantages of a child's presence come into play, but they may never be marshalled for an overall decision about whether the child is wanted.

Rationale for Timing of First Pregnancy. Rabin and Green (1968) assessed motivations for parenthood among 200 undergraduate students who responded to a 30-item incomplete sentence test. Following are the four major categories of responses with respect to motivation for parenthood:

1. Altruistic: responses refer to unselfish motivation for parenthood--simply, affection for children, concern for them, and the need to express nurturance in relation to them.
2. Fatalistic: or predestination, expressed the notion that man was brought into the world to procreate and perpetuate the species.
3. Narcissistic: refers to the expectation that the child will reflect glory upon the parent, prove his masculinity and, generally, prove his physical, biological, and psychological adequacy.

4. Instrumental: the child has utility, is to be used as a means to an end. He is "instrumental" in the sense that he is expected to be employed as a vehicle in the achievement of specific parental goals not listed under the narcissistic category.

Spacing Interval Between Marriage and First Birth. Coombs and Freedman (1970) interviewed 947 white married women in 1962, 1963, and 1966 to determine their familial growth and economic progress. Each of the women had had a first, second, or fourth birth in July, 1961. The women were divided into the following three categories for analysis:

1. Premaritally Pregnant--worst off economically and the most unhappy about it. Such couples continued to have birth planning failures in the course of their marriages, and the economic gap between them and couples who were more successful planners widened with time.
2. Short-spacers--those couples who were not premaritally pregnant but who had their first child within the first year of marriage, began childbearing at an economic disadvantage as compared with the long-spacers, but tended to catch up economically over time. These couples, by and large, did not have birth planning failures, but wanted, expected, and had more children than the long-spacers.
3. Long-spacers--delayed having children for a year or more, and closely approximate the "rationalist model" of couples who carefully plan to have few children. They married later than the premaritally pregnant, but at about the same age as the short-spacers. They included relatively few Roman Catholic

couples, and had, wanted, and expected the fewest children; they began contraception early in married life and had especially long intervals between births. Consistently, this group was the best off financially.

CHAPTER III

PROCEDURE

Selection of Subjects

In order to explore from a postnatal perspective the associations between selected background variables and the criterion variables, i.e., timing of first pregnancy and number of children desired, subjects for this study consisted of a sample of 100 postnatal women who were patients at the Stillwater, Oklahoma, Municipal Hospital during February to July, 1973. One hundred and fifty-seven persons were given portions of the instrument or the total questionnaire and interview schedule during the course of instrument development and administration. In order to make the sample as homogeneous as possible, the women were initially selected on the basis of the following criteria: (a) age range of 16-45 years, (b) Caucasian race, (c) current delivery resulting in a viable infant, (d) relatively uncomplicated postpartal emotional and physical adjustment, and (e) United States born. After completing the research instruments, the women were further selected on the basis of the following criteria: absence of history of miscarriage(s) and first marriages.

Subjects were objectively selected according to the above criteria and it is believed that the research findings can be generalized to parents in postpartum found in small western cities with a significant college or child-bearing age census. The sample was selected on the

assumption that errors of judgment in selection of subjects would tend to counterbalance each other in the data analysis. This group of patients was assumed to be a random sample over time in that a six month period of time was selected without foreknowledge of the number of women who would require postnatal care during this period of time.

Description of the Instruments

Background Questionnaire

The background questionnaire (Appendix A) was designed to obtain the following information: (a) age of husband and wife at time of the interview, (b) age of wife at marriage, (c) choice of infant feeding method, (d) educational attainment of husband and wife, (e) wife's evaluation of delivery experience, (f) husband and wife's values concerning size of family of orientation, (g) wife's evaluation of pregnancy experience, (h) husband and wife's religious preferences, (i) longest residence of husband and wife, (j) major source of income, (k) ordinal position of the husband and wife in family of orientation, (l) religiousity, i.e., attendance rate per week, (m) size of husband and wife's family of orientation, and (n) wife's employment status during the year prior to delivery.

Responses to questions concerning education, occupation, and source of income were converted into social status indices according to the McGuire-White (1955) Index of Social Status (short form). The spacing interval between marriage and birth of the first child was computed by subtracting the year of the wife's birth from the current year, 1973. Next, the wife's age at marriage was subtracted from the above difference, thus giving the number of years married prior to this

delivery. For multiparous women, the age of the first child was subtracted from the number of years married to determine the period of marriage prior to the birth of the first child.

Finally, the questionnaire included a measure of marital adjustment --the Locke-Wallace Short Marital Adjustment Test (Locke and Wallace, 1959). This test contains fifteen items taken from several marital success instruments that showed the highest correlation with marital success as measured by these earlier instruments. This test of marital adjustment was selected because of its brevity and because the short form provided correlations with marital adjustment at approximately the same levels of more lengthy forms. The reliability coefficient for this test computed by the split-half technique and corrected by the Spearman-Brown formula was +.90. Validity was assessed by comparing scores of 48 maladjusted couples with the scores of 48 well-adjusted couples. The mean adjustment score for the well-adjusted couples was 135.9 while for the maladjusted couples only 17.7. Only 17 percent of the maladjusted couples received a score of 100 or more, whereas 96 percent of the well-adjusted couples scored 100 or better. A copy of this instrument may be found in Appendix B.

Fertility Interview Schedule

Selected prototype questions from fertility survey manuals (Bogue, 1970; Population Council, 1970; and United Nations, 1970) were modified by the researcher to conform to the research aims and socioeconomic context of this study. The interview schedule was constructed to provide a standardized method of recording the following fertility related information: (a) ability to use contraception, (b) development of

maternal feelings, (c) husband and wife's family size preferences, (d) husband and wife's initial feelings after seeing the newborn, (e) husband and wife's initial reaction to timing of pregnancy, (f) husband and wife's preferences for method of contraception, (g) husband and wife's sex ratio preferences for children, (h) husband and wife's spacing preferences for length of time between marriage and birth of the first child, (i) husband and/or wife's suggestion for initial timing of first pregnancy, (j) length of time between cessation of contraception and pregnancy, (k) method of contraception to be used after completion of childbearing, (l) parity, i.e., number of children, (m) prepregnancy use of contraception, (n) projected change in method of contraception after this delivery, (o) rationale for family size preference, (p) rationale for selection of first contraceptive used, (q) rationale for spacing intervals, (r) rationale for timing of pregnancies, (s) present sex of children and (t) wife's preparation for child care.

In addition, nine questions related to husband-wife communication were included to give some indication of husband-wife fertility communication (Appendix C). The index summarized the following areas of discussion: (a) degree to which the wife confides in mate, (b) parents' desired number of children, (c) efficiency of method of contraception, (d) initial suggestion that time for pregnancy had arrived, (e) method of solving disagreements, (f) possible side effects of agreed upon method of contraception, (g) responsibility for contraception, (h) spacing interval between children and (i) use of contraception.

Pilot Study

Preliminary Survey

In preparation for conducting the pilot study, eight wives meeting the criteria for inclusion in the final sample were given the background information questionnaire and fertility interview schedule in December, 1972. The primary objective in conducting the survey prior to commencing the actual study was to ascertain the feasibility of collecting data during the postnatal period. None of the women contacted refused to participate in the study, and two women stated that they appreciated this opportunity to discuss fertility alone with a nurse, i.e., the investigator. Additional objectives for conducting the survey were to eliminate ambiquities, inadequate wording, and leading questions; to establish the logical order; to evaluate the length of time required for administration of the instruments; to clarify the relationship of questions to the research purpose; and to allow the researcher to gain proficiency in administering the instruments.

Information concerning date of marriage was obtained in two different forms of questions to ascertain the feasibility of asking this question in a direct manner. The rationale was that such a question might result in defensiveness on the part of some of the respondents since there is evidence from national studies that approximately one-fourth of all babies born to women during their first marriage are conceived prior to marriage (Leslie, 1967). The direct question, "When did this marriage begin?" was used in the original survey and later discarded due to two women remarking about their hesitancy to divulge this information after delivery of their first baby. However, a second

indirect question, "How old were you at marriage?" was used in the pilot study with no unfavorable remarks by the respondents.

Reliability of Instruments

Using suggestions from the above survey, a revised draft of the schedule was administered in a pilot study to ten women at two different times to establish relative reliability of the instruments. During January, 1973, the women were pretested on the second or third postpartal day while in the hospital and retested at home approximately one week after discharge. The test-retest technique for estimating reliability was selected because the instruments were developed to measure fairly stable information, e.g., number of children desired, method of contraception used, and age at marriage. In addition, the use of a questionnaire seeking information on various areas and reactions to specific situations precluded the use of alternate-form reliability, split half or odd-even reliability, or Kuder-Richardson reliability techniques. The one week time interval between test and retest was chosen because of the low possibility of change in response caused by the wife's adjustment to a new family member in the home.

The percentage of agreement for the total instrument was +.87. However, when the instrument was classified into segments, the percentages of agreement were as follows: +.94 for background data and +.85 for the fertility interview schedule. The Locke-Wallace Short Marital Adjustment Test (Locke and Wallace, 1959) yielded a specific percentage of agreement of +.75, whereas the non-specific (plus-or-minus one category) percentage of agreement was +.96. Utilizing a chi square analysis, there was a significant relationship at the p=.001 level

between level of marital adjustment and subjective evaluation of marital happiness. Those subjects scoring highest on marital adjustment also evaluated their marriages as being "happy" or "very happy."

After completion of the pretests, the researcher questioned each respondent concerning her evaluation of the clarity of the questions and the amount of time required for completion of the instruments. All ten of the women indicated that they did not feel tired after spending 20-30 minutes filling out the questionnaire and answering the interview questions. Verbal remarks made by the respondents were included in the final draft of the instruments when appropriate.

Validity of Instruments

Fox (1970) has stated that the face validity procedure is appropriate for data which are relatively fixed and finite. Therefore, the face validity procedure for estimating validity was chosen for this study. All ninety-three instrument items appear to refer to different aspects of the respondents' background and to attitudes and actions related to fertility during postpartum. Thus, it seems logical to assume that these instruments measure background characteristics and fertility attitudes and actions during postpartum.

Absolute content validity for the instruments could not be obtained by surveying related rational and empirical literature due to the exploratory nature of this baseline fertility study conducted during postpartum. However, relative content validity was assumed because most of the questionnaire and interview schedule items were included in previous fertility studies conducted at times other than the postnatal period. Second, a review board composed of members with family

relations expertise assessed each of the test items for their relevance to understanding fertility during postpartum. Useful comments were received that aided in the revision of the questionnaire. Finally, several questions in the schedule were utilized as open-ended questions in the pilot study to ascertain valid response categories. These categories were used to form check lists for questions 23, 24, 26, 53, 54, 55, and 56 in the final investigation. Although these procedures were weak measures of validity, Fox (1970) concluded that none of the currently developed procedures for estimating validity provide a theoretically sound or practically satisfactory solution to the measurement problem.

Due to the highly ego-involved nature of this study and postnatal time period tested, several approaches were utilized during the pilot study to screen out individuals giving invalid responses. The definition of validity by Selltiz, et al. (1959), was used in this study. They defined the validity of a measurement instrument as the extent to which differences in scores on it reflect true differences among individuals, groups, or situations in the characteristic which it seeks to measure, or true differences in the same individual, group, or situation from one occasion to another, rather than constant or random errors.

After conducting an extensive review of related literature and numerous personal studies, Edwards (1963) concluded that the relationship between probability of a true response and the social desirability scale value is linear, i.e., the relationship between the probability of a socially desirable response and the social desirability scale value is V shaped, with items at both extremes of the social desirability continuum having a high probability of eliciting a socially desirable

response. The tendency to give socially desirable responses in self-description is regarded by Edwards as a general trait which is elicited by all personality items regardless of the particular scale.

In a more recent analysis of three independent samples, Edmonds (1972) found that marital adjustment scales in general are heavily contaminated by subjects' tendencies to distort the appraisals of their marriages in the direction of social desirability. When this distorting tendency, termed "marital conventionalization," was held constant via partial correlation techniques, no significant correlations remained between marital adjustment as measured and the conservative indexes of traditional family morality, religious activity, ascetic morality, church attendance, or premarital sexual abstinence. A substantial negative correlation emerged, however, between marital adjustment and general conservative ideology.

Prior to the above study, Edmonds (1967) developed a Marital Conventionalization Scale to be used in controlling for the conventionalization effect in marital adjustment studies. Marital conventionalization was defined as the extent to which a person distorts the appraisal of his marriage in the direction of social desirability. This test contains 34 marital-conventionalization items interspersed with 16 items taken from the Burgess-Wallin Marital Happiness Scale. The Burgess-Wallin items were included to disguise the purpose of the test. An equal number of universal truths that sound "bad" and universal falsehoods that sound "good" about marriage were included to prevent a response set on the part of respondents. Edmonds (1967) suggested that the validity of the test would be of the face validity type in that the content of the items in the marital conventionalization scale are

particular instances of marital conventionalization. Consequently, the basic question of validity was one of sampling representativeness with respect to the population of marital conventionalization behaviors. His randomly selected sample consisted of 100 university students who had been married for five years on the average.

Edmonds (1967) also developed a Short Marital Conventionalization Scale which contains 15 items which contributed the most to the total variance in the longer form. This short test of marital conventionalization provided a product-moment correlation coefficient of +.99 with the long form of marital conventionalization. A slightly modified version of the Edmonds (1967) Short Marital Conventionalization Scale was used in the pilot study to eliminate those subjects who were responding in a highly conventional manner. The ten items from the short form which contributed most to the total variance were randomly interspersed among items in the questionnaire schedule to prevent recognition of the purpose of the scale. Subjects giving conventional responses to 40 percent or more of the items on the modified Marital Conventionalization Scale were originally eliminated from the Edmond's sample. A copy of the modified scale may be found in Appendix D.

During the pilot study, six of the ten women in the pretest conducted at the hospital and nine of the same ten women in the pretest conducted at home gave conventional responses to 40 percent or more of the items on the modified version of the Short Marital Conventionalization Scale. Seven of the women in the pretest scored higher on the conventional scale after being at home with their new baby for one to two weeks, while only one woman showed a decrease in her conventionalization scores.

To determine the pervasiveness of this conventionalization phenomena during the paranatal period, the researcher administered the modified version of Edmonds' (1967) Short Marital Conventionalization Scale to twenty-seven pregnant women attending the prenatal instructional classes at Stillwater Municipal Hospital. Ninety-four percent of the respondents gave conventional responses to four or more of the questions, thus only 16 percent of the women would have been eligible for sample inclusion under the original criteria.

In summary, approximately 90 percent of the women gave highly conventional responses to the conventionalization scale during the prenatal and home interviews, whereas 60 percent gave conventional responses during the immediate postnatal period in the hospital. Thus, the paranatal period appears to be a time in the married woman's childbearing years when she gives highly conventional responses to a modified version of the Edmonds (1967) Short Marital Conventionalization Scale.

In order to remove the contaminating effect of conventionalization from the study of marital adjustment, Edmonds (1967) stated that approximately 80 percent of his sample would have had to be eliminated for the measurement of marital adjustment to be valid. Thus, the use of the Edmonds (1967) Short Marital Conventionalization Scale as a screening device for conventionalization would have eliminated approximately 60 percent of the sample, thereby disturbing the variance of scores and limiting generalization to a larger population.

A second and more realistic approach to screening out invalid responses consisted of developing a short lie scale containing the following groups of questions: (a) three of the most discriminating

items on the modified version of Edmonds (1967) Short Marital Conventionalization Scale, (b) two questions concerning common changes in the pregnant woman's physiology (absence of feeling perfectly well and increased frequency of urination, and (c) three significant concerns of pregnant women related to the commencement of labor contractions, possibility of giving birth to a child with abnormal characteristics, and the unknown aspects of delivery (Caplin, 1951; Goodrich, 1961; Larsen, 1966; Newton, 1963; and Pleshette, Asch, and Chase, 1956). Women giving "lie" responses to three or more of the eight questions were eliminated from the sample. During the pilot study period, ten women were given the lie scale items interspersed among the other questions of the background questionnaires. Three women gave lie responses to three or more items and were eliminated from the sample. Finally, the above described lie scale was included in the research instruments and a copy may be found in Appendix E.

Administration of Instruments

Arrangements were made with the hospital administrator, director of nurses, and obstetricians and pediatricians having staff privileges at Stillwater Municipal Hospital to conduct the investigation with married postnatal patients admitted to the obstetric floor during February-July, 1973. The investigator, a registered nurse, attended prenatal classes for six weeks to become more knowledgeable about the childbearing couples in this geographic area and their prenatal preparation for hospital admission. Furthermore, the researcher arranged for an orientation to the obstetric floor to become acquainted with the daily schedule of activities in order to plan the interviews at

appropriate times of the day. In general, the following two time periods were the most convenient for the patients: 10:30 a.m. to 12:00 noon, and 1:30 p.m. to 2:15 p.m. Approximately 90 percent of the women responded to the research instruments during the morning time period.

The interview time for each patient was checked with the obstetric nurse to make sure there were no contraindications. In addition, the obstetric nurse and floor cardex were utilized to screen out patients not meeting the following criteria: (a) age range 16-45 years, (b) Caucasian race, (c) current delivery resulting in a viable infant, (d) uncomplicated postpartal emotional and physical adjustment, and (e) United States born. Finally, the Oklahoma State University Committee on Research, Experimentation or Demonstration Involving Human Subjects reviewed the research proposal and decided that the women would not be "at risk" from participating in this study during postpartum.

During the second or third day postpartum, the researcher met with each postpartum patient to establish rapport and to discuss the general nature of the study before asking if she would like to participate in the interview. However, if the patient was found to be sleeping, having visitors, or not meeting the above criteria, the patient was not interviewed at that time. No pressure was exerted on the patient to participate, and she was assured that her responses would remain anonymous. If the patient's decision was affirmative, the researcher administered the questionnaire and interview session. During the six months of interviewing, two mothers refused to participate in the study apparently due to their preparations for discharge from the hospital.

The researcher remained in the room during the time the women completed the questionnaire form in case they had questions. The

interviewer read each question and response exactly as written. However, the respondents were permitted to ask questions if they did not understand a question. The interviewer marked each response on the interview form in the presence of the respondent immediately after each response was given. The average time required for questionnaire and interview completion was twenty-five minutes.

Analysis of Data

A preliminary screening of the response forms was conducted according to the following criteria: (a) absence of history of miscarriage(s), (b) age range of 16-45 years, (c) completeness of instrument response, (d) first marriage, (e) "lie" responses to two or fewer items on the lie scale. Of the 139 instruments completed, eighteen were eliminated due to lie scale responses, fifteen were eliminated because of multiple marriages, none was eliminated due to age, six were eliminated because of a history of miscarriage(s), and three were eliminated due to incompleteness of response. After eliminating those instruments which failed to meet the above criteria, there were one-hundred usable instruments.

Responses to all items were coded and transferred to cards for electronic processing in the computing center at Oklahoma State University, Stillwater, Oklahoma. The output from the computer, including raw numbers, percentages and indications of significance according to the chi square test, was recorded on master charts. Each segment of data on the master charts was studied for trends. In order to determine whether a significant relationship existed between the various

sub-samples with regard to fertility indices, the chi square test of independence and the Fisher Exact Probability Test were selected. The .05 level was pre-established as a criterion of statistical significance.

CHAPTER IV

RESULTS

Description of the Subjects

Background Information

A detailed description of the 100 subjects who participated in this study is presented in Table I. The sample consisted of 52.53 percent women with one child, 36.36 percent with two children, and 11.11 percent with three or more children. The majority of parents were of the Protestant religion with 77.78 percent of the wives and 83.33 percent of the husbands giving a Protestant religious preference. The highest percentage of the wives (33 percent) had lived for the longest time in a small or medium size city of 10,000 to 99,999 population whereas the two highest percentages for husbands' residence of longest duration were 30.00 percent for farm and 30 percent for small or medium city. Most of the husbands (37.76 percent) were in the 28 and more age category. Likewise, most of the wives (41.41 percent) were in the 26 and more age category. The largest proportion of the wives (42 percent) reported their age at marriage in the 19-20 year category. In most cases the parents reported having three children in their families of orientation. The largest proportion of the wives (33.67 percent) reported being the eldest child in their family of orientation, while most of the husbands (37.11 percent) were in the

TABLE I

BACKGROUND CHARACTERISTICS OF THE SUBJECTS

N = 100

Description	N*	Percent
Age of Husband		
17 - 24 years	33	33.67
25 - 27 years	28	28.57
28+ years	37	37.76
Age of Wife		
16 - 22 years	28	28.28
23 - 25 years	30	30.30
26+ years	41	41.41
Age of Wife at Marriage		
15 - 18 years	28	28.00
19 - 20 years	42	42.00
21+ years	30	30.00
Husband's Education		
High school or less	24	24.49
1 - 3 years college	29	29.59
College graduate or more	45	45.92
Wife's Education		
High school or less	50	51.02
1 - 3 years college	18	18.37
College graduate or more	30	30.61
Husband's Longest Residence		
Farm	30	30.00
Rural non-farm town	19	19.00
Small or medium city (10,000-99,999)	30	30.00
Large city (100,000+)	21	21.00
Wife's Longest Residence		
Farm	22	22.00
Rural non-farm town	24	24.00
Small or medium city (10,000-99,999)	33	33.00
Large city (100,000+)	21	21.00

TABLE I (Continued)

Description	N	Percent
Husband's Religion		
Protestant	80	83.33
Roman Catholic	8	8.33
None	3	3.13
Other	1	1.04
Wife's Religion		
Protestant	77	77.78
Roman Catholic	14	14.14
None	4	4.04
Other	1	1.01
Wife's Religiousity, i.e., Attendance Rate Per Week		
Less than once/week	33	33.67
Once/week	33	33.67
2-3 times/week	7	7.14
None	24	24.49
Number of Brothers in Husband's Family of Orientation		
None	22	22.22
One	33	33.33
Two	29	29.29
Three	9	9.09
Four or more	6	6.06
Number of Sisters in Husband's Family of Orientation		
None	30	30.61
One	33	33.67
Two	21	21.43
Three	8	8.16
Four or more	6	6.12
Total Number of Children in Husband's Family of Orientation		
One	7	7.07
Two	21	21.21
Three	27	27.27
Four	20	20.20
Five or more	24	24.24

TABLE I (Continued)

Description	N	Percent
Ordinal Position of Husband in Family of Orientation		
First	29	29.90
Second	36	37.11
Third	13	13.40
Fourth	6	6.19
Fifth or more	13	13.40
Level of Husband's Satisfaction With Size of Family of Orientation		
Smaller	4	4.17
Larger	8	8.33
Same Size	83	87.50
Number of Brothers in Wife's Family of Orientation		
None	28	28.00
One	35	35.00
Two	22	22.00
Three	13	13.00
Four or more	2	2.00
Number of Sisters in Wife's Family of Orientation		
None	20	20.00
One	49	49.00
Two	16	16.00
Three	5	5.00
Four or more	10	10.00
Total Number of Children in Wife's Family of Orientation		
One	3	3.00
Two	24	24.00
Three	34	34.00
Four	15	15.00
Five or more	23	23.00

TABLE I (Continued)

Description	N	Percent
Ordinal Position of Wife in Family of Orientation		
First	33	33.67
Second	31	31.63
Third	18	18.37
Fourth	7	7.14
Fifth or more	9	9.18
Level of Wife's Satisfaction with Size of Family of Orientation		
Smaller	3	3.03
Larger	12	12.12
Same Size	83	83.84
Parity (Number of Children)		
One child	52	52.53
Two children	36	36.36
Three or more children	11	11.11
Main Source of Income in Marriage at Time of Interview		
Husband	84	84.85
Wife	9	9.09
Parents	3	3.03
Husband and wife	3	3.03
Student Status of Person Who Provides Major Source of Income		
Student	29	29.90
Non-student	67	67.07
Wife's Employment During Previous Year		
Yes	60	61.86
No	36	37.11
Wife's Main Reason for Working		
Like to work	21	34.43
New baby expense	1	1.64
Buy extra things for self	4	6.56
Husband in school	28	45.90
Other	7	11.48

TABLE I (Continued)

Description	N	Percent
Husband's Attitude Concerning Wife's Employment		
Approved	44	73.33
Approved for only short period	13	21.67
Disapproved	2	3.33
Wife's Plans to Return to Work After Delivery		
Yes	32	53.33
No	27	45.00
Expected Time Between Delivery and Return to Work		
0 - 3 months	23	69.70
4+ months	7	21.21
Undecided	2	9.09
Child Care Arrangements for After Mother Returns to Work		
Nursery	6	17.65
Relatives	5	14.71
Husband	6	17.65
Undecided	17	50.00
Social Status		
Upper class	2	2.04
Upper middle	38	38.78
Lower middle	34	34.69
Upper lower	23	23.47
Lower lower	1	1.02

*Sample size does not always equal 100 under each subcategory due to respondents not answering all questions on the research instruments.

second ordinal position in their family of orientation. The majority of husbands and wives were satisfied with the size of their families of orientation. Most of the parents (73.47 percent) were of the middle class as measured by the McGuire-White Index of Socio-Economic Status (1955).

The largest percentage of wives (43.88 percent) had completed high school for their educational attainment, whereas most of the husbands (45.92 percent) were in the completed college or more education category. A majority of the wives (61.86 percent) had been employed during the year prior to the interview. Of the 60 women employed during the previous year, 53.33 percent planned to return to work after discharge from the hospital. Of the 32 mothers who planned to return to work after delivery, 69.70 percent planned to return to work within three months or less.

Paranatal Fertility Information

In addition to the background information, the research instrument also contained items which elicited the subject's attitudes and behavior with regard to paranatal fertility information (Table II). Below are the results of the findings. With regard to spacing interval between marriage and first birth, 28 percent of the women were premaritally pregnant, and an additional 20 percent became pregnant during the first year of marriage. The remaining half of the subjects did not become pregnant until the second or more year of marriage. The majority of the mothers (53 percent) evaluated their pregnancy experience as being in the wonderful category. Similarly, the largest proportion of mothers (39 percent) evaluated their delivery experience as being in the

TABLE II

PARANATAL CHARACTERISTICS OF THE SUBJECTS

N = 100

Description	N*	Percent
Spacing Interval Between Marriage and First Birth		
Premaritally pregnant	28	28.00
Pregnant during first year of marriage	20	20.00
Pregnant during second year of marriage	20	20.00
Pregnant during three or more years of marriage	32	32.00
Method of Infant Feeding		
Breast	48	48.00
Bottle	52	52.00
Evaluation of Pregnancy Experience		
Wonderful	53	53.00
Fair	34	34.00
Terrible	13	13.00
Evaluation of Delivery Experience		
Easy	37	37.00
Average	39	39.00
Hard	24	24.00
Husband-Wife Discussion of Number of Children Desired		
Yes	97	97.00
No	3	3.00
Wife's Desired Children		
One child	3	3.19
Two children	61	64.89
Three children	21	22.34
Four children	6	6.38
Five or more children	3	3.19

TABLE II (Continued)

Description	N	Percent
Wife's Sex Preference for Children		
One boy and one girl	22	23.66
Two boys and two girls	3	3.23
"Sex does not matter--just healthy"	60	64.52
One girl and one boy	2	2.15
Other	6	6.45
Husband's Desired Children		
One child	8	8.60
Two children	62	66.67
Three or more	20	21.51
"As many as it takes to get a boy"	3	3.23
Husband's Sex Preference for Children		
One boy and one girl	22	24.18
Two boys and two girls	1	1.10
"Sex does not matter--just healthy"	58	63.74
One girl and one boy	2	2.20
Other	8	8.79
Husband-Wife Agreement on Desired Number of Children		
Yes	82	86.32
No	12	12.63
Agreed Upon Number of Children		
One child	3	3.53
Two children	55	64.71
Three children	22	25.88
Four or more	3	3.53
Undecided	2	2.35
Rationale for Agreed Upon Number of Children		
Size of families of orientation	11	11.70
Finances/just good number/ small to give affection	35	37.23
ZPG/mother return to work	14	14.89
Number or sex criteria (only child, odd number with middle child left out in play, one of each sex)	26	27.66
Other	8	8.51

TABLE II (Continued)

Description	N	Percent
Husband-Wife Discussion of Ideal Spacing Between Children		
Yes	81	81.82
No	18	18.18
Wife's Ideal Spacing Interval Between Children		
1 - 2 years	10	11.24
2 - 3 years	53	59.55
3 - 4 years	18	20.22
4 or more years	7	7.87
Other	1	1.12
Husband's Ideal Spacing Interval Between Children		
1 - 2 years	14	17.07
2 - 3 years	40	48.78
3 - 4 years	18	21.95
4 or more years	6	7.32
Other	4	4.88
Husband-Wife Agreement on Ideal Spacing Interval Between Children		
Yes	75	88.24
No	10	11.76
Husband-Wife Agreed Upon Ideal Spacing Interval Between Children		
1 - 2 years	9	11.69
2 - 3 years	41	53.25
3 - 4 years	19	24.68
4 or more years	6	7.79
Other	2	2.60
Rationale for Agreed Upon Spacing Interval		
Spacing in families of orientation	10	11.24
Allowance for enough affection per child	47	52.80
Expedient reasons (completion school, financial stability, mother's age or health)	22	24.72
Other	10	11.24

TABLE II (Continued)

Description	N	Percent
Wife's Ideal Spacing Interval Between Marriage and First Birth		
0 - 2 years	22	25.58
2 - 3 years	39	45.35
3 - 4 years	14	16.28
4 or more years	7	8.14
"Depends on the couple"	4	4.65
Husband's Ideal Spacing Interval Between Marriage and First Birth		
0 - 2 years	24	32.43
2 - 3 years	33	44.59
3 - 4 years	10	13.51
4 or more years	7	9.46
Husband-Wife Agreement on Ideal Spacing Interval Between Marriage and First Birth		
Yes	65	85.53
No	11	14.47
Husband-Wife Agreed Upon Ideal Spacing Interval Between Marriage and First Birth		
0 - 2 years	19	28.36
2 - 3 years	31	46.27
3 - 4 years	9	13.43
4 or more years	8	11.94
Rationale Agreed Upon for Ideal Spacing Interval Between Marriage and First Birth		
Marital adjustment before children	68	81.93
Financial stability/complete school	3	3.61
Age of couple/maturity	4	4.82
Other	8	9.64
Husband-Wife Discussion of Contraceptive		
Yes	90	90.00
No	10	10.00

TABLE II (Continued)

Description	N	Percent
Wife's Preferred Method of Contraception		
Pills	79	79.00
Diaphragm	3	3.00
Foam	6	6.00
IUD	6	6.00
Other (Condom or undecided)	6	6.00
Husband's Preferred Method of Contraception		
Pills	67	68.37
Diaphragm	1	1.02
Foam	5	5.10
Other (IUD or condom)	7	7.14
"He just left it up to me"	18	18.37
Husband-Wife Agreement on Method of Contraception		
Yes	94	94.95
No	5	5.05
Husband-Wife Agreed Upon Method of Contraception		
Pills	77	80.21
Diaphragm	3	3.13
Foam	5	5.21
IUD	7	7.29
Other	4	4.17
Husband-Wife Discussion of Effectiveness of Agreed Upon Method		
Yes	68	68.00
No	32	32.00
Rationale for Agreed Upon Method		
Doctor recommended	45	45.00
Friends' advice/"just most common"	19	19.00
Safest	8	8.00
Most effective and easiest	13	13.00
Other	15	15.00

TABLE II (Continued)

Description	N	Percent
Method of Contraception for after Completion of Desired Childbearing		
Pills	7	13.73
IUD	11	21.57
Male sterilization	21	41.18
Female sterilization	10	19.61
Other	2	3.92
"Have not thought about"	48	49.00
Wife's Opinion of Responsible Person for Contraception		
Man	0	0.00
Woman	35	35.00
Both	65	65.00
Husband's Opinion of Responsible Person for Contraception		
Man	2	2.00
Woman	40	40.00
Both	58	58.00
Husband-Wife Opinion of Person(s) Responsible for Contraception		
Both-Both	49	51.58
Woman-Woman	25	26.32
Woman-Both	14	14.74
Both-Woman	3	3.16
Other	4	4.21
Use of Contraception Before First Pregnancy		
Yes	70	70.00
No	30	30.00
Method of Contraception Used Prior to First Pregnancy		
Pills	53	53.54
Diaphragm	2	2.02
Foam	8	8.08
None	30	30.30
Other (condom or coitus interruptus)	6	6.06

TABLE II (Continued)

Description	N	Percent
Ability to use Contraception Prior to First Pregnancy		
Stopped to get pregnant	54	54.00
Method failure	12	12.00
Stopped for other reasons	4	4.00
No method used	30	30.00
Length of time to become Pregnant if Stopped Contraception for Pregnancy		
0 - 1 month	6	11.32
1 - 2 months	14	26.42
3 months - 1 year	26	49.06
1 - 3 years	7	13.21
Wife's Initial Reaction to Timing of First Pregnancy		
Earlier	8	8.00
Later	35	35.00
Right	57	57.00
Husband's Initial Reaction to Timing of First Pregnancy		
Earlier	6	6.00
Later	35	35.00
Right	56	56.00
Other	2	2.00
Husband-Wife Initial Reaction to Timing of First Pregnancy		
Later-Later	33	33.00
Later-Right	3	3.00
Right-Right	52	52.00
Right-Earlier	4	4.00
Other	8	8.00
Initiator of Subject of First Pregnancy		
Wife	24	24.24
Husband	9	9.09
Both-Mutual	26	26.26
Accidental-Neither	37	37.37
Other	3	3.03

TABLE II (Continued)

Description	N	Percent
Husband-Wife Rationale for Timing of First Pregnancy		
Accidental	36	36.36
Completion activity (school, military, financial stability)	16	16.16
After marriage adjustment	4	4.04
Other (husband wanted one; no real reason, just wanted one; companion for mother; etc.)	30	30.30
Husband-Wife Level of Communication Regarding Fertility		
Lower (1 - 5)	30	30.00
Lower Medium (6)	32	32.00
Upper Medium (7)	20	20.00
Higher (8 - 9)	18	18.00
Level of Marital Adjustment		
High (135-174)	31	31.00
Medium (120-134)	30	30.00
Low (64-119)	39	39.00

*Sample size does not always equal 100 under each subcategory due to respondents not answering all questions on the research instrument.

average category. In regard to method of infant feeding, 48 percent of the mothers were in the breast category, and 52 percent of the mothers were in the bottle category. The majority (97 percent) of the women indicated that they had had husband-wife discussions concerning the number of children desired. Approximately 60 percent of the husbands and wives desired two children, and the sex of the children did not matter so long as they were healthy. In regard to a rationale for parental agreement concerning desired number of children, the largest proportion (35 percent) indicated one of the following reasons: (a) finances, (b) just good number; (c) small enough to give affection. However, 26 percent stated that number or sex criteria determined their desired number of children. The majority (81 percent) of the women responded that they had had husband-wife discussions concerning spacing intervals between children. Most of the husbands (40 percent) and wives (53 percent) believed that they thought that two to three years between children would be ideal. Most of the parents (47 percent) reported that their rationale for spacing interval between children was chosen to allow enough giving of affection per child. However, the next largest percentage of parents stated that their spacing interval was chosen due to expedient reasons, e.g., completion of school, gaining financial stability, mother's health or age. Thirty-one percent of the parents agreed upon an ideal spacing interval of two to three years between marriage and the first birth. Among this 31 percent, sixty-eight percent of these parents indicated this ideal spacing interval would allow for a period of marital adjustment before children. Ninety percent of the mothers indicated that they had had husband-wife discussions about contraception. The greatest proportion of couples

(77 percent) agreed upon the pill as their contraceptive method of choice. Most of the couples chose the pill due to their doctor's recommendation. The greatest percentage of couples (48 percent) had not discussed the method of contraception that they will use after completion of childbearing. However, 31 percent stated that either male or female sterilization would be their choice. Forty-nine percent of the respondents indicated that both the husband and wife should assume responsibility for contraception. Seventy percent of the women reported using some method of contraception before their first pregnancy, and a majority (53 percent) chose the pill method. The largest proportion of women (54 percent) classified according to reported ability to use contraception prior to the first birth deliberately stopped using a contraceptive method to become pregnant. Fifty-two percent of the couples thought that their first pregnancy had occurred at the right time. Thirty-seven percent of the subjects reported that their first pregnancy had been accidental and that neither the husband nor the wife had discussed the desire for pregnancy at that particular time. The greatest proportion of mothers (32 percent) were in the lower medium category of husband-wife communication regarding fertility. The respondents were relatively equally divided between the three arbitrarily defined levels of marital adjustment as measured by the Locke-Wallace Short Marital Adjustment Test (Locke and Wallace, 1959).

Findings and Discussion

Eight hypotheses were proposed in order to assess whether or not significant relationships were present among the attitudes and behavior of parents concerning the following two measures of fertility during

postpartum: (a) initial evaluation of the timing of the first pregnancy and (b) number of children desired. The dependent variable, initial evaluation of timing of the first pregnancy, was also classified into two categories for analysis under these hypotheses. Each category was composed of a combination of the husband and wife's initial evaluation to the timing of the first pregnancy, e.g., later-later, right-later, earlier-right. Only the two combinations of "later-later" and "right-right" were utilized for analysis due to small numbers of the parent's responses comprising the other categories. The other dependent variable, number of children desired, was classified into two categories. If the husband and wife came to an agreement on the same number of children desired, their responses were grouped into the following categories: (a) one to two children and (b) three or more children. The findings associated with the following variables will be sequentially presented as follows: (a) timing of first pregnancy; (b) control variables associated with timing of the first pregnancy; (c) number of children desired; (d) control variables associated with number of children desired; (e) timing of the first pregnancy and number of children desired; and (f) social status. Under each section, the related hypothesis or hypotheses will be examined by presenting the findings in tabular form followed by a discussion of the table contents.

Timing of the First Pregnancy

> Hypothesis Ia: There will be no significant relationship among initial evaluation of timing of the first pregnancy among parents classified according to the following traditional background variables: (1) age of wife at marriage; (2) educational attainment of husband and wife; (3) parity or number of children; (4) residence of longest duration for husband and wife; (5) social status; and (6) wife's employment during year prior to last delivery.

Age of Wife at Marriage. The ages of the wives at marriage were classified into three categories for analysis under this hypothesis, i.e., 15-18 years, 19-20 years, and 21 or more years. As shown in Table III, the results of chi square analysis indicated that no significant association was found between the age of wife at marriage and parents' initial evaluation of the timing of the first pregnancy. This finding is contrary to the Growth of American Families study which found a slight tendency for unwanted conceptions to be more frequent among couples where wives were younger at marriage (Whelpton, Campbell, and Patterson, 1966). Similarly, the 1970 National Fertility Study indicated that there was an inverse relationship between the relative age of women at completion of a pregnancy and ability to delay a wanted pregnancy and prevent an unwanted pregnancy. However, these two studies sampled women in the 16-45 age range while the current study was primarily composed of 20-30 year-old women.

Educational Attainment. The categories of educational attainment were different for husband and wife due to most of the husbands having a higher level of education than their wives. The husband's educational attainment was classified into the following three categories: (a) high school graduate or less, (b) 1-3 years of college, and (c) college graduate or more. The wife's educational attainment was classified into the following two categories: (a) high school graduate or less and (b) more than high school graduate. As shown in Table III, the results of chi square analysis indicated that the hypothesis that initial evaluation of timing of first pregnancy is independent of educational attainment was only rejected in the subcategory of wives.

TABLE III

CHI SQUARE ANALYSIS OF PARENTS' INITIAL EVALUATION OF TIMING OF FIRST PREGNANCY AND SELECTED VARIABLES

Variables	N*	df	Chi Square Value	p
Traditional Variables				
Age of wife at marriage	85	2	0.33	n.s.
Educational attainment				
Husband	85	2	1.28	n.s.
Wife	85	1	6.05	.01
Parity (number of children)	84	1	3.34	n.s.
Residence of longest duration				
Husband	85	3	2.60	n.s.
Wife	85	3	0.07	n.s.
Size of family of orientation				
Husband	85	2	0.92	n.s.
Wife	85	2	5.71	n.s.
Social status	85	2	0.07	n.s.
Wife employment during year prior to last delivery	84	1	1.50	n.s.
Paranatal Variables				
Ability to use contraception	82	1	28.54	.001
Contraceptive method used prior to first pregnancy	84	2	11.03	.01
Evaluation of last delivery experience	85	2	0.67	n.s.
Evaluation of last pregnancy experience	85	1	4.71	.05
Parent primarily responsible for contraception	74	2	0.38	n.s.
Husband and/or wife suggested timing for last pregnancy	84	2	26.48	.001
Level of husband-wife agreement on timing of sexual relations	84	2	0.89	n.s.
Level of husband-wife communication regarding fertility	85	1	3.67	n.s.
Level of marital adjustment	85	2	7.30	.05
Level of marital happiness	81	1	6.13	.05
Method of infant feeding	85	1	0.23	n.s.
Rationale for number of children desired	73	1	0.09	n.s.
Rationale for timing of first pregnancy	84	2	31.86	.001

TABLE III (Continued)

Variables	N	df	Chi Square Value	p
Spacing interval between marriage and first birth				
Actual	84	3	28.56	.001
Ideal	58	2	1.43	n.s.

*Number under each background variable is not equal to total sample size due to categories of the dependent variable requiring husband-wife agreement on initial evaluation of timing of first pregnancy, i.e., "right-right" and "later-later."

The couples with wives in the more than high school educational attainment category were four times more likely to have initially evaluated the timing of their first pregnancy in the favorable "right-right" category as compared with the unfavorable "later-later" category, whereas the couples with wives in the less than high school educational attainment category were almost evenly split between favorable and unfavorable initial evaluation of the timing of their first pregnancy. Thus, the higher levels of educational attainment for the wife seem to be associated with a couple's positive evaluation of the timing of their first pregnancy.

In contrast, Ryder (1973) reported from the 1970 National Fertility Study that there was apparently no significant relationship between the education of the wife and the proportion failing to delay or prevent a pregnancy, provided that relative age was controlled. The current study's finding can possibly be explained in light of the relatively small age range for most of the respondents, i.e., 20-30 years. With most of the mothers being in this age range, their level of educational attainment might be a more significant factor in controlling the timing of their pregnancies than age.

Parity or Number of Children. Since the parity for the total sample fell primarily in the one to two child range, the variable of parity was classified into two categories, i.e., one child and two or more children. No significant association was found between the couples' present parity or number of children and their initial evaluation of the timing of their first pregnancy. Similarly, Ryder (1973) reported that data from the 1970 National Fertility Study indicated that there

was no systematic variation according to order of pregnancy interval in the proportions of couples experiencing contraceptive failures once intention to delay or prevent and relative age are controlled.

Residence of Longest Duration. The categories for residence of longest duration for husband and wife included the following four categories: (a) farm, (b) small rural town not on a farm, (c) small or medium city (10,000-99,999) and (d) large city (100,000+). Neither husband's nor wife's residence of longest duration appeared to be significantly associated with initial evaluation of timing of first pregnancy (Table III). This finding concurs with the recent conclusion of numerous researchers that the demographic factors which previously had been the best predictors of fertility have almost lost their predictive powers due to increasing homogenization of reproductive behavior (Kiser, 1968; Scanzoni, and McMurry, 1972; and Westoff, 1972).

Size of Family of Orientation. The size of family of orientation for both husband and wife was defined as the total number of children, counting the parent, in the family within which they grew up. This variable was classified into the following three categories: (a) one to two children, (b) three children, and (c) four or more children. As shown in Table III, the parents' size of family of orientation was not found to be significantly associated with initial evaluation of timing of first pregnancy. As in the preceding discussion, this finding may be explained in light of the increasing ability of all parts of the population to plan the spacing of their children effectively (Westoff, 1972). A question concerning the spacing intervals between marriage and first child and between children in the parents' families

of orientation may have been a more appropriate area to investigate in relationship to the parents' initial evaluation of the timing of their first child.

Social Status. The women's responses to questions concerning education, occupation, and source of income were converted into social status indices according to the McGuire-White (1955) Index of Social Status (short form). The various levels of computed social status were grouped into the following three categories for the purposes of this study: (a) upper class and upper middle; (b) lower middle; and (c) lower class. There appeared to be no significant association between the respondents' social status level and initial evaluation of the timing of the first pregnancy (Table III). In contrast, Coombs, et al. (1970), concluded that the couples' ability to plan the spacing of their children correlated closely with their chances of economic improvement. However, the Coombs study was a five-year longitudinal survey while the present study involved subjects of varying parity recalling their initial evaluation of the timing of their first pregnancy in relation to their current social status.

Wife's Employment During Year Prior to Her Last Delivery. Responses to the question concerning wife's employment status were divided into "yes" and "no" categories. As indicated in Table III, there appeared to be no significant association between wife's employment prior to her last delivery and initial parental evaluation of timing of the first pregnancy. Among upper middle socioeconomic groups, Sears, et al. (1957), suggested that the intensity of the wife's devotion to employment may be more of an important independent variable than the presence or

absence of outside employment in relation to the wife's reaction to pregnancy.

> Hypothesis Ib: There will be no significant relationship between initial evaluation of timing of first pregnancy among parents classified according to the following paranatal variables: (1) ability to use contraception, (2) contraceptive method used prior to first pregnancy, (3) evaluation of delivery experience, (4) evaluation of pregnancy experience, (5) parent primarily responsible for contraception, (6) husband and/or wife suggested timing for first pregnancy, (7) level of husband-wife agreement on timing of sexual relations, (8) level of husband-wife communication regarding fertility, (9) level of marital adjustment, (10) level of marital happiness, (11) method of infant feeding, (12) rationale for number of children desired, (13) rationale for timing of first pregnancy, and (14) spacing interval between marriage and first birth.

Ability to Use Contraception. The couple's ability to use contraception before the first pregnancy was classified into the following three categories: (a) deliberately stopped contraception to become pregnant; (b) failure within contraceptive method; and (c) no contraceptive method used. As shown in Table III, the respondents' ability to use contraception before the first pregnancy was found to be significantly related ($p=.001$) to their initial evaluation of timing of first pregnancy. There were more than six times as many favorable "right-right" reactions to timing of first pregnancy, as compared with unfavorable "later-later" reactions, among the couples who deliberately stopped their contraceptive efforts in anticipation of the first pregnancy. On the other hand, there were more than twice as many unfavorable initial reactions to timing of the first pregnancy, as compared with favorable reactions, among the couples who had experienced a failure within their contraceptive method or had used no method. Similarly,

Poffenberger, Poffenberger, and Landis (1952) interviewed student wives concerning the reaction to their first pregnancy and found that none of the wives who planned to have a baby reacted unhappily, while 5.74 percent of those who tried to avoid pregnancy and 31.8 percent of those who had apparently been indifferent toward conception remarked that they were worried or unhappy at the knowledge they had conceived.

Contraceptive Method Used Prior to First Pregnancy. Due to the large number of women using the pill (oral contraceptives) or no method prior to the first pregnancy, this variable was divided into the following three categories: (a) pills, (b) other methods (coitus interruptus, condom, diaphragm, foam, etc.), and (c) no method used. The parents' method of contraception used prior to the first pregnancy was found to be significantly associated ($p=.01$) with initial reaction to timing of first pregnancy (Table III). Among the parents who used the oral contraceptives prior to the first pregnancy, there were three times as many favorable "right-right" reactions to timing of first pregnancy as compared with unfavorable "later-later" responses. Similarly, there were twice as many favorable reactions to timing of first pregnancy as compared with unfavorable reactions among parents who used other less effective methods of contraception. In contrast, there were almost twice as many unfavorable reactions to timing of first pregnancy as compared with favorable reactions among the parents who had used no contraceptive method prior to the first pregnancy. These findings reflect the failure proportions for methods of contraception reported by Ryder (1973) from the 1970 National Fertility Study.

Evaluation of Delivery Experience. The mothers' responses to the question concerning evaluation of their delivery experience were classified into the following three categories: (a) easy, (b) average, and (c) difficult. As indicated in Table III, there appeared to be no significant association between wife's evaluation of delivery experience and couple's initial evaluation of timing of first pregnancy. In contrast, Newton (1955) found that women who felt childbirth was "hard" were more likely to reject their children and to dislike baby care.

Evaluation of the Pregnancy Experience. The respondents' evaluation of their last pregnancy experience was divided into the following two categories: (a) "wonderful" and (b) "fair" or "terrible." There was a significant association ($p=.05$) between the mother's evaluation of the last pregnancy experience and couple's initial evaluation of timing of first pregnancy (Table III). Among the mothers who evaluated their last pregnancy as "wonderful," there were more than twice as many favorable "right-right" reactions to timing of first pregnancy as compared with unfavorable "later-later" reactions. However, the couples whose wives evaluated their last pregnancy in the "fair" or "terrible" category were evenly split between the favorable and unfavorable initial reaction categories for timing of first pregnancy.

Davids, et al. (1963), found that mothers who were greatly concerned about hurting their unborn children during pregnancy tended to have babies who behaved abnormally during the first five days after birth, whereas mothers whose babies behaved normally in the first five days after birth either strongly wanted their pregnancy or strongly did not want the pregnancy. Similarly, Patterson, et al. (1960), indicated that

the average number of complaints reported during pregnancy by the group of mothers with planned pregnancies was significantly less than the average number of complaints reported by the mothers who stated that they had unintentionally become pregnant.

Level of Husband-Wife Communication Regarding Fertility. Nine questions on the research instruments related to the couples' discussion or agreement on fertility decisions were combined to form an index of fertility communication (Appendix C). The couples were classified into the following two categories of fertility communication: (a) low--zero to seven affirmative responses, and (b) high--seven through nine affirmative responses. These particular cut-off points for categories were arbitrarily selected to allow approximately half of the respondents to be in each category. There was no significant association between the couples' level of fertility communication and their initial evaluation of the timing of the first pregnancy.

Parent Primarily Responsible for Contraception. The husband's and wife's opinion as perceived by the wife of who should assume major responsibility for contraception was combined to form the subcategories for this variable, e.g., man-woman, both-woman, both-man. Only the three combinations of "both-both," "woman-woman," and "both-woman" were utilized for analysis due to small numbers of the responses in the other categories. As shown in Table III, the results of chi square analysis indicated that the null hypothesis of independence between the parents' initial evaluation of timing of first pregnancy and husband and/or wife major responsibility for contraception could not be rejected.

Level of Husband-Wife Agreement on Timing of Sexual Relations. The extent of parental agreement on timing of sexual relations was broken down into the following three levels: (a) always agree, (b) almost always agree, and (c) combination of disagree categories (occasionally, frequently, almost always, and always). As shown in Table III, there appeared to be no significant association between the level of husband-wife agreement on timing of sexual relations and their initial evaluation of timing of the first pregnancy.

These three findings of significance were contrary to Hill's (1966) Puerto Rican research conclusions, which indicated that the level of husband-wife communication was the "hub" variable through which other background variables were significantly correlated with the couple's fertility. However, the current study dealt primarily with the level of parental communication surrounding the first birth, and Rainwater (1960) found that husband-wife communication regarding family planning became more effective after the couple had as many children as were wanted.

Husband and/or Wife Suggested Timing for First Pregnancy. The wife's opinion of who initially suggested the timing for the first pregnancy was classified into the following three categories: (a) wife or husband, (b) mutual--husband and wife, and (c) neither--accidental. There was a significant relationship ($p=.001$) between husband and/or wife suggested timing for first pregnancy and the couple's initial evaluation of the timing of the first pregnancy (Table III). When the parent(s) did suggest the timing of the first pregnancy, they were five times more likely to initially evaluate the timing of the first

pregnancy in the favorable "right-right" category as compared with the unfavorable "later-later" category. Contrastingly, couples in which neither parent suggested the time for the first pregnancy were more than two times more likely to evaluate the timing of the first pregnancy in the unfavorable "later-later" category.

Thus, only one of the three component questions tested individually from the nine husband-wife communication questions, i.e., husband and/or wife suggested timing for the first birth, seemed to concur with the research findings of Hill (1966) and Rainwater (1960). These two researchers had found a significant relationship between level of husband-wife communication and the couple's ability to control the timing of pregnancies.

Level of Marital Adjustment and Level of Marital Happiness. The couples' level of marital adjustment was measured by way of the Locke-Wallace Short Marital Adjustment Test (Locke and Wallace, 1959), and their level of marital happiness was ascertained by tabulating the mother's responses to a question asking her to evaluate the degree of happiness of her marriage. The variable of level of marital adjustment was divided into the following three levels to describe approximately equal numbers of respondents in each level: (a) high (135-174), medium (120-134), and (c) low (64-119). The numbers enclosed in parentheses after each level are the scores calculated from the Locke-Wallace Short Marital Adjustment Test. The categories of marital happiness were limited to the following two due to only three women evaluating their marriage as being in the "very unhappy" category: (a) happy and (b) very happy. As shown in Table III, both level of

marital adjustment and level of marital happiness were found to be significantly associated (p=.05) with the couple's initial evaluation of the timing of the first pregnancy. The couples with high levels of marital adjustment and very happy marriages were significantly more likely to evaluate the timing of their first pregnancy in a favorable "right-right" manner as compared with an unfavorable "later-later" manner.

Christensen and Philbrick (1952) also found a significant positive relationship between a couples' level of marital adjustment and their ability to control fertility in line with their desires. Christensen (1968) stated that early post-marital conceivers may be complicating their adjustments by having a child before there has been time for their own marital relationship to achieve stability. Similarly, Hurley and Palonen (1967) found that couples having more than one child early in marriage had poorer marital adjustment than couples having one child.

Method of Infant Feeding. The mothers' choice of infant feeding was divided into the "breast" and "bottle" methods. There was no significant association between the wife's method of infant feeding and the couple's initial evaluation of the timing of the first pregnancy (Table III).

This finding is contrary to the research conclusion of Adams (1959) if premarital timing of the pregnancy was evaluated as being unfavorable by the couple. Adams (1959) found that premarital pregnancy was more likely among those who prefer to bottle feed their children than among those who prefer breast feeding. However, Newton (1963) concluded

that "planned babies" are not always accepted babies, nor are "unplanned babies" always unwelcome.

Rationale for Number of Children Desired. The parental reasons given for the particular number of children desired were varied and difficult to categorize. However, the couples' rationales for their desired family size were divided into the following four areas: (a) size of family of orientation; (b) finances/small enough to give adequate affection/"just good number;" (c) ecology or wife desired to return to work; (d) number or sex criteria ("only child," "odd number then middle child left out in play," "one of each sex," "if this child is a boy/girl, no more children"). As shown in Table III, there appeared to be no significant association between the couples' rationale for number of children desired and their initial evaluation of the timing of their first pregnancy.

Rationale for Timing of the First Pregnancy. Responses to the question regarding the couples' rationale for their particular timing of the first pregnancy was divided into the following three categories: (a) accidental; (b) completion of activity, e.g., financial stability, marriage adjustment period, military, or school; (c) miscellaneous, e.g., "husband wanted one," "no real reason, just wanted one," "companion for mother." There was a significant association ($p=.001$) between the couples' rationale for the timing of their first pregnancy and their initial evaluation of the timing of the same pregnancy. The couples indicating an accidental rationale were three times more likely to evaluate the timing of the first pregnancy as being unfavorable or should have occurred later, whereas the couples indicating that definite

planning had taken place prior to the first pregnancy--i.e., after completion of an activity--were fourteen more times likely to have evaluated their timing of the first pregnancy in a favorable "right-right" manner. The couples falling in the miscellaneous rationale category were nearly three times more likely to have favorably evaluated the timing of their first pregnancy as compared with an unfavorable evaluation.

In an ex-post facto study such as the current one, the possibility of some change in rationale and initial reaction to timing of first pregnancy by the respondents must be considered. Perhaps Festinger's (1957) theory of cognitive dissonance may come into play in this type of situation. Festinger's theory postulates, among other things, that if an individual is induced to engage in behavior that is inconsistent with his beliefs or attitudes, he will experience the discomfort of "cognitive dissonance" which will motivate him to seek a resolution of that inconsistency. In other words, the inconsistency, or "dissonance," between an individual's beliefs or attitudes and his behavior will motivate belief or attitude change toward cognitive consistency. For example, if the woman accidentally becomes pregnant prior to marriage, the couple may later evaluate the timing of their first pregnancy in the "planned" category.

Spacing Interval Between Marriage and First Birth. The categories for actual and ideal spacing intervals between marriage and first birth were divided into two different ways due to the presence of premarital pregnancies in the actual spacing interval. Actual spacing intervals between marriage and first birth were divided into the following four

categories: (a) premaritally pregnant, (b) pregnant during first year of marriage, (c) pregnant during second year of marriage, and (d) pregnant during three or more years of marriage, whereas the parents' ideal spacing intervals between marriage and first birth were classified into the following three categories: (a) less than two years, (b) two to three years, and (c) three or more years. The parents' ideal spacing interval came from an agreement by both parents on the same ideal interval. As indicated in Table III, the actual spacing interval between marriage and first birth was found to be significantly associated ($p=.001$) with the parents' initial evaluation of the timing of the first pregnancy. The couples who had experienced a premarital first pregnancy were more than three times as likely to evaluate unfavorably the timing of the first pregnancy, by stating that it would have been better if the pregnancy had occurred later. Couples with the first pregnancy coming during the first year of marriage were almost equally divided between the favorable and unfavorable categories of initial evaluation of timing of the first pregnancy. In contrast, the couples who experienced their first pregnancy during the second or more years of marriage were seven times as likely to favorably evaluate the timing of their first pregnancy as compared with an unfavorable evaluation. However, the couples' ideal spacing interval between marriage and first birth did not appear to be significantly associated with their initial evaluation of the timing of the first pregnancy (Table III).

Similarly, Coombs and Freedman (1970) found that the couples who were premaritally pregnant were characteristically in the lowest socio-economic group, most unhappy about their income level, and continued to

have birth planning failures. Second, the couples who had their first child within 9-12 months after marriage tended to begin childbearing at an economic disadvantage but generally did not have birth planning failures. Finally, the couples who delayed having children for a year or more began contraception early in married life, effectively planned long intervals between births, and were consistently in the highest socioeconomic level of the couples sampled.

Control Variables Associated with Timing of First Pregnancy

> Hypothesis II: There will be no significant relationship between initial evaluation of timing of first pregnancy and actual spacing between marriage and first birth among parents classified according to: (1) husband's ideal spacing interval between marriage and first birth, (2) wife's ideal spacing interval between marriage and first birth, and (3) parents' ideal spacing interval between marriage and first birth.

The two variables entitled "parent's initial evaluation of timing of first pregnancy" and "actual spacing interval between marriage and first birth" were classified into the same categories identified under the discussion of hypothesis one. However, the ideal spacing intervals between marriage and first birth for husbands, wives, and parents were categorized into "less than two years" and "more than two years." As indicated in Table IV, there seems to be no significant relationship between parents' initial evaluation of the timing of the first pregnancy and actual spacing interval between marriage and first birth while controlling for the ideal spacing intervals between marriage and first birth for husbands, wives, and parents.

> Hypothesis III: There will be no significant relationship between actual spacing interval between marriage and first pregnancy and ideal spacing interval between marriage

TABLE IV

FISHER EXACT PROBABILITY TEST ANALYSIS OF PARENTS' INITIAL EVALUATION OF TIMING OF FIRST PREGNANCY AND ACTUAL SPACING INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH WHILE CONTROLLING FOR SELECTED VARIABLES

Variable	N	p
Husband's Ideal Spacing Interval Between Marriage and First Birth		
Less than two years	14	n.s.
Two or more years	18	n.s.
Wife's Ideal Spacing Interval Between Marriage and First Birth		
Less than two years	13	n.s.
Two or more years	22	n.s.
Parents' Ideal Spacing Interval Between Marriage and First Birth		
Less than two years	12	n.s.
Two or more years	16	n.s.

and first birth among parents classified according to (1) ability to use contraception and (2) level of marital adjustment.

The variables included in this hypothesis were divided into the same categories discussed under hypothesis one. There appeared to be no significant association between the parents' actual spacing interval between marriage and first pregnancy and their ideal spacing interval between marriage and first birth while controlling for parental ability to use contraception and level of marital adjustment (Table V).

Number of Children Desired

Hypothesis IVa: There will be no significant relationship between desired number of children among parents classified according to the following traditional background variables: (1) age of wife at marriage, (2) educational attainment of husband and wife, (3) parity or number of children, (4) residence of longest duration, (5) size of family of orientation, (6) social status, (7) wife's employment during the year prior to first pregnancy.

Traditional Background Variables. As shown in Table VI, there was no significant association between the couple's desired number of children and the following traditional background variables: (a) age of wife at marriage, (b) educational attainment of husband and wife, (c) parity or number of children, (d) residence of longest duration, (e) size of family of orientation, (f) social status, (g) wife's employment during year prior to first pregnancy. This finding can perhaps be explained in light of the following recent research conclusions. Scanzoni and McMurry (1972) reviewed relevent literature concerning fertility control and concluded that the demographic variables which have traditionally been the best predictors of fertility have been gradually declining in their predictive power. Ryder and Westoff

TABLE V

FISHER EXACT PROBABILITY TEST ANALYSIS OF PARENTS' ACTUAL SPACING INTERVAL BETWEEN MARRIAGE AND FIRST PREGNANCY AND IDEAL SPACING INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH WHILE CONTROLLING FOR SELECTED VARIABLES

Variable	N	p
Ability to Use Contraception		
Deliberately stopped to become pregnant	9	[illegible]
Failure of method	6	n.s.
No method used	24	n.s.
Level of Marital Adjustment		
High	8	n.s.
Medium	10	n.s.
Low	13	n.s.

(1972) concluded from the 1965 and 1970 National Fertility Studies that American couples have changed their reproductive behavior radically over the course of the past five years, adjusting their fertility goals sharply downward and increasing substantially their ability to stop childbearing at the wanted level. All parts of the population have shared in these developments, particularly those whose performance previously deviated most from the national averages (e.g., youngest age group of women at marriage, couples with low education attainment, rural residents, large families of orientation, unemployed women). Furthermore, Ryder and Westoff (1972) pointed out that if this trend in birth rate continues in the 1970's, there will probably be an even greater homogenization of reproduction desires throughout the population.

> Hypothesis IVb: There will be no significant relationship between desired number of children among parents classified according to the following paranatal variables: (1) ability to use contraception, (2) contraceptive method used prior to first pregnancy, (3) evaluation of delivery experience, (4) parent primarily responsible for contraception, (5) husband and/or wife suggested timing for first pregnancy, (6) level of husband/wife agreement on timing of sexual relations, (7) level of husband-wife communication regarding fertility, (8) level of marital adjustment, (9) level of marital happiness, (10) method of infant feeding, (11) rationale for number of children desired, (12) rationale for timing of first pregnancy, (13) spacing interval between marriage and first birth--actual and ideal.

Ability to Use Contraception. There appeared to be no significant differences between the couples' desired number of children and their ability to use contraception (Table VI). From the 1970 National Fertility Study, Ryder (1972) reported one of the consequences of past contraceptive failure was an increase in the probability of future contraceptive failure. Thus, one might expect couples who experience

TABLE VI

CHI SQUARE ANALYSIS OF PARENTS' DESIRED NUMBER OF CHILDREN AND SELECTED BACKGROUND VARIABLES

Background Variable	N	df	Chi Square Value	p
Traditional Variables				
Age of wife at marriage	83	2	0.17	n.s.
Educational attainment				
Husband	82	2	0.49	n.s.
Wife	82	1	0.77	n.s.
Parity (number of children)	82	1	0.58	n.s..
Residence of longest duration				
Husband	83	1	1.67	n.s.
Wife	83	1	2.74	n.s.
Size of family of orientation				
Husband	82	2	1.67	n.s.
Wife	82	2	3.82	n.s.
Social status	82	2	0.81	n.s.
Wife's employment during year prior to first pregnancy	81	1	0.01	n.s.
Paranatal Variables				
Ability to use contraception	80	1	0.58	n.s.
Contraceptive method used prior to first pregnancy	82	2	3.89	n.s.
Evaluation of delivery experience	83	2	2.94	n.s.
Evaluation of pregnancy experience	83	1	0.36	n.s.
Parent primarily responsible for contraception	75	2	2.69	n.s.
Husband and/or wife suggested timing for first pregnancy	82	3	3.56	n.s.
Level of husband-wife agreement on timing of sexual relations	81	2	4.49	n.s.
Level of husband-wife communication regarding fertility	83	2	0.11	n.s.

TABLE VI (Continued)

Background Variable	N	df	Chi Square Value	p
Level of marital adjustment	83	2	1.36	n.s.
Level of marital happiness	78	1	0.01	n.s.
Method of infant feeding	83	1	1.89	n.s.
Parents' initial reaction to timing of first pregnancy	71	1	0.09	n.s.
Rationale for number of children desired	76	1	3.82	n.s.
Rationale for timing of first pregnancy	82	3	3.56	n.s.
Spacing interval between marriage and first birth				
Actual	83	2	5.85	n.s.
Ideal	56	2	5.67	n.s.

several conceptions due to contraceptive failure to have an increase in parity with a concomitant increase in number of children desired. Pohlman (1969) stated that parents tended to evaluate each of their children as desired up to an individual critical number which may be decreased or increased depending on surrounding circumstances as perceived by the couple.

Contraceptive Method Used Prior to First Pregnancy. As reflected in Table VI, there were no significant relationship between the couples' desired number of children and their contraceptive method used prior to their first pregnancy. This result could perhaps be explained in light of the general finding that following the first birth, there is a significant increase in the use of mechanical and chemical contraceptives (Landis, Poffenberger, and Poffenberger, 1950; and Westoff, 1972).

Evaluation of Delivery Experience. There was no significant association between the couple's desired number of children and the wife's initial evaluation of the timing of the first pregnancy (Table VI). This finding is somewhat different from the conclusion that Newton (1955) who found that mothers who felt negative about the childbirth experience also had fewer children.

Evaluation of the Pregnancy Experience. As indicated in Table VI, there were no significant relationship between the couple's desired number of children and the wife's evaluation of the pregnancy experience. In contrast, Newton (1955) found that women who were negative toward pregnancy, though older, were slightly more likely to have small ideal family size preferences.

Level of Husband-Wife Communication Regarding Fertility, Parent Primarily Responsible for Contraception, Husband and/or Wife Suggested Timing for First Pregnancy, Level of Husband/Wife Agreement on Timing of Sexual Relations. There was no significant association between the couples' desired number of children and their level of communication regarding fertility. This finding is reflected in Table VI.

Level of Marital Adjustment or Happiness. As shown in Table VI, there was no significant association between the couples' desired number of children and their level of marital adjustment or marital happiness. In contrast, Christensen and Philbrick (1952) found an overall negative relationship between family size and marital adjustment. More specifically, lower marital adjustment scores were found for couples desiring only one or two children and desiring fewer children at the time of interview than if they could start over again.

Method of Infant Feeding. There was no significant association between the couples' desired number of children and their method of infant feeding. This finding is indicated in Table VI.

Rationale for Number of Children Desired. As shown in Table VI, there was no significant association between the couples' desired number of children and their rationale for the number of children desired. Numerous fertility researchers have indicated that the couple's desired number of children may not be a rationally thought out decision (Pohlman, 1969; Styces, 1958; Westoff, et al., 1961; and Rainwater, 1960).

Rationale for Timing of First Pregnancy. There was no significant association between the couples' desired number of children and their

rationale for the timing of the first pregnancy. This finding is reflected in Table VI.

Spacing Interval Between Marriage and First Birth. As indicated in Table VI, there was no significant relationship between the couples' desired number of children and their actual and ideal spacing intervals between marriage and first birth. This finding is contrary to the Coombs and Freedman (1970) study conclusions. They found that couples who had their first child within the first year of marriage wanted and expected more children than the couples who delayed having children for a year or more after marriage.

Control Variables Associated with Number of Children Desired

> Hypothesis V: There will be no significant relationship between the number of children desired and selected background variables among parents classified according to level of marital adjustment.

Traditional Variables. There was no significant association between the couple's desired number of children and the three selected traditional variables of fertility, i.e., age of wife at marriage, parity, and social status, while controlling for level of marital adjustment. These findings are indicated in Table VII.

Paranatal Variables. Likewise, there was no significant association between the couple's desired number of children and the five selected paranatal variables, i.e., evaluation of the delivery experience, evaluation of the pregnancy experience, level of husband

TABLE VII

CHI SQUARE ANALYSIS OF PARENTS' DESIRED NUMBER OF CHILDREN AND SELECTED BACKGROUND VARIABLES WHILE CONTROLLING FOR LEVEL OF MARITAL ADJUSTMENT

Background Variable	N	df	Chi Square Value	p
Traditional Variable				
High marital adjustment				
Age of wife at marriage	25	1	0.01	n.s.
Parity (number of children)	24	1	0.00	n.s.*
Social status	25	1	0.02	n.s.*
Medium marital adjustment				
Age of wife at marriage	26	1	0.03	n.s.*
Parity (number of children)	26	1	0.04	n.s.*
Social status	26	1	0.16	n.s.*
Low marital adjustment				
Age of wife at marriage	32	1	0.46	n.s.*
Parity (number of children)	32	1	0.01	n.s.*
Social status	31	1	2.60	n.s.*
Paranatal Variable				
High marital adjustment				
Evaluation of delivery experience	25	1	0.11	n.s.*
Evaluation of pregnancy experience	25	1	0.18	n.s.*
Level of husband-wife communication regarding fertility	25	1	0.34	n.s.
Method of infant feeding	25	1	0.66	n.s.*
Spacing interval between marriage and first birth--actual	25	1	2.52	n.s.*

TABLE VII (Continued)

Background Variable	N	df	Chi Square Value	p
Medium marital adjustment				
Evaluation of delivery experience	25	1	0.29	n.s.
Evaluation of pregnancy experience	26	1	0.51	n.s.
Level of husband-wife communication regarding fertility	26	1	0.01	n.s.*
Method of infant feeding	26	1	0.05	n.s.
Spacing interval between marriage and first birth--actual	26	1	0.01	n.s.
Low marital adjustment				
Evaluation of delivery experience	32	1	0.01	n.s.*
Evaluation of pregnancy experience	32	1	0.04	n.s.*
Level of husband-wife communication regarding fertility	32	1	0.60	n.s.*
Method of infant feeding	32	1	1.02	n.s.*
Spacing interval between marriage and first birth--actual	32	1	0.12	n.s.

*Yates' correction for continuity formula applied to chi square analyses with one or more cells in the contingency table containing an expected frequency of less than five.

wife communication regarding fertility, method of infant feeding, and actual spacing interval between marriage and first birth, while controlling for level of marital adjustment. These findings are shown in Table VII.

> Hypothesis VI: There will be no significant relationship between the number of children desired and the level of marital adjustment among parents classified according to: (a) age of wife at marriage, (b) husband's educational attainment, and (c) wife's educational attainment.

Age of Wife at Marriage. As indicated in Table VIII, there was no significant association between parents' desired number of children and their level of marital adjustment while controlling for age of wife at marriage.

Husband's Educational Attainment. There was no significant relationship between parents' desired number of children and their level of marital adjustment while controlling for level of husband's educational attainment. These findings are reflected in Table VIII.

Wife's Educational Attainment. As shown in Table VIII, there seemed to be no significant association between the parents' desired number of children and their level of marital adjustment while controlling for level of wife's educational attainment.

> Hypothesis VII: There will be no significant relationship between number of children desired and selected background variables among parents classified according to spacing interval between marriage and first birth.

Traditional Variables. There was no significant association between parents' desired number of children and the two selected traditional variables of fertility, i.e., age of wife at marriage and

TABLE VIII

CHI SQUARE ANALYSIS OF PARENTS' DESIRED NUMBER OF CHILDREN AND LEVEL OF MARITAL ADJUSTMENT WHILE CONTROLLING FOR SELECTED BACKGROUND VARIABLES

Variable	N	df	Chi Square Value	p
Age of Wife at Marriage				
15 - 18 years	24	1	2.75	n.s.
19 - 20 years	35	2	1.28	n.s.
21+ years	23	1	0.04	n.s.
Husband's Educational Attainment				
Attended college or less	82	2	1.31	n.s.
Graduated college			n.a.*	
Completed graduate work			n.a.*	
Wife's Educational Attainment				
High school or less	82	2	1.31	n.s.
Attended college			n.a.*	
Graduate college or more			n.a.*	

*Not Applicable. Insufficient numbers in the category cells of the contingency table to warrent the use of chi square analysis.

social status, while controlling for actual spacing interval between marriage and first birth. These findings are reflected in Table IX.

Paranatal Variables. There was no significant association between parents' desired number of children and the seven selected paranatal variables of fertility, i.e., evaluation of delivery experience, evaluation of pregnancy experience, level of husband-wife communication regarding fertility, level of marital adjustment, level of marital happiness, method of infant feeding, and rationale for number of children desired, while controlling for actual spacing interval between marriage and first birth. These findings are shown in Table IX.

Timing of First Pregnancy and Number of Children Desired

> Hypothesis VIII: There will be no significant relationship between the parents' initial evaluation of the timing of the first pregnancy and their desired number of children.

There was no significant association between the couples' initial evaluation of the timing of the first pregnancy and their desired number of children. This finding is reflected in Table X.

Social Status and Selected Variables

> Hypothesis IXa: There will be no significant relationship between parents' level of social status and the following selected traditional variables: (1) age of wife at marriage, (2) parity or number of children, (3) size of family of orientation for husband and wife.

Age of Wife at Marriage. There was a significant relationship ($p=.01$) between parents' social status level and the age of the wife

TABLE IX

CHI SQUARE ANALYSIS OF PARENTS' DESIRED NUMBER OF CHILDREN AND SELECTED VARIABLES WHILE CONTROLLING FOR ACTUAL SPACING INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH

Background Variable	N	df	Chi Square Value	p
Traditional Variable				
Pregnant premaritally or during first year of marriage				
Age of wife at marriage	38	1	0.11	n.s.*
Social status	38	2	3.67	n.s.*
Pregnant during two or more years of marriage				
Age of wife at marriage	44	1	0.45	n.s.*
Social status	44	2	2.71	n.s.*
Paranatal Variable				
Pregnant premaritally or during first year of marriage				
Evaluation of delivery experience	38	1	0.71	n.s.
Evaluation of pregnancy experience	38	1	0.71	n.s.
Level of husband-wife communication regarding fertility	38	2	0.11	n.s.
Level of marital adjustment	38	1	0.24	n.s.*
Level of marital happiness	35	1	0.18	n.s.
Method of infant feeding	38	1	0.71	n.s.
Rationale for number of children desired	33	1	0.67	n.s.*
Pregnant during two or more years of marriage				
Evaluation of delivery experience	44	1	0.68	n.s.*
Evaluation of pregnancy experience	44	1	2.37	n.s.*
Level of husband-wife communication regarding fertility	44	2	3.77	n.s.*
Level of marital adjustment	44	4	2.01	n.s.*

TABLE IX (Continued)

Background Variable	N	df	Chi Square Value	p
Level of marital happiness	43	1	0.21	n.s.*
Method of infant feeding	44	1	2.03	n.s.*
Rationale for number of children desired	42	2	0.02	n.s.

*Yates' correction for continuity formula applied to analyses with one or more cells in the chi square contingency table containing an expected frequency of less than five.

TABLE X

CHI SQUARE ANALYSIS OF PARENTS' INITIAL EVALUATION OF TIMING OF FIRST PREGNANCY AND NUMBER OF CHILDREN DESIRED

Variable	N	df	Chi Square Value	p
Number of children desired				
1 - 2	26	1	0.09	n.s.
3 or more	45			

at marriage (Table XI). The couples with wife's age at marriage falling in the two older age groups, i.e., 19-20 years and 21 or more years, were more than three times as likely to be in the upper or upper middle socioeconomic classes, whereas the lower middle and lower socioeconomic classes had more couples with the wife's age at marriage falling in the two younger age categories, i.e., 15-18 years and 19-20 years. This finding concurs with the results of the Coombs and Freedman (1970) study of familial growth and economic progress. They found that early marriage, premarital pregnancy and lower socioeconomic status were all negatively correlated. However, later ages at marriage, postmarital pregnancy, and higher socioeconomic status were positively correlated.

Parity or Number of Children. As indicated in Table XI, there was no significant association between the parents' social status and their parity or number of children. This finding is contrary to the traditional inverse relationship generally found between socioeconomic status and parity (Westoff and Ryder, 1971). However, the current study was primarily composed of couples with relatively small families, i.e., 1-3 children.

Size of Family of Orientation. There was no significant relationship between parents' social status level and the size of their families of orientation. These findings are reflected in Table XI.

> Hypothesis IXb: There will be no significant relationship between parents' level of social status and the following selected paranatal variables: (1) ability to use contraception, (2) contraceptive method used prior to first pregnancy, (3) evaluation of delivery experience, (4) evaluation of pregnancy experience, (5) husband-wife discussion of side effects of contraception, (6) parent

TABLE XI

CHI SQUARE ANALYSIS OF PARENTS' SOCIAL STATUS AND SELECTED BACKGROUND VARIABLES

Background Variable	N	df	Chi Square Value	p
Traditional Variable				
Age of wife at marriage	98	4	15.96	.01
Parity (number of children)	97	1	0.63	n.s.
Size of family of orientation				
Husband	98	1	0.22	n.s.
Wife	98	1	0.56	n.s.
Paranatal Variable				
Ability to use contraception	94	1	1.78	n.s.
Contraceptive method used prior to first pregnancy	97	2	8.35	.05
Evaluation of delivery experience	98	2	2.73	n.s.
Evaluation of pregnancy experience	98	2	7.23	.05
Husband-wife discussion of side effects of contraception	97	1	1.38	n.s.
Parent primarily responsible for contraception	93	2	2.09	n.s.
Husband and/or wife suggested timing for first pregnancy	97	2	0.95	n.s.
Level of husband-wife agreement on timing of sexual relations	97	1	2.07	n.s.
Level of husband-wife communication regarding fertility	98	1	0.65	n.s.
Level of marital adjustment	98	2	4.24	n.s.
Method of infant feeding	98	1	1.76	n.s.
Parental agreement on number of children desired	82	1	0.59	n.s.
Rationale for number of children desired	84	2	0.85	n.s.
Rationale for timing of first pregnancy	97	2	1.51	n.s.
Spacing interval between marriage and first birth				
Actual	97	1	1.95	n.s.
Ideal	67	2	1.73	n.s.

primarily responsible for contraception, (7) husband and/or wife suggested timing for first pregnancy, (8) level of husband-wife agreement on timing of sexual relations, (9) level of husband-wife communication regarding fertility, (10) level of marital adjustment, (11) method of infant feeding, (12) parental agreement on number of children desired, (13) rationale for number of children desired, (14) rationale for timing of first pregnancy, (15) spacing interval between marriage and first birth--actual and ideal.

Ability to Use Contraception. As indicated in Table XI, there was no significant relationship between the couples' ability to use contraception and their social status. Westoff (1972) found in the 1970 National Fertility Study that low income couples have almost caught up to the level of contraceptive protection experienced by higher income couples.

Contraceptive Method Used Prior to First Pregnancy. There was a significant relationship ($p=.05$) between the method of contraception used prior to the first pregnancy and the couple's social status level (Table XI). Interestingly, about the same percentage of each social status level used the less effective methods of contraception, e.g., diaphragm, douche, foam, whereas twice as many of the couples in the upper class or upper middle socioeconomic classes utilized the pill, as compared with couples in the lower classes. Contrastingly, Westoff (1972) reported from 1965 and 1970 National Fertility Study data that there has been a sharp increase in reliance on the effective contraceptive methods by the lower socioeconomic classes, almost to the use rate of the higher social classes.

Evaluation of Delivery Experience. As reflected in Table XI, there was no significant association between the couple's social status and the wife's evaluation of her delivery experience. In contrast, Newton (1955) found that mothers who felt negative about childbirth came from the lower or higher income occupation groups, whereas women who expressed positive feelings toward childbirth were more likely to have come from the middle income occupation groups.

Evaluation of Pregnancy Experience. There was a significant relationship ($p=.05$) between the couple's social status level and the wife's evaluation of her pregnancy experience. This finding is indicated in Table XI. Higher social status was related to more positive evaluations. Newton (1955) also found a significant positive relationship between the woman's socioeconomic level and her positiveness in evaluating her pregnancy.

Level of Husband-Wife Communication Regarding Fertility, Level of Husband-Wife Agreement on Timing of Sexual Relations, Husband and/or Wife Suggested Timing for First Pregnancy, Parent Primarily Responsible for Contraception, and Husband-Wife Discussion of Side Effects of Contraception. As indicated in Table XI, there was no significant association between level of husband-wife communication on subjects related to fertility and their social status level. In contrast, Rainwater (1965) and Hill (1966) found an inverse realtionship between the couples' social status and their ability to communicate regarding fertility.

Level of Marital Adjustment. There was no significant association between the couples' social status and their level of marital adjustment.

In contrast, Blood and Wolf (1960) found a positive relationship between the couples' socioeconomic status and their level of marital success.

Method of Infant Feeding. As indicated in Table XI, there was no significant relationship between the couples' social status and their choice of infant feeding method. Pleshette, et al. (1956), found approximately equal percentages of lower income women choosing the bottle and breast methods of infant feeding.

Rationale for Number of Children Desired. There was no significant association between the couples' social status and their rationale for the number of children desired. This finding is reflected in Table XI.

Rationale for Timing of First Pregnancy. As indicated in Table XI, there was no significant relationship between the couples' social status and their rationale for the timing of their first pregnancy.

Spacing Interval Between Marriage and First Birth--Actual and Ideal. There was no significant association between the couples' social status and their actual and ideal spacing intervals between marriage and first birth. In contrast, Coombs and Freedman (1970) found an inverse relationship between the couple's economic level and the length of time between marriage and first birth.

CHAPTER V

SUMMARY

The purpose of this research was to study parents' attitudes and behavior concerning fertility during postpartum and to relate these attitudes and behavior to selected traditional and paranatal variables. To achieve this purpose, a background questionnaire designed to obtain information concerning personal characteristics, socioeconomic status, and level of marital adjustment was used. An interview schedule was also developed in order to assess the respondents' attitudes and behavior regarding fertility, e.g., husband and wife's preferences for method of contraception and rationale for number of children desired. The dependent variable of fertility was limited to the following two parental measures: (a) initial evaluation of the timing of the first pregnancy and (b) number of children desired.

The subjects participating in this study were 100 women who were postnatal patients at Stillwater (Oklahoma) Municipal Hosptial during February-July, 1973. The women were consecutively selected on the basis of the following control criteria: (a) age range of 16-45 years, (b) Caucasian race, (c) current delivery resulting in a viable infant, (d) first marriage, (e) uncomplicated postnatal emotional and physical adjustment, and (f) United States born. Given these subject characteristics, the findings can be generalized to parents in postpartum found in small western cities with a significant college or

child-bearing age population. The majority of the mothers ranged in age from 16 to 25 years, had one child, indicated a Protestant religious preference, and were in the middle socioeconomic class.

The chi square test was used to determine if the variables of this study were significantly independent of each other or significantly associated. The .05 level was designated as the criterion of statistical significance. Due to some of the cells in the 2x2 chi square contingency tables containing less than 5 expected subjects, the Yates' Correction for Continuity Formula was applied before the chi square formula was calculated. Finally, when the controlled subsample(s) contained less than 20 subjects, the Fisher Exact Probability Test was utilized for significance testing.

Major Findings

The data were analyzed for significant associations between the two criteria variables, i.e., timing of the first pregnancy and number of children desired; or the selected traditional paranatal groups of variables. The major findings are schematically presented in Figure 2 and discussed as follows:

(1) There was a significant association between parents' initial evaluation of the timing of the first pregnancy and the following variables: (a) level of marital adjustment, (b) actual spacing interval between marriage and first birth, (c) rationale for timing of first pregnancy, (d) husband and/or wife suggested timing for first pregnancy, (e) ability to use contraception, (f) level of marital happiness, (g) wife's evaluation of pregnancy experience, (h) contraceptive method used prior to first pregnancy, and (i) wife's education.

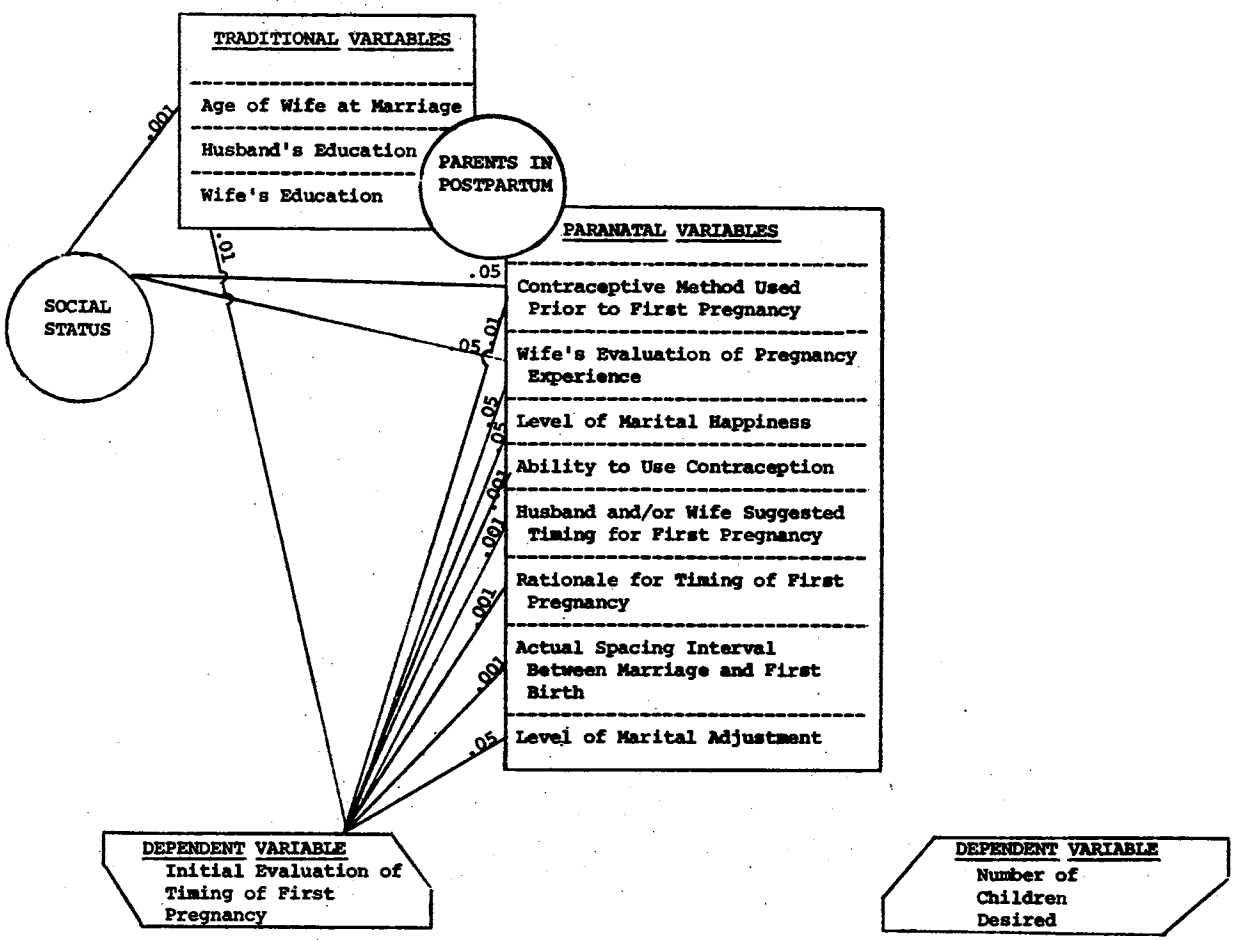

Figure 2. Time Ordering of Significant Traditional and Paranatal Variables with the Two Dependent Variables of Fertility. Level of Significance Determined by Way of Chi Square Analysis.

After analysis of each of the respective contingency tables for the above-listed significant associations, the following trends emerged: (a) the couples with higher levels of marital adjustment or happiness were more likely to give favorable initial reactions to the timing of their first pregnancy than were couples with the lower levels of marital adjustment or marital happiness; (b) the couples with longer spacing intervals between marriage and first birth were more likely to give favorable initial evaluations of the timing of their first pregnancy than were couples experiencing relatively short spacing intervals between marriage and first birth; (c) the couples indicating that definite planning had taken place prior to the first pregnancy were more likely to evaluate the timing of their first pregnancy favorably than were couples indicating an accidental rationale; (d) when the parent(s) did suggest the timing of the first pregnancy, the couple was more likely to give a favorable initial evaluation of the timing of their first pregnancy than if neither parent suggested the timing for the first pregnancy; (e) the couples who deliberately stopped using a contraceptive method in anticipation of the first pregnancy were more likely to evaluate the timing of their first pregnancy favorably than were couples who experienced a failure within their contraceptive method or did not use a contraceptive; (f) the couples with wives evaluating their pregnancy in the "wonderful" category were more likely to evaluate the timing of their first pregnancy favorably than were couples whose wives evaluated their last pregnancy in the "fair" or "terrible" categories; (g) the couples who elected to use the oral contraceptives or other less effective methods of contraception were more likely to give favorable initial evaluations of the timing of their first

pregnancies than were couples who used no method prior to their first pregnancy; (h) the couples with wives in the high school graduate or more educational attainment category were more likely to favorably evaluate the timing of their first pregnancies than were the couples whose wives were in the less than high school graduate category. The couples with wives in the less than high school graduate education category were almost evenly divided between the favorable and unfavorable initial evaluation categories of their first pregnancy.

(2) There were no significant associations between the parents' desired number of children and the selected traditional and paranatal variables.

(3) There were no significant associations between the two dependent variables of fertility and selected traditional and paranatal variables while controlling for other traditional or paranatal variables.

(4) There was no significant association between the couples' desired number of children and their intiial evaluation of the timing of their first pregnancy.

(5) There was a significant association between the parents' social status and the following variables: (a) age of wife at marriage, (b) contraceptive method used prior to first pregnancy, (c) wife's evaluation of last pregnancy experience.

After analysis of each of the respective contingency tables for the above-listed significant associations, the following trends emerged: (a) the couples with the wife's age at marriage in the 15-18 year category were more likely to be in the lower social status levels than the couples with the wife's age at marriage in the 19-20 or 21+ year categories; (b) the couples utilizing the effective oral contraceptives

prior to their first pregnancy were more likely to be in the upper or middle social status levels than the couples using the other less effective methods of contraception; (c) the couples with wives evaluating their last pregnancy experience in the "wonderful" category were more likely to be in the middle or lower-upper social status level than the couples with wives evaluating their pregnancy experience in the "fair" or "terrible" categories.

In summary, the couples who gave favorable initial evaluations of the timing of their first pregnancy can be characterized as follows from the significant findings of this study:

1. Higher levels of marital adjustment and marital happiness.
2. Longer spacing intervals between marriage and first birth, i.e., two or more years.
3. Definite planning rationale for the timing of first birth.
4. Ability to use contraceptive method evidenced by deliberately stopping contraception prior to first pregnancy.
5. Wife evaluates pregnancy experience in "wonderful" category.
6. Utilize the most effective method of contraception, pills or other less effective methods.
7. Wife's educational attainment is high school graduate or more.

However, the couples who gave unfavorable initial evaluations of the timing of their first pregnancy can be described as follows:

1. Lower levels of marital adjustment and marital happiness.
2. Premaritally pregnant.
3. Accidental rationale for timing of first pregnancy.
4. Inability to use contraceptive methods indicated by using no method or experiencing method failure.

Finally, the couples in the upper-middle or lower-upper socioeconomic classes can be characterized as follows from the significant associations found in this study:

1. Older age of wife at marriage, i.e., 19 or more years.
2. Utilizing the most effective method of contraception, i.e., "pills."
3. Wife evaluates last pregnancy in "wonderful" category.

However, couples in the lower-middle or lower socioeconomic classes can be described as follows:

1. Younger age of wife at marriage, i.e., 15-18 years.
2. Utilization of less effective methods of contraception, e.g., condom, douche, diaphragm.
3. Wife evaluates last pregnancy in the "fair" or "terrible" categories.

Explanation for Non-Significant Findings

Due to the relatively large number of statistically insignificant findings, possible reasons for these results will be discussed in the following paragraphs.

Statistical Significance

Blalock (1972) stated that the significance level attained depends on the size of the samples used. If the samples are very large, it is generally easy to establish significance for even a slight relationship. For example, chi square varies directly with the number of cases if the proportions in the cells remain the same. Thus, when a sample is small,

it requires a much more striking relationship in order to obtain significance.

The current study utilized a rather small sample due to time required for interviews and the relatively small number of deliveries at the Stillwater Municipal Hospital. Applying Blalock's (1972) line of reasoning, the statistically significant associations found in this study are probably stronger than if the same results had been obtained with a large sample, e.g., 1,000 subjects.

Traditional and Paranatal Variables

The traditional variables of this study can be subsumed under the broad category entitled, "demographic variables" and the paranatal variables under "psychological variables." Kiser (1968) and Westoff (1972) concluded that there has been a gradual decline in the predictive power of the demographic factors which previously had been the best predictors of fertility, e.g., income, education, and residence. Taeuber (1966) and Pohlman (1969) suggested that more predictive success could be achieved through the use of social psychological variables in fertility motivation studies. However, there has not been a study beyond the exploratory stage to date that shows significant relationships between inner psychological variables and fertility. Both the Indianapolis (Whelpton and Kiser, 1955) and Princeton (Westoff, Potter, and Sagi, 1961 and 1963) studies failed to do so. Rainwater, (1960, 1965) has conducted two studies which incorporated psychological variables, but his sample sizes were small, especially when classified into categories. While there will be significant relationships between these identified variables and subsequent measures of fertility for

certain sections of society, the variable of "individual taste for children" is too dependent upon values, habits, and traditions to vary only in relation to one of the above variables.

Homogenization of Family Size Preferences

In their book, From Now to Zero, Westoff and Westoff (1973) concluded that the nation is within sight of replacement fertility with fertility desires and achievement in about the same number range for most Americans. Thus, the finding of this study that most couples desire 2±1 child is in line with national statistics, but it was a limitation in this study in attempting to examine family size preferences in relation to the variables elected for analysis. For example, there may be a cancelling out of certain significant associations when elaboration procedures do not include highly specific control measures.

Exploratory Study

Due to the limited amount of research dealing with the specific variables utilized in this study and the nature of sample selection, the variables selected for comparison included in this study may not be the significant ones. However, it is impossible to take into account all of the relationships studied in the social sciences. The hypotheses were formulated under the assumption of ceteris paribus, other things being equal, i.e., that all other variables are invariant or held constant.

Implications for Further Research

Further analysis of the present data is warranted. (1) Due to the highly significant relationship between the couples' initial evaluation of the timing of the first pregnancy and wife's educational attainment it seems reasonable to analyze this association further while controlling for (a) method of contraception, (b) level of marital adjustment, and (c) actual spacing interval between marriage and first birth. (2) There was a significant relationship between the couples' initial evaluation of the timing of the first pregnancy and the wife's evaluation of her last pregnancy. The question would more appropriately have asked the mothers to evaluate their first pregnancy experience; therefore, it would be appropriate to control for parity when looking at this relationship. (3) Due to the recent finding of similar family planning abilities among couples with various levels of educational attainment, it might be profitable to look at the relationship between couples' initial evaluation of the timing of their first pregnancy and the following variables while controlling for the level of the wife's educational attainment: (a) level of marital adjustment, (b) actual spacing interval between marriage and first birth, (c) rationale for timing of first pregnancy, (d) husband and/or wife suggested timing for first pregnancy, (e) ability to use contraception, (f) level of marital happiness, (g) wife's evaluation of last pregnancy experience, and (h) contraceptive method used prior to first pregnancy. (4) Method of infant feeding might be treated as a dependent variable in relationship to selected independent variables, e.g., wife's evaluation of last delivery, wife's evaluation of last pregnancy, rationale for timing of first pregnancy, and method of contraception.

As a further contribution to providing material from which to construct more complete theories of fertility attitudes and behavior as the outcome of a family life cycle process, the following modifications of the present study seem appropriate: (a) sampling of women with a wider range of age and educational attainment, (b) asking questions regarding the spacing intervals of children in parent's families of orientation, (d) direct questioning of husbands and their attitudes and behavior, (d) follow-up study of similar nature conducted approximately 4 to 6 weeks after the birth of the first child, (e) sampling couples in other geographic areas and cross-culturally, (f) inclusion of a control sample of couples of similar age and parity removed from the postnatal setting, (g) increase in sample size, (h) ideally a longitudinal study to include various stages of the childbearing phase of the family life cycle, (i) stricter adherence to concepts included in the interactional and developmental conceptual frameworks, (j) development and standardization of a checklist form that could be used to identify couples who are in the high risk category for having an unwanted child.

Finally, Ryder (1970) suggested that the most needed fertility research of the twenty-first century will focus on the consequences of a stationary or declining population. The current study has shown that most of the couples sampled desired 2±1 child(ren). Interestingly, the couple's number of children desired was not significantly related to any of the other selected variables in this study. Perhaps, research of the future will deal primarily with the decision-making process of couples to have or not to have children rather than their family size preferences. Due to the increasing ability of the American population

to control procreation rationally in line with their number and spacing desires, the individual couple's family planning rationale will assume a major place in fertility research of the future. This study has indicated that the following factors may be significant antecedent variables to consider in a future study of parents' rationales for spacing intervals for their children: (a) ability to use contraception, (b) actual spacing interval between marriage and first birth, (c) age of wife at marriage, (d) contraceptive method used prior to first pregnancy, (e) husband and/or wive suggested timing for first pregnancy, (f) level of marital happiness and marital adjustment, (g) rationale for timing of first pregnancy, (h) social status, and (i) wife's evaluation of last pregnancy experience. However, these predictions must be viewed in light of the past low ability rate of demographers to successfully predict American birth rates.

Conclusion

In summary, the realization of a society sophisticated in the use of contraception throughout most of the social status structure during the past ten years has resulted in a decrease in both the number of children desired and the actual number of unwanted children. A consequence of these declines has been an increase in exposure time per couple to the risk of unwanted pregnancy. In the recent past, the reason for the increasing exposure to the risk of unwanted fertility has shifted from earlier childbearing to a desire for fewer children. Subsequently, the number of unwanted births has changed very little, despite a substantial decline in the rate at which unwanted births occur.

With this increase in the ability of couples to control rationally the number and timing of their children, there has been a concomitant increase in the number of relevant factors affecting this decision and the interaction affects of these variables. Furthermore, Freedman (1971) summarized the 1965 National Fertility Study and stated:

> (The study)...makes explicit the many complexities and unsolved problems remaining in understanding reproduction. Unfortunately, after separating important reproductive processes into their components and selecting subgroups to make analyses comparable, it is not always clear how these analytical elements can be reassembled to give a picture of the functioning whole. Things were easier to understand when we were more naive (Freedman, 1971, p. 90).

Thus, the complexity of this study's attempts to add to the data base for predicting fertility during postpartum is somewhat explained.

Finally, while this study found significant relationships between the dependent fertility variable of timing of first pregnancy and selected traditional and paranatal variables, there were no significant findings associated with the dependent variable of desired number of children. Second, there were no significant associations involving the dependent variables when controlling for other traditional and paranatal variables. Third, the independent variable of socioeconomic status was found to be significantly associated with several other independent variables. This study has shown that there may be more variability in the timing of pregnancies than desired number of children among couples surveyed during postpartum.

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APPENDIX A

Oklahoma State University
Division of Home Economics

Department of Family Relations
and Child Development

INFORMATION SHEET

Please answer all the questions below as completely as you can. Your answers will be kept confidential and will be seen only by this researcher.

1. Where have you lived for the longest time?
   ___On a farm
   ___Small rural town not on a farm
   ___Small or medium city (10,000-99,999)
   ___Large city (100,000+)

2. Where has your husband lived for the longest time?
   ___On a farm
   ___Small rural town not on a farm
   ___Small or medium city (10,000-99,999)
   ___Large city (100,000+)

3. When was your husband born? ___/___/___Date
4. When were you born? ___/___/___Date
5. How old were you at this marriage? _____Age

6. Is this your first marriage?
   ___Yes
   ___No

7. How many brothers and sisters were in your family? (Not including yourself)
   ___Brothers
   ___Sislers
8. You were number 1, 2, 3, 4, 5, 6, 7, 8, 9 (Circle One)

9. Were you satisfied with this size family or would you have liked it to have been smaller or larger?
   ___Smaller
   ___Larger
   ___Same size

10. How many brothers and sisters were in your husband's family? (Not counting your husband)
    ___Brothers
    ___Sisters
11. Your husband was number 1, 2, 3, 4, 5, 6, 7, 8, 9 (Circle One)

12. Was your husband satisfied with this size family or would he have liked for it to have been smaller or larger?
    ___Smaller
    ___Larger
    ___Same size

13. What religion do you prefer?
___Protestant
___Roman Catholic
___Jewish
___Morman
___None
___Other_____

14. What religion does your husband prefer?
___Protestant
___Roman Catholic
___Jewish
___Morman
___None
___Other_____

15. On the average, how many times a week do you attend religious services?
___Less than once a week
___Once a week
___Two-Three times a week
___None

16. Who is the main source of income in your marriage?
___Husband
___Wife
___Parents
___Other_____

17. What is the occupation of the principal earner of the above income?
_____(specific job)

18. Is this person a student?
___Yes
___No

19. The main source of your family income is:
___Hourly wages, piece work, weekly checks
___Salary, commissions, monthly checks
___Profits, royalties, fees from a business or profession
___Savings and investments
___Private relief, odd jobs, share cropping, seasonal work
___Public relief or charity

20. Last grade or year you completed in school?
___Less than grade 8
___Completed grade 8 but did not attend beyond 9th
___Attended high school, completed grade 9, but did not graduate
___Completed high school
___Attended college or university two or more years
___Graduate from 4-year college
___Completed graduate work for profession

21. Last grade or year your husband completed in school?
___Less than grade 8
___Completed grade 8 but did not attend beyond 9th
___Attended high school, completed grade 9, but did not graduate
___Completed high school
___Attended college or university two or more years
___Graduate from 4-year college
___Completed graduate work for profession

22. During the last year, were you employed at a job that paid you a wage or salary?
___Yes (Go to Q 23)
___No (Go to Q27)

23. What was the main reason you were working?
___Like to work
___New baby expenses
___To buy extra things for self
___Husband in school
___Other_____

24. How did your husband feel about your working?
___Approved
___Approved for this short period
___Disapproved
___Other_____

25. Do you plan to return to work after going home?
___Yes, in _____months
___No (Go to Q27)

26. Have you thought about or arranged for child care after you go back to work?
___Nursery
___Relatives
___Husband
___Other_____

27. Check the dot on the scale below which best describes the degree of happiness, everything considered, of your present marriage. The middle point, "happy," represents the degree of happiness which most people get from their marriages, and the scale gradually ranges on one side to those few who are very unhappy in marriage, and on the other, to those few who experience extreme joy or felicity in marriage.

. . . . . .

VERY UNHAPPY | HAPPY | VERY HAPPY

State the approximate extent of agreement or disagreement between you and your mate on the following items. Please check each column.

		Always Agree	Almost Always Agree	Occasionally Disagree	Frequently Disagree	Almost Always Disagree	Always Disagree
28.	Handling family finances						
29.	Matters of recreation						
30.	Demonstration of affection						
31.	Friends						
32.	Sex relations						
33.	Conventionality (right, good, or proper conduct)						
34.	Philosophy of life						
35.	Ways of dealing with in-laws						

36. When disagreements arise, they usually result in: husband giving in___, wife giving in___, agreement by mutual give and take___.

37. If my mate has any faults I am not aware of them. Agree___ or disagree___.

38. Do you and your mate engage in outside interests together? All of them___, some of them___, very few of them___, none of them___.

39. There are times when my mate does things that make me unhappy. Agree___ or disagree___.

40. In leisure time do you generally prefer: to be "on the go"___, to stay at home___? Does your mate generally prefer: to be "on the go"___, to stay at home___?

41. There are times when I become angry with my mate. Disagree___ or agree___.

42. Do you ever wish you had not married? Frequently___, occasionally ___, rarely___, never___.

43. There was not one day during my pregnancy that I did not feel perfectly well. Agree___ or disagree___.

44. If you had your life to live over, do you think you would: marry the same person___, marry a different person___, not marry at all___.

45. Did you ever consider the fact that your child might be born with some kind of a defect? Yes___ or No___.

46. Do you confide in your mate: almost never___, rarely___, in most things___, in everything___.

47. Did you ever have a period during your pregnancy when you had to urinate more frequently than usual? Yes___ or No___.

48. Are you breast or bottle feeding your baby? Breast___ or Bottle___.

49. During your pregnancy, were you ever concerned about when you would start the contractions of labor? Yes___ or No___.

50. In general, how did you feel during this last pregnancy? (Check a point)

. . . . . .
Wonderful Fair Terrible

51. I never thought about what would happen to me during delivery at the hospital? Agree___ or disagree___.

52. Would you say that you had a hard time or did you have an easy time giving birth to this baby? (Check a point)

. . . . . .
Easy Average Hard

Now, I would like to talk with you about being a parent. Your name will not be associated with these answers, so your identity will be kept confidential.

INTERVIEW QUESTIONS

53. Do you feel that you have been prepared to take care of your child in any particular way? If yes, please describe.
___Parental example
___Talking with friends who have children
___From caring for my other children
___Other_____

54. Can you remember your first thoughts or feelings when you first saw your baby? If yes, please describe.
___Scared or afraid
___Happy
___It's a boy (girl)
___Other_____

55. Did your husband express his first thoughts or feelings toward himself as a father after first seeing the baby? If yes, please describe.
___I could just tell by looking at him
___Just happy
___Other_____

56. Can you remember your first thoughts or feelings toward yourself as a mother when you first saw your baby? If yes, please describe.
___Scared or afraid of responsibility
___Just real proud
___Other_____

57. Can you remember how long it has taken for you to really feel that this is my child and I am the mother?
___First child_____Days or number of times seen (circle one)
___This child _____Days or number of times seen

58. Have you and your husband discussed the number of children that you would like to have all together?
___Yes
___No (Go to Q 59 and then Q 62)

59. How many children do you want to have? Sex preference?
___Boys
___Girls
___Sex does not matter

60. How many children does your husband want to have? Sex preference?
___Boys
___Girls
___Sex does not matter

61. Did you and your husband come to an agreement on the same desired number of children?
___Yes _____Number
___No

62. Can you remember how you decided on this number of children?
_____

63. Have you and your husband discussed the length of time that you would like to have between children?
___Yes
___No (Go to Q 64 and then Q 67)

64. How much time did you think should be between the birth of one child and the birth of the next one?
_____Years

65. How much time did your husband think there should be between the birth of one child and the birth of the next one? What would he probably say?
_____Years

66. Did you and your husband come to an agreement on the best length of time between the children?
___Yes _____Years
___No

67. Can you remember how you arrived at this decision on spacing?
_____

68. Some of the ladies have told me that they thought it was all right for the couple to not be married and have children. While others have said that they thought that the couple should be married. Have you and your husband discussed the relationship of marriage to the birth of the first child? ___Yes or ___No. If Yes, describe.
___Should be married (go to Q 69)
___Do not have to be married (Go to Q73)
___Other_____

69. In your opinion, what is the best length of time between marriage and the birth of the first child?
_____Years

70. What would your husband probably say is the best length of time between marriage and the birth of the first child?
_____Years

71. Did you and your husband come to an agreement on the length of time between marriage and the birth of the first child?
___Yes _____Years

72. Can you remember your reasons for this particular length of time?
_____

73. In the past, have you and your husband discussed the use of contraception?
___Yes
___No (Go to Q 74 and then Q 77)

74. What method of contraception did you want to use?
_____Method

75. What method did your husband want to use?
_____Method

76. Did you and your husband come to an agreement on the same method of contraception to be used?
___Yes _____Method
___No

77. Did you and your husband ever discuss the possible side effects of _____Method?
___Yes
___No

78. Did you and your husband ever discuss the degree of protection from pregnancy given by this method as compared to other methods?
___Yes
___No

79. Can you remember how you first decided to use this method?
_____

80. After this pregnancy, has there been any change in the method?
___Yes_____Method_____Reason
___No

81. After you have the total number of children that you desire, have you thought about what method of contraception you all would like to use?
___Yes_____Method_____Reason
___No

82. Do you think it is the man's or the woman's main responsibility to make sure contraception is being used?
___Man
___Woman _____Why?
___Both

83. In your husband's opinion, should the woman or man take the main responsibility for contraceptive use?
___Man
___Woman _____Why?
___Both

Pregnancy History and Spacing Table							
Pg. Order	Sex	Age	Before Birth B. C. Use	B. C. Stop or Fail	Initial Reaction to Pg. Timing Wife	Husband	Rationale
1	F M		Yes No ( )	Stop( ) Fail	E-L-R W	E-L-R H	
2	F M		Yes No ( )	Stop( ) Fail	E-L-R W	E-L-R H	
3	F M		Yes No ( )	Stop( ) Fail	E-L-R W	E-L-R H	
4	F M		Yes No ( )	Stop( ) Fail	E-L-R W	E-L-R H	
5	F M		Yes No ( )	Stop( ) Fail	E-L-R W	E-L-R H	
6	F M		Yes No ( )	Stop( ) Fail	E-L-R W	E-L-R H	

Questions to be Answered in Above Table

1. Please tell me the names and ages of all your children.
2. Have we left out any who are not living here?
3. Have you had any pregnancies when your child was not born alive or lived only a short time?

4. Some of the ladies have told me that when they first learned that they were pregnant, they would have liked for it to have occurred earlier or later than it did. When you became pregnant with _____(Pregnancy order), how did you feel about being pregnant at that time?
5. How do you think your husband felt when he learned that you were pregnant? The timing of the pregnancy?
6. Were you using a method of contraception before this pregnancy? If yes, did you deliberately stop using this method to become pregnant or did the method fail?
7. How long were you not using this method before you became pregnant?
8. Who took the iniative or "pushed" to have a baby at this particular time? Can you remember who first brought up the subject of having a baby at this time?
9. Can you remember some of the reasons for deciding on this particular time to have a baby?

APPENDIX B

LOCKE-WALLACE (1959) SHORT MARITAL ADJUSTMENT TEST

Marital-Adjustment Test

1. Check the dot on the scale line below which best describes the degree of happiness, everything considered, of your present marriage. The middle point, "happy," represents the degree of happiness which most people get from marriage, and the scale gradually ranges on one side to those few who are very unhappy in marriage, and on the other, to those few who experience extreme joy or felicity in marriage.

0	2	7	15	20	25	35
Very Unhappy			Happy			Perfectly Happy

State the approximate extent of agreement or disagreement between you and your mate on the following items. Please check each column.

		Always Agree	Almost Always Agree	Occasionally Disagree	Frequently Disagree	Almost Always Disagree	Always Disagree
2.	Handling family finances	5	4	3	2	1	0
3.	Matters of recreation	5	4	3	2	1	0
4.	Demonstrations of affection	8	6	4	2	1	0
5.	Friends	5	4	3	2	1	0
6.	Sex relations	15	12	9	4	1	0
7.	Conventionality (right, good, or proper conduct)	5	4	3	2	1	0
8.	Philosophy of life	5	4	3	2	1	0
9.	Ways of dealing with in-laws	5	4	3	2	1	0

10. When disagreements arise, they usually result in: husband giving in 0 , wife giving in 2 , agreement by mutual give and take 10 .
11. Do you and your mate engage in outside interests together? All of them 10 , some of them 8 , very few of them 3 , none of them 0 .

12. In leisure time do you generally prefer: to be "on the go"___, to stay at home___? Does your mate generally prefer: to be "on the go"___, to stay at home___? (Stay at home for both, 10 points; "on the go" for both, 3 points; disagreement, 2 points.)
13. Do you ever wish you had not married? Frequently 0, occasionally 3, rarely 8, never 15.
14. If you had your life to live over, do you think you would: marry the same person 15, marry a different person 0, not marry at all 1?
15. Do you confide in your mate: almost never 0, rarely 2, in most things 10, in everything 10?

APPENDIX C

HUSBAND-WIFE COMMUNICATION*

1. When disagreements arise, they usually result in: Husband giving in___, wife giving in___, agreement by mutual give and take_x_. (36)
2. Do you confide in your mate: Almost never___, rarely___, in most things___, in everything_x_. (46)
3. Have you and your husband discussed the number of children that you would like to have all together? Yes_x_ or no___. (58)
4. Have you and your husband discussed the length of time that you would like to have between children? Yes_x_ or no___. (63)
5. In the past, have you and your husband discussed the use of contraception? Yes_x_ or no___. (73)
6. Did you and your husband ever discuss the possible side effects of the agreed-upon method of contraception? Yes_x_ or no___. (77)
7. Did you and your husband ever discuss the degree of protection from pregnancy given by this method as compared to other methods? Yes_x_ or no___. (78)
8. Who first brought up the subject of having a baby at this time? (a) Wife___, (b) Husband___, (c) Both-mutual_x_, (d) Accidental-neither___, (e) Other___. (91)
9. Combination of husband and wife's opinion on who should take the responsibility for birth control. Both-Both_x_, or Other responses___. (82 & 83)

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*The response allocated one point for each question is marked with an "x" and the number in parentheses indicates the research instrument question number. The responses were tabulated to give an indication of husband-wife communication in regard to fertility with scores ranging from one to nine.

APPENDIX D

MODIFIED FORM OF THE EDMONDS (1967) SHORT MARITAL CONVENTIONALIZATION SCALE

T F 1. There are times when my mate does things that make me unhappy. (10)

T F 2. My marriage is not a perfect success. (8)

T F 3. My mate has all of the qualities I've always wanted in a mate. (8)

T F 4. If my mate has any faults, I am not aware of them. (8)

T F 5. My mate and I understand each other completely. (8)

T F 6. We are as well adjusted as any two persons in this world can be. (6)

T F 7. I have some needs that are not being met by my marriage. (6)

T F 8. Every new thing I have learned about my mate has pleased me. (6)

T F 9. There are times when I do not feel a great deal of love and affection for my mate. (6)

T F 10. I don't think anyone could possibly be happier than my mate and I when we are with one another. (6)

Scored responses are T to items 3, 4, 5, 6, 8, and 10. Scored responses are F to items 1, 2, 7, and 9. Numbers in parentheses are the weights used in computation of the weighted score and are proportional to the square of the biserial correlation coefficients between each item and the total marital conventionalization score.

Edmonds, Vernon H. "Marital Conventionalization: Definition and Measurement." Journal of Marriage and the Family. (Nov. 1967), pp. 681-688.

APPENDIX E

LIE SCALE*

1. If my mate has any faults, I am not aware of them. Agree___ or disagree_x_. (37)
2. There are times when my mate does things that make me unhappy. Agree_x_ or disagree___. (39)
3. There are times when I become angry with my mate. Agree_x_ or disagree___. (41)
4. There was not one day during my pregnancy that I did not feel perfectly well. Agree___ or disagree_x_. (43)
5. Did you ever consider the fact that your child might be born with some kind of a defect? Yes_x_ or no___. (45)
6. Did you ever have a period during your pregnancy when you had to urinate more frequently than usual? Yes_x_ or no___. (47)
7. During the pregnancy, were you ever concerned about when you would start the contractions of labor? Yes_x_ or no___. (49)
8. I never thought about what would happen to me during delivery at the hospital? Agree___ or disagree_x_. (51)

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*The "true" responses are marked with an "x" in the above questions. The numbers in parentheses indicate the corresponding question in the research instruments. After eliminating those respondents answering with the "lie" response to three or more of the eight questions, the total percentage of "true" responses to each question ranged from 88 to 94 percent.

VITA

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