THE EFFECT OF EXTENT OF PREPARATION ON MATERNAL ADJUSTMENT

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by

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Abstract

Studies of normal young women have shown that they experience moderate to high levels of stress during the process of transition to motherhood. Various researchers have investigated the influence of preparation on maternal adjustment. However, the results of these studies are conflicting. The purpose of this research was to determine whether extent of preparation for the new role of mother influenced the subsequent level of maternal adjustment.

A questionnaire, devised by the researcher, was administered to thirty-six (36) mothers within six months of the birth of their first child. The names of potential subjects were obtained by visiting Lamaze childbirth preparation classes offered by Houston Organization for Parent Education (H.O.P.E.) and requesting volunteers.

The data was analyzed using SCSS, the conversational analog to the Statistical Package for the Social Sciences. Item-to-total analysis was used to test for reliability of scales. Correlational procedures were utilized to determine the relationship between the control variables and the dependent variable, maternal adjustment. The significant control variables, infant temperament and mother's health were introduced into a regression equation together with the independent variable extent of preparation. All statistical tests were performed at an alpha level of .05 .

This study provided empirical support for the hypothesis that extent of preparation influences maternal adjustment. The research hypothesis was supported even when tested with the control variables.

Extent of preparation explained 18% of the variance in maternal adjustment. The results indicate that the cumulative effect of participating in a number of preparatory activities was the basis for mother's subsequent adjustment.

Acknowledgements

I would like to dedicate this work to those who contributed to it's achievement:

To my mother, for her Tuesdays,

To my sister, Marisol, for her corrections,

To my husband, Hugh, for his help and encouragement.

I would also like to express my appreciation to Dr. Jean Latting for the time and effort she invested in this project.

Finally, I wish to thank my children, Sara and Alexander, for their understanding and enduring affection.

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PROBLEM STATEMENT

Introduction

Pregnancy, childbirth and the postpartum period are all part of the process of transition of women to mothers and are recognized as a time of turmoil in their lives (Bibring, Dwyer, Huntington, & Valenstein, 1961; Le Masters, 1957). The process of becoming a mother involves major changes in a woman's body, her feelings about herself (Leifer, 1980), her family life (Dyer, 1963), and her social status (Rossi, 1968). The birth of a child involves not only a change in the mother's personal life style but also the reorientation of family life in order to incorporate the new individual. For a woman it means not only taking on a new role, but perhaps giving up old ones.

Maternal adjustment involves the development of a sense of competency, and of a harmonious relationship between the woman's needs, feelings, and the physical and psychological demands of the infant. There is no consensus on whether preparation is effective in enhancing maternal adjustment. Some researchers have found that preparation for the role of mother helped women to cope with the changes which a new baby made in her personal and family life (Dyer, 1963; Gordon & Gordon, 1967). Others have found that preparation had little effect in easing the transition to parenthood (Le Masters, 1957; Russell, 1974).

How effective is preparation in helping women to adjust to motherhood? The purpose of this study was to investigate whether preparation for their new roles influenced women's subsequent adjustment.

Prevalence and Scope of the Problem

The period around childbirth has been regarded as a time of crisis for the mother (Bibring et al., 1961). Caplan (1961) theorizes that the postpartum period is a time of increased susceptability to emotional problems because of the physiological, psychological, and social changes involved in becoming a mother. He suggests that women's difficulties are a result of their unique situation. In caring for their babies, women are forced to deal with problems in regards to their own childhoods which they had previously repressed, and with problems in the present which are imposed by their new roles and responsibilities.

The range of problems in adjustment to motherhood varies from the development of what is known colloquially as "baby blues" to psychosis. Pitt (1968) found that 65% of new mothers suffered from "baby blues", a form of depression (Grossman, Eichler & Winickoff, 1980). Melges (1958) defined "baby blues" as a mild depression involving an inability to perform everyday tasks. Symptoms are a lack of energy, inexplicable crying episodes, rapid mood changes, irritability, confusion and anxiety.

Studies of normal young women have shown that they experience moderate to high levels of stress during the period of adjustment to motherhood. Grossman, Eichler & Winickoff, (1980) in their study of 93 married middle-class couples found that all of their mothers experienced some amount of distress. Difficulties involved coping with the increased work load, incorporating the infant into the family life, and adjusting to the changes in the marital relationship.

Shereshefsky & Yarrow (1973) conducted a longitudinal study of 60 married, middle-class women having their first babies. One of the requirements for inclusion in the study was that the women have no previous history of psychological problems. The researchers found that of their 60 "normal" subjects, seven developed psychiatric problems within six months of childbirth, and three had to be hospitalized. The researchers found that women who were having problems coping with general life stresses and those who had not been able to appropriately address previous maturational tasks were at increased risk for developing psychiatric problems postpartum.

In a study of 19 women with demographic characteristics similar to those of Shereshefsky & Yarrow's subjects, Leifer (1980) found that even among those mothers judged to be optimally prepared for their new roles, the transition to motherhood was difficult. Immediately after the birth Leifer's subjects experienced feelings of elation and euphoria. However these feelings were quickly replaced by varying amounts of depression and anxiety. Leifer found that during the two months postpartum the predominant mood of more than two thirds of her subjects was moderately to extremely negative.

Kaij and Nilsson (1972) found that psychotic reactions occurred in one or two women per one thousand births (Grossman et al., 1980). Melges (1968) studied 100 women who were hospitalized because of emotional problems which developed within three months of childbirth. The patient's diagnosis varied from depression to schizophrenia. There is no official psychiatric nomenclature for a postpartum psychiatric syndrome.

Melges' subjects suffered from feelings of shame, helplessness, and confusion. He found that in the majority of cases the precipitating stress was conflict over assuming the mothering role. The women had difficulty thinking of themselves as mothers, most of them had ambivalent relationships with their own mothers. They also had problems communicating with their infants, they were confused by their babies crying and were unable to interpret their babies needs. Other consequences of mothers' emotional disturbances were increases in perinatal mortality, obstetrical complications, child abuse, and infanticide (Selby, Calhoun, Vogel, & King, 1980).

Theories of Causation and Alternative Courses of Action

Medical, psychological and social theories have been suggested to explain the process of and problems in maternal adjustment. The medical model posited a physiological basis for difficulties in adjustment. Selby, et al., (1980) cite the work of Karacan and Williams (1970), who theorized that hormonal changes contribute to postpartum psychological problems. The production of estrogen and progesterone increase throughout the pregnancy. Both hormone levels drop dramatically after delivery. Progesterone has been shown to have the effect of decreasing monoamine activity. A decrease in monoamine activity is one hypothesis of the cause of depression. Karacan and Williams also postulated that a rebound effect of the nervous system which was sensitized by the decreased monoamine activity could be related to postpartum psychosis. It has been suggested that an increase in monoamine activity is involved in schizophrenic and manic disorders.

Sugarman (1977) suggested several ways that medical practitioners might be able to help new mothers adapt more easily to their roles. Better prenatal care and more emphasis on nutrition might reduce the incidence of birth defects and complications during pregnancy. In addition, avoidance of unnecessary medications and intervention during labor and delivery which inhibit mothers' ability to respond spontaneously to their infants would enhance maternal adjustment. Sugarman also pointed out the positive effects of breastfeeding on both mother and infant. She explained that prolactin, a hormone associated with lactation, has a tranquilizing effect on the mother and may be important in diminishing depression associated with the drop in hormone levels at delivery.

Nonetheless, medicine's explanation of maternal adjustment is limited because physiological changes are not necessarily related to, or the cause of, specific behaviors. The medical model also failed to address the factors of the individual's psychological functioning and social environment which play a critical role in adjustment.

Psychoanalytic theories about maternal adjustment are presented below. The first theory hypothesizes maternal adjustment on the basis of the woman's emotional response to the pregnancy. Whether a woman accepts or rejects her pregnancy is thought to be a crucial indicator of her future relationship with her infant (Wolkind and Zajicek, 1981). Referring to the work of Grimm (1969), Wolkind and Zajicek stated that in the process of emotional adjustment to pregnancy the woman's task is accepting the intrusion of the fetus into her body, coming to terms with the fact that it represents the father, and achieving a sense of oneness

with the fetus, while acknowledging its separate existance. Finally, she must prepare herself for the birth, and after this, be able to regard the infant as a separate individual. According to them, successful completion of this process results in maternal adjustment.

The second psychoanalytic view perceives adjustment as the passive acceptance of woman's biological destiny. Deutsch (1947) hypothesized that maternal adjustment is characterized by conflicting ego processes. The first ego process is regressive and tries to reestablish union with the infant. This results in excessive anxiety and difficulty in differentiation. The second ego process is progressive and attempts to reassert the woman's independence and separateness from the infant; a consequence of this is an inability to 'mother'. Deutsch holds that motherhood is the confirmation of a woman's feminine identity and that it is woman's responsibility to give up any other aspirations she might have to devote herself to the maternal role. A failure to do so is considered a maladaptive response to motherhood (Wolkind & Zajicek, 1981).

The third psychoanalytic theory focuses on motherhood as the resolution of a maturational crisis. Bibring et al., (1961) characterizes pregnancy, childbirth and the postpartum period as a time of "normal developmental crisis". She compares it to other critical changes in the lives of women such as adolesence and menopause where the woman must reorganize her sense of self in order to incorporate her new social role into her personality. Pregnancy represents an important biological and developmental step. It revives previous psychological conflicts. The resolution of these difficulties leads to a maturational

step forward. The crisis which is begun by pregnancy continues through the postpartum period. Problems in the early mother-child relationship are due to the mother's yet incomplete, psychic reorganization. The resolution of the crisis is adjustment to motherhood.

Psychological theorists have found women to be very open to intervention during pregnancy and immediately postpartum (Bibring et al., 1961; Caplan, 1961). They have recommended preventative intervention during pregnancy in order to forestall problems in maternal adjustment. Shereshefsky and Yarrow (1973) tested the efficacy of psychotherapy in preventing postpartum problems. Individual therapy was offered to 29 women drawn randomly from their total sample of 60. These women were assigned at random to one of three treatment groups. The goal of therapy was to help the women to cope more effectively with the stress of pregnancy and early motherhood.

The first treatment approach was psychoanalytic. Women were helped to gain insight into their feelings through interpretation of their behavior and past history. The second group of women were helped to clarify their feelings about themselves and others without investigation into the origins of the of these feelings. The third group received "anticipatory guidance" a form of educational counseling espoused by Caplan (1961). It helped the women to foresee and to plan how to handle possible future problems.

The subject's maternal adjustment was rated at six months postpartum. In comparing the control group with the treated groups it was found that overall the latter were significantly better adapted. They were more able to visualize themselves as mothers during the

pregnancy. An independent judge rated them to be more relaxed during labor and delivery. They were subjectively more satisfied with their birth experience. They identified more strongly with their new families, and their marital relationships were significantly better than those of the control group. Their marital adjustment scores held at the prenatal level of adaptation whereas the controls' marital relationship scores deteriorated. Of the treated groups those who received "anticipatroy guidance" were rated as the most well adjusted.

The different psychoanalytic viewpoints have contradictory explanations of the phenomena of maternal adjustment. They focus on intrapsychic factors to explain adjustment. However, as Shereshefsky and Yarrow's study suggests the makeup of a woman's personality may not be the sole source of the problems she may have in functioning as a mother. Other factors could be impacting on her life and influencing her ability to deal with the demands of her new role. Furthermore, no matter how beneficial counseling might be for women at this point in their lives, psychotherapy is impractical for most. Even if such programs were available, most mothers-to-be who are presumably "normal" probably would not be willing to commit themselves to the expense involved, time required, and stigma associated with seeing a therapist.

Cohen (1966), an obstetrician suggested that by gathering a careful history and listening attentively to the patient during her prenatal visits the physician can ascertain which mothers might develop problems in maternal adjustment. Clues to the existance of possible problems are persistent difficulties in the acceptance of the pregnancy, and failure to develop an attachment to the fetus. Cohen said that the physician

can deal with most such problems during the pregnancy by simply addressing them directly and openly. He states that in most cases realistic reassurance is all that is required to alleviate potential postpartum disturbances. The woman who does not respond to this intervention should be referred to a psychiatrist.

In addition to the psychological theories previously described social theories have been developed to describe some of the factors which impact on mother's adaptation to their new roles. Different variables which have been explored are: age, parity, marital adjustment (Grossman et al., 1980), social status (Rossi, 1968), role conflict (Sheehan, 1981), social history (Frommer & O'Shea, 1973), characteristics of the infant (Kronstadt, Oberklaid, Ferb & Swartz, 1979), and social isolation (Leifer, 1980). The seminal research into the effect of social factors on maternal adjustment was done by Gordon and Gordon (1960). They explored the influence of several social variables on the prevention of postpartum emotional problems. Subjects were randomly assigned to one of two groups. The experimental group attended classes where they were advised to take practical steps such as finding a babysitter and getting plenty of rest ahead of time to prevent possible problems in adjustment to motherhood. The researchers found that one of 46 women in the experimental group and 10 of the 36 mothers in the control group developed emotional problems within six months of delivery.

Probably the most well known kind of intervention during pregnancy is attendance at childbirth preparation classes. After initial resistance by obstetricians, childbirth preparation techniques have won

wide acceptance. In the United States the Lamaze method is the most commonly available form of preparation (Wolkind and Zajicek, 1981). The goal of Lamaze training is to allow the woman to be an active participant in the birth process by enabling her to cope with, and control, any pain she might experience. Wolkind and Zajicek stated that the problem in studying the effectiveness of childbirth preparation is that most women elect to attend the classes, and it is very difficult to find a control group. For this reason most of the research studies have compared women who chose to attend classes and those who have refused to do so. The pre-existing differences between the two groups has made evaluation of the results difficult. Wolkind and Zajicek found that most of the research studies have concluded that childbirth preparation has no effect on the length of labor, the amount of drugs administered, the rate of complications, and the mother's anxiety. One researcher (Hughey,1978) found that in the treated groups there were fewer Cesareans, the babies had higher Apgar scores and the mothers needed less stitches. Wolkind and Zajicek note however, that in this study the experimental group was primarily Caucasian and had a higher educational level than the control group.

Where differences in the effects of preparation have been found the differences between the groups have been great enough to obscure the results. Wolkind and Zajicek concluded that there is no evidence to indicate the effectiveness of childbirth preparation on maternal adjustment. Leifer (1980) concured with their findings stating that attendance at childbirth classes does not appear to influence womens' abilities to cope with the stresses of motherhood. She says that the

emotional demands of becoming a mother are probably great enough to overshadow the effects of the childbirth experience itself. In conclusion it seems that childbirth education is limited to providing parents with information about labor and delivery, and that it does not help the parent to anticipate the needs of the newborn or the requirements of their new roles.

Preparation for Motherhood

A possible explanation for women's problems in adjusting to motherhood may be a lack of appropriate preparation for the role. Shereshefsky and Yarrow (1973) found that almost all of their subjects had failed to anticipate the extent of fatigue, disorganization, and feelings of inadequacy they would encounter in the face of their infant's and husband's demands. Approximately one third of their subjects experienced difficulty beyond the norm of the group. These problems consisted of feelings of excessive anxiety, depression, feelings of inadequacy, overreaction to realistic problems, and hostile attitudes towards their infants.

Leifer's subjects were unprepared for the stress brought about by their change in lifestyle (1980). They reported that social isolation, loss of personal freedom, loss of occupational roles and changes in their marital relationships were the source of problems in adjustment. Dyer (1963) found that while the majority of parents in his study felt that they had been adequately prepared for parenthood, nevertheless, 80% of them also felt that their expectations had been unrealistic. In a review of the literature Selby, et al., (1980) cite Trick (1975) who

found that discrepancies between mothers' actual feelings and their cultural expectations were a significant source of stress.

Today most prospective parents prepare for their new roles as best they can on their own, and according to these studies more often than not they fail to anticipate what it will be like. Perhaps women who had the opportunity to explore a variety of sources of information about motherhood might be better able to cope with the day-to-day demands and responsibilities of a newborn.

Justification

This study proposed that the number and diversity of anticipatory activities in which women engaged, might affect their subsequent adjustment. Prior research in this area had been limited to very specialized forms of intervention. It is hoped that the results of this study will help practitioners who work with expectant mothers to provide them with appropriate information, and refer them to those resources which women found to be most helpful in enabling them to cope successfully with adjustment to motherhood.

CONCEPTUAL FRAMEWORK

Introduction

Studies of normal young women have shown that they experience moderate to high levels of stress during the period of adjustment to motherhood (Grossman et al., 1980; Leifer, 1980; Shereshefsky and Yarrow, 1973). Various researchers have investigated the influence of preparation on maternal adjustment (Dyer, 1963; Gordon & Gordon, 1967; Shereshefsky and Yarrow, 1973). The results of these studies are conflicting. A woman's ability to cope with the stress of motherhood and adjust to her new role may or may not be influenced by preparation. The purpose of this study was to investigate whether the extent of preparation for the new role of mother influenced the subsequent level of maternal adjustment.

Hypothesis

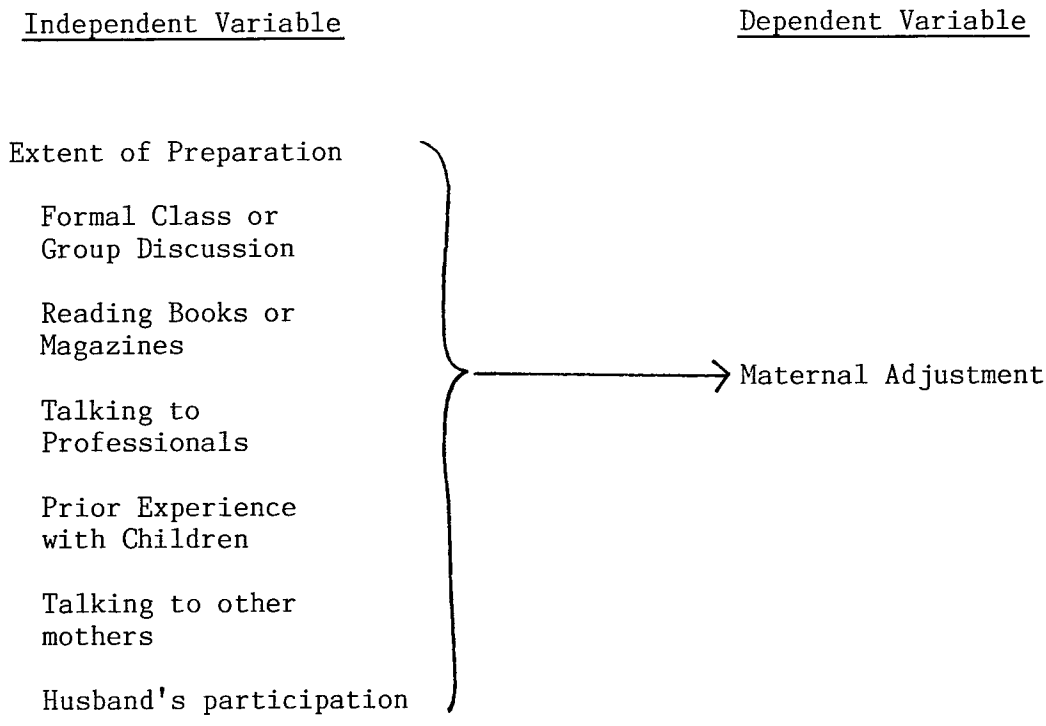
The hypothesis, represented by Figure 1, may be stated as follows:

The extent of preparation influences maternal adjustment.

Definition of Variables

Maternal adjustment, the dependent variable, involves adaptation to the demands of the role of mother. The woman's feelings about herself, her relationship with her infant, and her satisfaction with her new role partially determine her level of adjustment (Shereshefsky and Yarrow, 1973). The woman's ability to cope with the demands of her other responsibilities such as that of wife, homemaker, and employee also

Figure 1
Research Model



impact on the transition to motherhood (Gordon & Gordon, 1967; Sheehan, 1981). For the purposes of this research then, maternal adjustment was defined as the new mother's general psychological adaptation to the demands and limits imposed by her new role, and her satisfaction with her relationships with her infant and spouse (Grossman et al., 1980).

Extent of preparation for motherhood, the independent variable, was defined as participation in one or more of the following activities before the baby was born:

(1) attending a parenting class or group discussion which emphasized the responsibilities and demands of being a mother,
(2) reading books or magazines about what it is like to be a parent, and the personal adjustments necessitated in becoming a mother and caring for a baby,
(3) talking to a professional such as an obstetrician, nurse or pediatrician about child care plans,
(4) having prior experience with children, such as babysitting, caring for younger brothers and sisters, or working in a nursery,
(5) talking to other mothers about what it is like to be a mother,
(6) involving one's husband in the preparatory process, attending classes together, talking about what it will be like to be parents, and planning how one will care for the infant.

Justification

Cottrell (1942) defined "role" as "an internally consistent series of conditioned responses by one member of a social situation which represents the stimulus pattern for a similarly internally consistent series of conditioned responses of others in that situation". In other words, a role is the behavior which is expected by society of a person in a particular position in that society. Cottrell postulated that the degree of adjustment to a role varies directly with the clarity with which the role is defined and with the amount of anticipatory socialization to the role, it also varies directly

compatibility to other preexisting roles.

Role clarity is defined by Cottrell as an explicit description of the socially expected behavior. Anticipatory socialization is defined as the opportunity to identify with the appropriate role models, to rehearse or imagine oneself in the role, and to practice the role. Cottrell theorized that adjustment to a role is a factor of the individual's expectations of the role, preparation for the role, and any possible conflicts they might have in enacting the role. Burr (1972) took Cottrell's theory one step further. He posited that increases in anticipatory socialization beyond moderate amounts probably do not continue to exert the same amount of influence on adjustment.

Lazarus (1976) explains adjustment as an ongoing process between the individual and the environment. It involves the individual's attempts to attain equilibrium or to achieve self-actualization. This process is important because under normal conditions it enables the person to function in an ever changing environment. Stress occurs when a person's capacity to adjust is overwhelmed by the demands of the environment,

Adjustment is the process by which an individual comes to fit in a role. Adjustment is usually examined negatively rather than positively. It is often measured by the amount of tension, anxiety, or frustration a person experiences in the process of assuming a role (Lazarus, 1976).

The concepts of adjustment and stress are the keys to understanding both normal and pathological behavior. According to Lazarus stress can be defined in two ways, as situational that is, environmental or outside of the person, or as an internal state of the individual. Lazarus

distinguished between two sources of stress; those which are biological, or make extreme physical demands, and those which are psychological or threaten the person's self-esteem. Psychologists consider threats to self-esteem to be much more important in influencing adjustment than environmental stressors.

The new mother must deal with both environmental stressors and internal stresses. She must learn to care for the infant and gratify his or her incessant demands. She has also to cope with the internal biological stress of for example, lack of sleep, and psychological stress related to feelings of inadequacy as a mother (LeMasters, 1957).

Thirty-eight of the 46 couples interviewed by LeMasters (1957) reported a "severe crisis" in adjustment to parenthood, they stated that preparation for their new roles had been ineffective. Women complained about their restricted social life and the increase in housework. They expressed regret at the loss of their jobs, and feelings of inadequacy as mothers. In a study of 306 new mothers, 92 of whom developed emotional disturbances, women who experienced role conflict had more difficulty adapting to motherhood (Gordon & Gordon, 1965).

Women who participate in formal preparation for motherhood have been found by some researchers to experience less difficulty in adjustment than those who have had no schooling (Dyer, 1963; Gordon & Gordon, 1965). However, other researchers have found that attending classes is not related to mother's role satisfaction (Russell, 1974; Chamberlain & Chave, 1977).

Reading books or magazines about motherhood was found to have little influence on mother's adjustment (Russell, 1974). On the other

hand, women reported that talkng to a professional did help them to adapt to their new roles (Gordon & Gordon, 1965; Chamberlain & Chave, 1977). Prior experience with children was found by Shereshefsky and Yarrow (1973) to be a significant predictor of maternal adjustment. However, Russell, (1974) who administered questionnaires to 296 mothers concluded that experience caring for young children was not a factor in enhancing maternal role adjustment.

Gordon & Gordon (1965) advised new mothers to talk to other mothers of young children about their problems. They found that this form of social support decreased emotional problems postpartum. The efficacy of talking to other mothers prior to the birth of one's own child had not been previously evaluated. Husband's participation in preparation, specifically the husband's attending classes together wtih the mother has been found to help women to adjust to their new roles (Gordon & Gordon, 1967).

It appeared that there was no consensus as to whether prepartion helped in the transition to motherhood. A number of studies had evaluated specific efforts on the parts of parents while others did not clearly define what was meant by preparation. This researcher assumed that women engaged in more than one activity in the process of getting ready for her new role. She postulated that the number and variety of anticipatory activities the women participated in would influence their adjustment.

Rival Variables

The theoretical model represented by Figure 2 illustrates a number of variables in addition to preparation which might influence maternal adjustment. These include the woman's social history, her health, her adjustment to the pregnancy, temperamental characteristics of the infant, role expectations and environmental stressors. Several demographic variables were also considered.

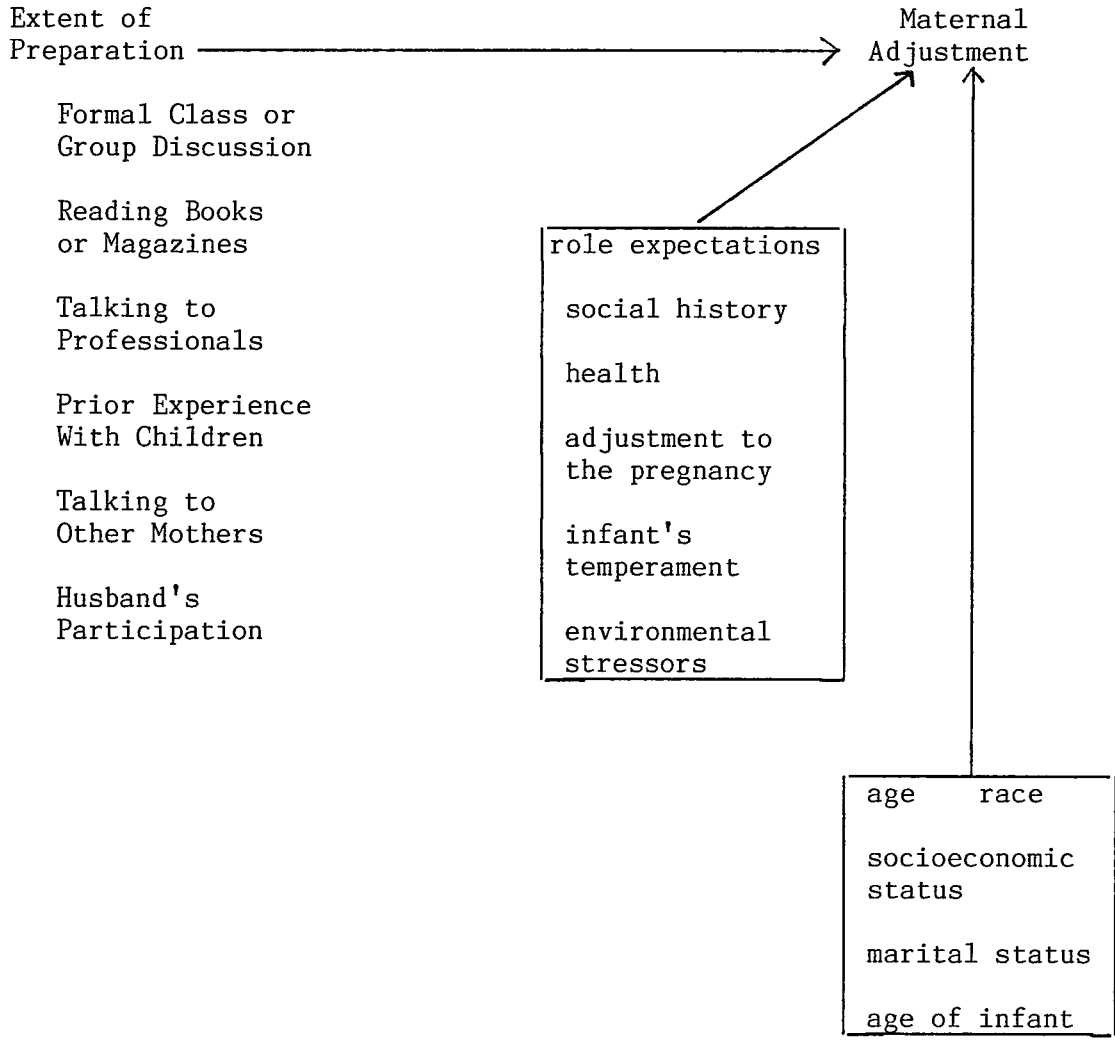
The new mother's social history has been found to influence maternal adjustment (Wolkind & Zajicek, 1981). Social history includes information about the status of the family of origin and the woman's relationship with her own mother. Whether a woman comes from a broken family, and her ability to relate to her own mother as a role model have been found to affect emotional adjustment postpartum (Frommer & O'Shea, 1973; Ballou, 1978).

The mother's health, her overall physical well being, was thought to be important because women with health problems are more likely to have difficulty dealing with the stress of new motherhood (Russell, 1974). Adjustment to the pregnancy was defined as the woman's acceptance of the pregnancy and development of positive feelings towards the fetus (Cohen, 1966). Women who had problems accepting their pregnancy had more difficulty accepting their infants and adjusting to motherhood (Leifer, 1980).

Infant's temperamental characteristics also influence mothers adaptation to their new roles. Temperamental characteristics as defined by Thomas, Chess, Birch, Hertzig & Korn (1963) refer to the infants personal styles of relating to the world. According to them

Figure 2

Theoretical Model



babies temperaments can be divided into three general categories: difficult, slow-to-warm-up, and easy. Problems can occur when mother and infants temperaments are not compatible. Mother's who considered their infants to be "difficult" had more problems in adjustment than mothers who considered their infants to be "easy" (Kronstadt et al., 1979).

Role expectations were defined by the researcher as the factual understanding of the demands of the new role of mother and an awareness of possible role conflicts. Mothers' understanding of the demands of their new role and its compatibility with their other roles has been shown to influence their adjustment (Sheehan, 1981). Environmental stressors, also defined by the researcher refered to those physical factors which impact on the woman's ability to function in the maternal role. Stressors included items such as moving within six months of childbirth and financial problems. Gordon & Gordon (1960) found that the overall amount of stress in a woman's life was predictive of emotional adjustment postpartum.

Other variables which might affect adjustment which were controlled for by the design of the study. These included the following: mother's age, socioeconomic status, race, marital status, and age of the infant. The age of the mother is important because mothers over 40 and teenagers are at increased risk for physical problems during pregnancy and postpartum (Oppel & Royston, 1971). Socioeconomic status refered to the woman's social class and income. Race or ethnicity was defined as the woman's racial or ethnic heritage. Both socioeconomic status and ethnicity have been demonstrated to impact on women's preparation for

motherhood (Snow, Johnson & Mayhew, 1978).

Marital status referred to whether the woman was married, single, widowed or divorced. An unmarried woman is more likely to be at an economic and social disadvantage (Wolkind & Zajicek, 1981), for this reason only married women were included in the study. Finally, the age of the infant was important because it takes several weeks for the baby to develop a regular pattern of behavior (Carey, 1970).

Conclusions

Becoming a mother is a major change in a woman's life. It demands that she reevaluate her perceptions of her world. Home from the hospital, for the first time, totally responsible for the care of the infant, her assumptions about what motherhood entails are shaken. She suddenly becomes aware of the descrepancies between the ideal, and the real world experience of being a mother. The purpose of this study was to investigate whether the extent of preparation aided a woman in her adjustment to her new role.

Methodology

Introduction

The purpose of this research was to investigate the influence of preparation on women's adjustment to their new roles of mother. The following sections describe the methodological procedures employed in implementing the research. Data collection, instrumentation, study variables and method for data analysis are included.

Data Collection

A questionnaire was administered to thirty-six (36) new mothers within six months of the birth of their first child. The names of potential subjects were obtained by visiting Lamaze childbirth preparation classes offered by the Houston Organization for Parent Education (H.O.P.E.). Sue Steinhardt, director of training and evaluation for H.O.P.E., gave the researcher permission to visit the Lamaze classes to request volunteers. H.O.P.E. is a privately funded, nonprofit organization whose purpose is to provide information, education and support for parents. It offers a variety of classes and sponsors a number of programs. For example, it offers Newborn Parenting, Toddler Parenting, Baby Care classes, and self-help programs such as Mother's Offering Mothers Support (MOMS). Women are referred to H.O.P.E. by their physicians for the six-week Lamaze childbirth preparation course.

The Lamaze method is a training program in which mothers and their "coaches", usually their husbands, are taught a series of exercises and

breathing techniques. The purpose of the training program is to provide women with information about the physiological processes of pregnancy and childbirth, and to teach them how to maintain control throughout labor and delivery. Preparation for parenthood is not part of Lamaze curriculum. For information about child care, child development, and parenting, students are referred elsewhere.

The researcher used an accidental sampling strategy. She was given a list of the teachers who would be offering the Lamaze course during the spring and summer of 1984. The researcher telephoned these women to ask permission to visit their classes. Data was gathered from subjects who happened to be enrolled in the classes she visited. The researcher attended one session in each of twelve different series of Lamaze classes.

At the beginning of each class session the researcher introduced herself as a student at the University of Houston, Graduate School of Social Work. She explained that the purpose of the research as an investigation into the effects of different kinds of preparation on mothers' adjustment to their new roles. She invited expectant mothers to participate in the study by asking those first time mothers who were interested to write their name, address, zip code, and phone number on a sign up sheet which was passed around the class. The researcher explained that she would telephone the volunteers approximately 10 weeks after the birth of their babies. If they were still willing to participate in the study at that time she would mail them a questionnaire.

The researcher periodically reviewed the list of volunteers.

Approximately two months after the date the volunteer's baby was expected the researcher telephoned the new mother, identified herself, her affiliation with the University of Houston Graduate School of Social Work, and reminded the mother of her offer to participate in the study. The researcher explained again the purpose of the research project, that participation was voluntary, and that her responses would be confidential.

Mothers names were crossed off the list as they were contacted, whether they agreed to participate in the study or not. Most of the women agreed to complete a questionnaire. The researcher was unable to contact some mothers because of incorrect or disconnected phone numbers.

The subjects were mailed a questionnaire, cover letter and return envelope. The letter assured the subjects of confidentiality and asked them not to put their name anywhere on the questionnaire or the enclosed stamped self-addressed return envelope. The cover letter included the researcher's name, address, and phone number, together with a statement that respondents contact her should they have any questions, or desire a copy of the results of the research.

One hundred and seventeen (117) women volunteered to participate in the study. Between April and August of 1984 approximately 85 questionnaires were mailed out. Fifty-four (54) or 63% of them were returned. This good response rate was probably due to the follow-up phone call to the potential volunteer.

Instrumentation

An original questionnaire was administered to all participants (Appendix B). This questionnaire was composed of questions relating to the dependent variable, the independent variable, and the control variables. This instrument was designed by the researcher specifically to measure these variables.

Items A 1-10 and B 1-10 were intended to measure the dependent variable maternal adjustment the mothers psychological adaptation to the demands and limits of her new role. Five-point Likert-type questions were devised for this purpose ("I feel that the baby keeps me from doing the things I want to do").

Extent of preparation the independent variable measured participation in one or more activities before the baby was born. Yes or no responses to items E 1-6 were utilized to determine the womens involvement in specific preparatory efforts ("Talked to other mothers about what it was like to be a mother").

A number of control variables were measured also using five-point Likert type questions. Section C items 1-5 sought to obtain information about the mother's perception of her infant's temperament which was defined as the infant's personal style of relating to the world ("How often does your baby wake during the night?"). Questions D 1-3 measured adjustment to the pregnancy ("I felt anxious about my health during the pregnancy"). This variable was defined as the woman's acceptance of the pregnancy and the development of positive feelings towards the fetus (Cohen, 1966). Questions D 4-9 and F 7-8 were designed to measure role expectations . These questions addressed the mothers' understanding of

the demands of their new roles and their awareness of possible role conflicts ("I have had to give up a lot of my past activities since the baby was born").

Eight items, D 10-16 and F-2, inquired about stress those environmental factors which impacted on the mothers ability to function in the maternal role ("I have been able to get away and pursue my own interests"). Information about the woman's family of origin and her relationship with her mother ("I've had a good relationship with my mother most of my life"), the subject's social history was obtained via questions D 17-18 and F-13.

The final part of the questionnaire section F asks about the subject's marital status, the number of children she has, her health and age, and her infant's health and age. Health was defined as the mother's overall physical well being ("How would you rate your health at this time?"). Social class was measured by Hollingshead's Two Factor Index (Items F-9 and 12). Question F-10 asked whether the subject was employed and question F-11 inquired whether she planned to go back to work during the coming year. Open-ended items G 1-4 gave the participants an opportunity to express themselves regarding their adjustment to the role of mother.

Study Variables

Twenty questions were developed by the researcher to measure maternal adjustment the dependent variable. Univariate statistics revealed that only ten of the questions varied sufficiently for further analysis. All of the items devised to measure the subject's

satisfaction with her spouse (B 6-10) varied sufficiently to be included. Only three of the items intended to measure the relationship with the infant (B 1-3 & 5) could be used, and of the items developed to measure the mother's psychological adaptation to her new role again only three (A 3-4 & 6) had adequate variance. Two questions which had originally been devised to measure the variable 'role expectations' corresponded to the definition of 'maternal adjustment' ("Being a mother is pretty much what I expected it to be", and "I found it easy to adjust to being a mother"). Therefore it was decided to test them in the statistical analysis of the dependent variable.

Principal components analysis using the procedure FACTOR was performed on the above named items. Four factors with eigenvalues of one or greater were yielded. A SCREE test was performed. Only the first factor, with an eigenvalue of 3.461 was retained for further analysis. Seven items loaded above the .50 cutoff point for inclusion in Factor 1 (Table 1).

These items where submitted to item-to-total reliability testing. All of the items correlated with the total scale above .35 and had p-values of less than .05. The items standard deviations were similar (ranging from .97 to 1.35), enabling them to be summed to create the dependent variable maternal adjustment which ranged from 2 to 28.

Table 1

Principal Components Analysis of Maternal Adjustment

ITEM	FACTOR
I don't mind having to plan my day around the baby's schedule.	.738
Being a mother is pretty much what I expected it to be.	.720
I feel that the baby keeps me from doing the things I want to do.	.676
My husband understands what I have been going through.	.655
I found it easy to adjust to being a mother.	.633
My husband and I have enough time together alone.	.574
Sometimes I feel as if I don't know what the baby wants.	.546

The independent variable extent of preparation was developed by asking subjects whether they participated in the following activities: (1) attended a parenting class or group discussion, (2) read about what it would be like to be a parent, (3) talked to a professional about child care plans, (4) had prior experience with children, (5) talked to other mothers about what it was like to be a mother, and (6) involved one's husband in the preparatory process. An answer of 'yes' for each activity was given a value of one and 'no' the value of zero. The responses were summed to create a single independent variable extent of preparation, which ranged from 0 to 6.

Factors other than preparation which might have an influence on maternal adjustment were controlled. The variable infant temperament measured the mother's perception of her infant's behavior. Responses to

five questions which utilized a five-point Likert scale ("never" to "always") were subjected to item-to-total reliability testing. Four items which measured how often the babies woke during the night, whether their schedules were predictable, and how they adapted to both strangers and new environments correlated above .35 and had significance of less than .05. These items were summed to create the study variable which ranged from 5 to 15.

Adjustment to the pregnancy was computed by correlating three questions. The two items which were significant at .05 were summed to create the new variable. The relevant items concerned the mother's anxiety about both her health and that of the fetus. Social history was created by summing the respondent's answers to three questions relating to her relationship with her own mother and family history. The new variable ranged from 0 to 12. Other independent variables measured were mother's health , employment ("Are you presently employed outside the home?") and plans to return to work .

Two variables, role expectations and environmental stressors were deleted from further analysis because of their similarity to the definition of maternal adjustment. Items which had originally been devised to measure these variables were used for descriptive purposes only.

Subjects were asked their race , marital status , socioeconomic status, number of children , age, and age of the infant . To compute socioeconomic status the subjects were asked the highest level of education completed and the title of their last position. Their responses were scored using the Hollingshead two factor index which

provides scales for rating occupation and education and assigns them factor weights. Each subject's score for education was multipled times its factor weight of four and each subject's score for occupation was multiplied times its factor weight of seven. The two scores were then summed to produce the index of social position or socioeconomic status. Respondents scores ranged from eleven to forty.

Method for Data Analysis

The data was analyzed using SCSS, the conversational analog to the Statistical Package for the Social Sciences. Item-to-total analysis was used to test for reliability of scales. Correlational procedures were utilized to determine the relationship between the control variables and the dependent variable, maternal adjustment. The significant control variables, infant temperament and mother's health were introduced into a regression equation together with the independent variable extent of preparation. All statistical test were performed at an alpha level of .05.

FINDINGS

Description of the Study Sample

The sample used in this study was comprised of 36 women. As illustrated in Table 2, all of them were white, married, and mothers of one child. The subject's ages ranged from 18 to 37. The average age was 27. Seventy percent of the sample were between the ages of 24 and 30 years old. The infant's ages ranged from 6 weeks to 18. The median age was 11 weeks, 62% of the infants were between 9 and 12 weeks of age.

The subjects were classified into either the upper (36%) or middle (64%) socioeconomic classes according to Hollingshead's index of social position. The subject's level of education was high (89% had some college or above). Prior to the birth of their children most of the women had been employed in either professional (36%) or managerial (47%) positions. Forty-four percent of the women worked full-time outside of the home, 8% worked part-time and 47% were not employed. Of the unemployed women 9 did not plan to return to work outside of the home during the coming year and 6 were undecided.

In addition to the preceding demographic description of the sample, subjects may also be described in terms of their perception of the infant's temperament, adjustment to the pregnancy, social history, and health (Table 3). The mean score for infant temperament was 11.6. The range was 5 to 15. According to their mothers, twenty-seven (75.1%) of the babies evinced the constellation of temperamental characteristics labeled "slow-to-warm-up" by Chess and Thomas (1974). Two (5.6%) of the infants were classified as "difficult" and 7 (19.5%) as "easy".

TABLE 2
Description of the Sample
(N=36)

VARIABLE	CATEGORY	FREQUENCY	PERCENTAGE
Race	White	36	100
Marital Status	Married	36	100
# of Children	1	36	100
Age of Mother	18 - 24	8	22.2
mean = 27	25 - 30	22	61
sd=4.2	31 - 37	6	16.8
Age of Infant	6 - 8	8	22.2
mean = 11	9 - 12	23	63.8
sd=2.6	13 - 18	5	14
Socioeconomic Status	Upper class	13	36
	Middle class	23	64
Education	Graduate level	4	11.1
	College	17	47.2
	Some college	11	30.6
	High school	4	11.1
Employment	Full time	16	44.4
	Part time	3	8.3
	Not employed	17	47.2
Job	Major professional	4	11.1
	Business manager, Lesser professional	9	25
	Administrative, Minor professional	17	47.2
	Clerical,sales, technician	6	16.7
Plans to return to Work	No	9	25
	Undecided	6	16.7
	Missing	1	2.8
	Not Applicable	20	55.6

Table 3
Description of the Rival Variables

VARIABLE	RANGE	CATEGORY	FREQUENCY	PERCENTAGE
MOTHER'S HEALTH				
		Excellent	18	50
mean=3.3		Good	12	33.3
sd= .75		Fair	6	16.7
		Poor	0	-
INFANT TEMPERAMENT				
	0-6	"Difficult"	2	5.6
mean=11.6	7-13	"Slow-to-warm-up"	27	75.1
sd= 2.2	14-18	"Easy"	7	19.5
ADJUSTMENT TO PREGNANCY				
mean=2.7	0-3	Poor	23	63.9
sd=2.2	4-7	Good	13	36.2
Worried about own health		Strongly agree	9	25.
		Agree	16	44.4
		Undecided	1	2.8
		Disagree	8	22.2
		Strongly disagree	2	5.6
Worried about development of fetus		Strongly agree	11	30.6
		Agree	12	33.3
		Undecided	2	5.6
		Disagree	10	27.8
		Strongly Disagree	1	2.8
SOCIAL HISTORY				
	0-8		10	27.8
mean=9.55	9-12		25	69.4
sd=2.5		Missing cases	1	
Feels closer to mother now		Strongly Agree	6	16.7
		Agree	18	50.
		Undecided	7	19.4
		Disagree	2	5.6
		Strongly Disagree	2	5.6
Always had good relationship with mother		Strongly Disagree	15	41.7
		Agree	9	25.
		Undecided	2	5.6
		Disagree	5	13.9
		Strongly Disagree	4	11.1
Separated from mother before age 11		Yes	2	5.6
		No	33	94.4

The mother's scores on the adjustment to the pregnancy scale ranged from 0 to 7 with a mean score of 2.77. Twenty-three women (63.9%) obtained scores of three or less indicating that adjustment to the pregnancy was poor. The women worried both about their health (25 subjects, 69.4%), and the development of the fetus (23 subjects, 63.9%).

On the variable social history, respondent's scores ranged from 0 to 12. The median score was 10, demonstrating that most of the women (63.9) had positive relationships with their mothers, and felt that their relationship had improved since they became mothers themselves. Two subjects (5.6%) had been separated from their mothers as children. None of the subjects complained of poor health. Fifty percent (18) thought their health was excellent, 33% (12) rated it as good and the remaining 17% (6) stated their health was fair.

Description of the Independent Variable

All of the subjects had engaged in some kind of preparation (Table 4). Most (79.9%) were involved in four or more activities. All the mothers had read books or magazine articles about what it would be like to be a parent. However, only about one-half of them (55.5%) thought this was helpful. Thirty-four women (94.4%) had involved their husbands in preparation. Most of them (88.2%) stated this was a worthwhile effort. Nonetheless, when asked if they had talked with their husbands about what it would be like to be parents one-third (12) of them had not.

Thirty (83.3%) subjects had spoken to other mothers about what it was like to be a parent and 24 (80%) rated this as important.

was like to be a parent and 24 (80%) rated this as important. Twenty-three (63.8%) women had prior experience with children. This was felt to be a valuable form of preparation by 17 (73.9%).

Four (44.4%) of the nine (25%) women who had talked to professionals about parenting thought this was a valuable endeavor, while the others were either undecided or and thought it's importance was negligible. A total of 8 (22.2%) women had attended parenting classes. One-half of them rated class participation as important. Seven (87.5%) subjects went to class together with their husbands. Finally, an item on the questionnaire asked if the subjects had felt "well prepared" for motherhood. Twenty (55.6%) agreed with this statement, 12 (33.3%) disagreed and 4 (11.1%) were undecided.

The mothers were provided the opportunity to express their own opinions. Following are some of the subjects comments to the open ended question asking if preparation had helped:

"It helped but it was still pretty scary."

"Knowing what to expect was comforting."

"I wish I had attended a class."

Another question asked the women to state what they thought had helped them the most in adjusting to being a mother. Here are some of their responses:

"Having had my mother as a role model."

"Lots of past experience with children."

"Talking to friends about their experiences."

"The love and support of my husband."

"Getting to know my baby - increasing self-confidence."

Table 4
Description of Extent of Preparation
(N = 36)

VARIABLE	CATEGORY	FREQUENCY	PERCENTAGE		
EXTENT OF PREPARATION					
Number of activities subject engaged in:	2	5			13.9
	3	7			33.3
	4	15			41.7
mean=3.8	5	7			33.3
sd=1.08	6	2			5.6
IMPORTANCE OF PREPARATION					
Read	Important	20	(55.6%)		
	Undecided	9	(25%)		
	Little Importance	7	(19.4%)		
	No Opportunity	0		Total=36	100%
Involved Husband in preparation	Important	30	(88.2%)		
	Undecided	3	(8.8%)		
	Little Importance	1	(2.9%)	Total=34	94.4
missing cases=1	No Opportunity	1			2.7
Talked with husband about what it would be like to be parents	Strongly Agree	12			33.3
	Agree	12			33.3
	Undecided	4			11.1
	Disagree	7			19.4
	Strongly Disagree	1			2.8
Talked to other mothers	Important	24	(80%)		
	Undecided	5	(16.6%)		
	Little Importance	1	(3.3%)	Total=30	83.3
	No Opportunity	6			16.6
Prior experience with children	Important	17	(73.9%)		
	Undecided	3	(13%)		
	Little Importance	3	(13%)	Total=23	63.8
	No Opportunity	13			36.1
Talked to professional	Important	4	(44.4%)		
	Undecided	2	(22.2%)		
	Little Importance	3	(33.3%)	Total=9	25
missing cases=2	No Opportunity	25			69.4

Table 4 (cont'd) Description of Extent of Preparation

VARIABLE	CATEGORY	FREQUENCY			PERCENTAGE
Professionals subjects spoke with: missing cases=1	Obstetrician	6			
	Pediatrician	5			
	Nurse	3			
	Social Worker	1			
Attended class	Important	4	(50%)		
	Undecided	2	(25%)		
	Little Importance	2	(25%)	Total=8	22.2
	No Opportunity	28			77.7
Husband attended parenting class with subject	Yes	7			87.5
	No	1			12.5
	No Opportunity	28			
FELT WELL PREPARED FOR MOTHERHOOD	Strongly Agree	5			13.9.
	Agree	15			41.7
	Undecided	4			11.1
	Disagree	8			22.2
	Strongly Disagree	4			11.1

Evaluation of the Control Variables

Correlational procedures were employed to determine which of the potential control variables were significantly associated with maternal adjustment and thus might affect the relationship between the independent variable (extent of preparation) and the dependent variable (maternal adjustment). All of the potential rival variables were evaluated for their relationship with maternal adjustment utilizing Pearson product-moment correlations. As Table 5 demonstrates no significant correlations were found between maternal adjustment, adjustment to the pregnancy ($r=.02$, $p<.45$), and social history ($r=.19$, $p<.14$). Statistically significant correlations were found between

maternal adjustment and two variables, infant temperament (r=.42, p<.009) and mother's health (r=.38, p<.016).

TABLE 5
Correlation Between Control Variables and Maternal Adjustment

	Maternal Adjustment
Infant temperament	.42*
Adjustment to the pregnancy	.02
Social history	.19
Mother's health	.38*

*Significant at the point .05 level

Statement of the Hypothesis

The research hypothesis may be stated as follows:

The extent of preparation influences maternal adjustment.

Test of the Hypothesis and Results

To test the association between the independent and dependent variables, extent of preparation was entered into a regression equation with maternal adjustment. A significant association was found between extent of preparation and maternal adjustment (F=7.04, p=.01). Extent of preparation accounted for 18% of the variance in maternal adjustment (Table 6).

Table 6
Relationship of Extent of Preparation to Maternal Adjustment

DEPENDENT VARIABLE	INDEPENDENT VARIABLE	BETA	SE	df	F	p	R^2
Maternal Adjustment	Extent of Preparation	.42	.15	1,34	7.4	.01	.1789

To test the possible association between the significant rival variables and the dependent variable, the rival variables, infant temperament and mother's health, were entered in a stepwise fashion into a multiple regression equation with the dependent variable, maternal adjustment (Table 7). A significant association was found between maternal adjustment, infant temperament ($F=5.4$, $p<.026$) and mother's health ($F=4.85$, $p<.035$). Together, these variables explained 27% of the variance in maternal adjustment.

Table 7
Relationship Between Rival Variables and Maternal Adjustment

RIVAL VARIABLES	BETA	SE	df	F	p	Cumulative R^2
Infant temperament	.35	.15	2,33	5.4	.026	.1641
Mother's health	.33	.15		4.85	.035	

Based on these results the hypothesis was retested, this time controlling for the both the significant rival variables and the independent variable. Again, the hypothesis was supported even when tested with the control variables. Results of this multiple regression equation are tabulated in Table 8.

It appears that, when all three variables were entered into the equation, extent of preparation had the most impact on maternal adjustment (beta=.285), followed by infant temperament (beta=.331), and then by mother's health (beta=.356). All three variables taken together are highly significant ($F=7.03$, $p=.001$) and account for 39% of the variance in maternal adjustment.

Table 8
Relationship Between Control Variables and Maternal Adjustment

DEPENDENT VARIABLE	BETA	SE	F	p	R^2
Maternal adjustment df=3,32					
INDEPENDENT VARIABLES					
Extent of Preparation	.358	.138	6.68	.015	
Infant Temperament	.331	.139	5.66	.023	
Mother's Health	.285	.140	4.12	.051	
Joint Effect	-	-	7.03		.3973

Limitations of the Data

The results from this study are limited because of the small sample size and because the sample may not have been representative of the pool of potential respondents. Participation was voluntary and the subjects self-selected themselves. Also, the design of the questionnaire, devised by the researcher, may have influenced the results. The wording of the items or the sequence of the questions may have skewed subject's responses.

Another possible problem is that the mothers themselves assessed their infants temperamental characteristics thus affecting the results. Mother's are not objective judges of their babies behavior because they are so closely involved with them. For this reason mother's assesments may be influenced by their own needs and feelings rather than the infant's actual benavior.

In addition, there may be some variable which was not accounted for which impacted on the dependent variable thus making the relationship

between extent of preparation and maternal adjustment a spurious one. Lastly, the generalizability of the results to other more heterogeneous population is limited because the study focused on married, white, middle-class women, with only one child.

CONCLUSIONS

Introduction

Childbirth precipitates a number of changes in the lives of women. They must take on the new role of mother while coping with the responsibility of caring for the newborn, and at the same time dealing with modifications in the marital relationship. The objective of this study was to explore whether the extent of prenatal preparation for parenthood was effective in enhancing subsequent maternal adjustment. It was hoped that the information obtained through this research would help practitioners who work with expectant mothers to better serve their clients.

Summary of the Findings

While a number of studies had looked at how specific behaviors or situations impacted on maternal adjustment, none had explored whether the number of preparatory activities in which pregnant women engaged was important. This study proposed that the range of activities in which expectant mothers participated would influence later adjustment to motherhood. The relationship between mother's adjustment and extent of preparation was examined together with a number of other variables which might influence the results. When tested while controlling for the significant rival variables, mother's health and infant temperament, the research hypothesis was supported, indicating that extent of the preparation plays an important part in maternal adjustment.

Theoretical Implications

The results of this research indicate that the cumulative effect of participating in a number of activites was the basis for the subject's good subsequent adjustment. The study did not attempt to determine which of several different types of preparation was most effective, rather it assumed that each effort might have it's own particular contribution to adjustment, and that taken together they would help the mother to cope with the changes in her life.

According to theory, preparation influences adjustment because it allows the person the opportunity to imagine themselves in the new role, identify with appropriate role models and practice new behaviors (Cottrell, 1942). When the foundations have been laid, adjustment to change tends to take place more smoothly than if the changes had been unanticipated (Golan, 1981). Preparation provides the parent with relevant information with which to guide their actions. It increases the range of options available for appropriate behavior. In addition preparation enhances the person's ability to maintain internal balance (Parkes & White, 1974).

It appears that the more types of preparation the mother participated in, the more likely she was to have the necessary resources for a smooth transition to motherhood. Participation in a variety of anticipatory activites may be more helpful than involvement in just one effort because it provides the mother with a variety of information on which to base decisions, and possibly more potential sources of future support.

Most of the women in the study had engaged in four activities.

Those reported most frequently were reading, involving the spouse, talking to other mothers, and prior experience with children. Probably it was the additive effect of these efforts which helped them to adjust more easily to motherhood. A critical part of preparation involves predictions about the different kinds of behavior which might occur and ways for dealing with them. Perhaps reading, and talking to other mothers provided the subjects the opportunity to forsee obstacles to adjustment, and prior experience experience with children the occasion to rehearse possible remedies. Effective preparation for motherhood demands attention to the emotional as well as the thinking and acting aspects of caring for an infant, perhaps involving the husband in the preparatory process helped attend to these needs.

As suggested by prior research, good maternal health was found to be a predictor of maternal adjustment. Russell (1974) found that women who reported less than excellent health had more problems in the process of transition to motherhood than women who said their health was excellent. It may be that physical health is a major determinant in a person's ability to cope with change. Health is necessary to provide the person with the endurance required to initiate and follow through with problem-solving measures. The person's appraisal of herself as healthy or sickly may influence her determination and manner of addressing problems thus affecting her adjustment (Pickett, 1980).

The mothers in this study assessed their own infant's temperament. This variable explained a significant percentage of maternal adjustment. This finding is consistent with that of Kronstadt (1979) who reported that mothers who judged their infants to be difficult had more problems

in adjustment. Carey (1970) found that mothers of babies who had been objectively assessed as difficult tended to minimize the problem. He hypothesized that these mothers may have been trying to make their babies seem more desirable. Significantly however, a study by Campbell (1977) demonstrated that mother's expectations had more influence than behavior, on their perceptions of their infants. She suggests that expectations may influence future positive interactions.

Research has shown that mother's feelings towards their babies (Schaefer & Bayley, 1963) and mother's perceptions of their infants (Broussard & Hartner, 1971) are influenced by the infant's behavior. It is likely that there is some kind of interaction between the mother's idealized image of her baby and the infant's objective behavior. It also seems logical that mother's methods for handling their babies would affect temperament.

When the baby's behavior is in accord with the mother's expectations, the woman feels as if she is managing well. However if the baby does not respond as expected to her ministrations she may feel she is doing something wrong, begin to feel frustrated and inadequate, and thus affect her overall adjustment to her role (Brazelton & Buttenwieser, 1983).

Infant temperament may have such a great effect on maternal adjustment because adjustment occurs in the context of the interpersonal relationship between the mother and child. Behavior is not unidirectional, actions elicit responses that in turn generate other reactions. The infant's responses to the parent may confirm, neutralize, or invalidate previously learned behaviors (Goldstein,

1981). As one woman stated, "realizing that my baby's behavior depends a lot on how I feel" helped her the most in adjusting.

Good adjustment requires a supportive atmosphere and satisfactory compensation for the distress and disruption having a baby entails. Respondent's answers to an open-ended question asking what helped them the most elucidate this point:

> "My son, he makes being a mother fun."
>
> "I was not prepared for the feelings I would have - loving the baby so much and his total helplessness. I was not prepared for my husband's reaction. He is not as involved, when he has had enough he goes off to 'mow the lawn'. He feels that the baby is my responsibility. I could use more support but not just when I ask for it. I would like to feel like a 'team' again. Motherhood is not great thing, it is my baby who makes it all worthwhile."

Extent of preparation may increase maternal adjustment because it involves taking active control of one's situation. Perhaps the woman's willingness to confront the future through her participation in a variety of preparatory efforts is the basis for good adjustment.

Practical Implications

Many pregnant women approach motherhood with virtually no information about what to expect. The results of this study indicate that women should be encouraged to participate in as many different preparatory activities as possible. Engaging in a variety of anticipatory efforts appears to be a most effective method of getting ready for the changes which take place during the process of adjustment to parenthood because it provides mothers with a variety of sources of

information and support.

Preparation is important because it provides parents with the information necessary to make good decisions. It enables them to have a better understanding of infant behavior. It prepares them for dealing with their own feelings, and it can set up the basis for support systems which are important for help during the period of transiton.

The results of this study imply that in order to be most effective a program should:

- involve both parents;
- offer information about early childhood growth, development, and abilities of infants;
- provide parents with information about possible changes within themselves and in the marital relationship;
- familiarize parents with community resources available for help;
- model the skills necessary to care for a young infant;
- begin to set up systems for obtaining the emotional support needed during the adjustment period.

The results of this study indicate that the mother's health and the infant's temperatment are critical areas where intervention may make significant differences in the developing relationship between mother and child. Better prenatal care would enhance maternal adjustment by decreasing the incidence of difficult deliveries which impede the mother's recuperation from childbirth and her return to health. Major physical changes occur after delivery: hormonal changes, beginning of lactation, and the physical effects of loss of sleep. If a woman does not recoup her energy in those first weeks after the baby's birth she

may spend months trying to catch up on the rest she desperately needs. Some form of home health care during the immediate postpartum period as is available in several European countries (Spain, 1984) would relieve some of these problems. Help at home during the immediate perinatal period might improve opportunities for good adjustment by speeding the mother's return to health.

Mothers perceptions of their infants temperament greatly affected their adjustment. Women's views of their infants appear to be influenced both by expectations and behavior. There are measures that assess newborns temperamental characteristics. One way of helping mothers to adjust to their new roles might be to perform such evaluations. On the basis of this behavioral assesment women could be provided with objective information about their infants mode of response. The examiner could offer concrete suggestions for caring for the particular infant. For example, what soothes one newborn overstimulates another.

Suggestions for Future Research

Future research is indicated to assess to what extent the results obtained in the present study can be generalized to a more heterogenous population. The subjects in this case were all married, white and middle class. Would the results be so dramatic with a different sample frame? Teenage mothers and single parents at any age are more likely to have difficulties than women in more secure positions. In addition there is the question of whether the results would be applicable to other racial groups. For example for women of color, social history

might be a more important influence on maternal adjustment. Therefore, comparative research between this study population and other groups may be useful.

Research into the effects of health on adjustment is indicated. Though this variable explained a significant amount of variance, no subject declared she was in 'poor' health. In addition, the results of this study indicate that infant temperament exerts an important influence on maternal adjustment. For this reason research into the effects of the dynamics between parent and child also seems to be needed. It would appear to be worthwhile to evaluate the effects of providing parents with objective assessments of their child's temperament, in order to determine whether this would affect their future relationships with their infants and subsequent adjustment to their roles.

Conclusions

This research was a synthesis of previous work in the area of maternal adjustment. It demonstrated that the cumulative effect of involvement in a variety of preparatory efforts was most effective in enhancing adjustment. This information is important because adjustment is the basis for adequate functioning in a role. Neglectful, inadequate, and abusive behavior can result from parents inability to cope with the day-to-day demands of an infant.

Preparation can help parents become more knowledgeable about child care and development. It can help couples anticipate changes in the marital relationshp and begin to establish the support systems which are

essential for meeting future needs. Getting off to the right start can lay the foundation for the development of satisfactory family relationships. It can lead to a life time of psychological growth and good family mental health. Preparation through enhancing mother's adjustment ensures that the family gets off to a good beginning, thus increasing the probablility that things will continue to go well.

APPENDIX A

University of Houston
Central Campus
Houston, Texas 77004

Committee for the Protection of Human Subjects

November 18, 1983

Ms. Patricia Bastidas
c/o Dr. Jean Latting
Graduate School of Social Work

Dear Ms. Bastidas:

The University of Houston Committee for the Protection of Human Subjects reviewed your research proposal entitled "The Effect of Prenatal Preparation on Maternal Adjustment" on November 17, 1983, according to institutional guidelines.

The Committee has given your project unconditional approval; however, you need to correct the typographical errors in both cover letters and the proposed questionnaire. Reapplication will be required:

( ) a. After each subject's exposure
( ) b. Quarterly
( ) c. Semiannually
(x) d. Annually
(x) e. Change in protocol
(x) f. Development of unexpected problems or unusual complications
( ) g. Other

Thus, if you will still be collecting data on this project in November, 1984, you must reapply to this Committee for approval before this date if you wish to prevent an interruption of your data collection procedures.

If you have any questions, please contact Ms. Laurel Kuhner Berker, Office of Sponsored Programs, at x3412.

Sincerely yours,

Stuart Feldman, Chair
University of Houston Committee
for the Protection of Human
Subjects

SF:ms
cc: Dr. Clyde McDaniel
PLEASE NOTE: All subjects must receive a copy of the informed consent document. You must retain copies of informed consents which require subject signatures for a minimum of 5 years.

CPHS5/F

July 24, 1983

Ms. Sue Steinhardt
Houston Organization for Parent Education

Houston, Texas 77098

Dear Ms. Steinhardt,

I am a student at the University of Houston Graduate School of Social Work. I am conducting a research study on the effects of preparation on realistic role expectations and subsequent maternal adjustment.

I spoke with you on the telephone on July 7th. You gave me permission to contact Nancy Biondello and arrange to visit Lamaze classes to request volunteers for the research project. Before I can proceed with the study it must be reviewed by the Human Subjects Committee of the University. The committee requires a written statement to the effect that the proper authorities have granted me access to the potential volunteers. Could you please provide me with a brief note stating that I have your permission to visit the H.O.P.E. sponsored Lamaze classes and request volunteers. For your convenience I have enclosed a sample draft of the required letter.

If you have any questions, or would like to review the proposal please do not hesitate to contact me.

Thank you very much,

Patricia Bastidas

Houston, Texas 77080

Houston Organization for Parent Education, Inc.

A Non-Profit Educational Association

77098

August 4, 1983

Patricia Bastidas

Houston, TX 77080

Dear Patricia:

Thank you for your letter of July 24, 1983, regarding your research project to fulfill the requirements for a Masters Degree in Social Work. Houston Organization for Parent Education agrees to allow you to visit Lamaze classes to make a brief presentation of your study and to solicit volunteers. We understand the purpose of your research as evaluating the effects of preparation on realistic role expectations and subsequent maternal adjustment.

Hopefully, the results of this study will point to the kinds of preparation which are most effective in helping mothers to adjust to their new roles. When you have completed your study, we would like you to write an article detailing the results for our newsletter.

Yours truly,

Susan L. Steinhardt
Trainer/Evaluator

'ma

APPENDIX B

date

Dear Participant,

Becoming a mother involves major changes in a woman's life. Many women experience moderate to severe stress in the process of adjustment to motherhood. I am investigating women's adjustment to their new roles. Your response to the enclosed questionnaire will greatly contribute to the scucess of this study. The results of this research will help people who work with expectant mothers to refer them to those resources which are the most helpful in enabling new mothers to successfully cope with the stresses of adjustment to their new roles. I realize that some questions are of a personal nature. However, such questiions are necessary in order to get a true understanding of what you are thinking and and feeling. I am associated with the University of Houston Graduate School of Social Work, and am conducting this research with the cooperation of Houston Organization for Parent Education (H.O.P.E.).

After you complete the questionnaire please return it to me in the stamped self addressed envelope enclosed, and keep this letter. To ensure your privacy, please do not put your name on the questionnaire or return address on the envelope. If you would like information about the results of this study, or have any questions about your participation in this research, please feel free to call me.

Thank you for your participation.

Patricia Bastidas

Houston, Texas 77080

THIS STUDY HAS BEEN REVIEWED BY THE UNIVERSITY OF HOUSTON COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS .

MOTHER'S QUESTIONNAIRE

A THE FOLLOWING QUESTIONS ARE CONCERNING FEELINGS ABOUT BEING A MOTHER. THERE ARE NO RIGHT OR WRONG ANSWERS. PLEASE READ EACH QUESTION CAREFULLY AND CIRCLE THE WORD WHICH BEST DESCRIBES YOUR FEELINGS.

1. I wake up most mornings feeling positive about what the day will bring.
Strongly Agree Agree Undecided Disagree Strongly Disagree

2. I am just as happy now as I was before the baby was born.

Strongly Agree Agree Undecided Disagree Strongly Disagree

3. I feel tired all the time.

Strongly Agree Agree Undecided Disagree Strongly Disagree

4. I don't mind having to plan my day around the baby's schedule.

Strongly Agree Agree Undecided Disagree Strongly Disagree

5. I cry more now than I used to.

Strongly Agree Agree Undecided Disagree Strongly Disagree

6. I feel that the baby keeps me from doing the things I want to do.

Strongly Agree Agree Undecided Disagree Strongly Disagree

7. Most women probably do a better job of being a mother than I am doing.

Strongly Agree Agree Undecided Disagree Strongly Disagree

8. Taking care of baby is one of the most fufilling things I have ever done.

Strongly Agree Agree Undecided Disagree Strongly Disagree

9. Compared to other mothers, I get down in the dumps too often.

Strongly Agree Agree Undecided Disagree Strongly Disagree

10. I feel capable of taking care of the baby.

Strongly Agree Agree Undecided Disagree Strongly Disagree

B MOTHER'S HAVE RESPONDED DIFFERENTLY TO THE FOLLOWING STATEMENTS. REMEMBER, THERE ARE NO RIGHT OR WRONG ANSWERS. PLEASE CIRCLE THE WORD WHICH BEST DESCRIBES YOUR RESPONSE.

1. Taking care of baby is difficult.

Strongly Agree Agree Undecided Disagree Strongly Disagree

2. My baby has personality.

Strongly Agree Agree Undecided Disagree Strongly Disagree

3. I worry a lot about the baby's health.

Strongly Agree Agree Undecided Disagree Strongly Disagree

4. My baby and I enjoy doing things together.

Strongly Agree Agree Undecided Disagree Strongly Disagree

5. Sometimes I feel as if I don't know what the baby wants.

Strongly Agree Agree Undecided Disagree Strongly Disagree

6. My husband understands what I have been going through.

Strongly Agree Agree Undecided Disagree Strongly Disagree

7. My husband and I have enough time together alone.

Strongly Agree Agree Undecided Disagree Strongly Disagree

8. Since the baby was born my relationship with my husband has changed for the better.

Strongly Agree Agree Undecided Disagree Strongly Disagree

9. Since the baby was born my husband has been helping more with the household chores.

Strongly Agree Agree Undecided Disagree Strongly Disagree

10. I would like my husband to be more involved in the care of the baby.

Strongly Agree Agree Undecided Disagree Strongly Disagree

11. Before the baby was born my husband and I talked quit a bit about what it would be like to be parents.

Strongly Agree Agree Undecided Disagree Strongly Disagree

C THE FOLLOWING QUESTIONS ARE ABOUT YOUR BABY'S BEHAVIOR. PLEASE CIRCLE THE WORD WHICH BEST DESCRIBES YOUR BABY.

1. How often does your baby wake during the night?

Usually Never Once Twice Three Times or More

2. Is baby on a regular schedule? For example, can you usually predict when baby will want to eat again?

Always Usually Sometimes Seldom Never

3. Baby is friendly. He/She enjoys looking at, and smiles at strangers.

Always Usually Sometimes Seldom Never

4. When baby is hungry he/she screams if not fed immediately.

Always Usually Sometimes Seldom Never

5. Baby adapts easily to new situations.

Always Usually Sometimes Seldom Never

D YOU ARE HALF WAY THROUGH. PLEASE ANSWER THESE QUESTIONS AS BEST YOU CAN. CIRCLE YOUR RESPONSE.

1. When I found out I was pregnant I was disappointed.

Strongly Agree Agree Undecided Disagree Strongly Disagree

2. I felt anxious about my health during the pregnancy.

Strongly Agree Agree Undecided Disagree Strongly Disagree

3. While I was pregnant I worried a great deal about whether the baby would be o.k.

Strongly Agree Agree Undecided Disagree Strongly Disagree

4. I found it easy to adjust to being a mother.

Strongly Agree Agree Undecided Disagree Strongly Disagree

5. I have had to give up a lot of my past activities since the baby was born.

Strongly Agree Agree Undecided Disagree Strongly Disagree

6. I want to have a career that is meaningful in addition to being a wife and mother.

Strongly Agree Agree Undecided Disagree Strongly Disagree

7. Being a mother is pretty much what I expected it to be.

Strongly Agree Agree Undecided Disagree Strongly Disagree

8. I feel I was well prepared for motherhood.

Strongly Agree Agree Undecided Disagree Strongly Disagree

9. I had no idea taking care of a baby would take so much time and energy.

Strongly Agree Agree Undecided Disagree Strongly Disagree

10. I had someone with experience available to help me when the baby was newborn.

Strongly Agree Agree Undecided Disagree Strongly Disagree

11. Having a baby has created financial problems.

Strongly Agree Agree Undecided Disagree Strongly Disagree

12. I have been getting enough sleep.

Strongly Agree Agree Undecided Disagree Strongly Disagree

13. I have friends with young children who I can ask for information and advice.

Strongly Agree Agree Undecided Disagree Strongly Disagree

14. I feel comfortable leaving my child with a babysitter.

Strongly Agree Agree Undecided Disagree Strongly Disagree

15. I feel it is important for me to be involved in activities outside of the home.

Strongly Agree Agree Undecided Disagree Strongly Disagree

16. I have been able to get away and pursue some of my own interests.

Strongly Agree Agree Undecided Disagree Strongly Disagree

17. I feel closer to my mother as a result of becoming a mother myself.

Strongly Agree Agree Undecided Disagree Strongly Disagree

18. I've had a good relationship with my mother most of my life.

Strongly Agree Agree Undecided Disagree Strongly Disagree

E BELOW ARE SEVERAL DIFFERENT KINDS OF WAYS IN WHICH WOMEN PREPARE FOR MOTHERHOOD. PLEASE GO DOWN THE LIST AND CIRCLE YES IF YOU PARTICIPATED IN THAT ACTIVITY, AND NO IF YOU DID NOT. THEN, RATE EACH ONE YOU MARKED YES ACCORDING TO HOW IMPORTANT IT HAS BEEN IN HELPING YOU TO COPE WITH THE RESPONSIBILITIES AND DEMANDS OF BEING A MOTHER. THANK YOU.

1. Attended a parenting class or group discussion (other than childbirth preparation classes) which emphasized the responsibilities and demands of being a mother.

YES NO

Very Important | Undecided | Little Importance | No Importance

2. Read books or magazine articles about what it is like to be a parent.

YES NO

Very Important | Undecided | Little Importance | No Importance

3. Talked to a professional about child care plans.

YES NO

Very Important | Undecided | Little Importance | No Importance

Please circle whom you spoke with:

Obstetrician Nurse Pediatrician Social Worker Other

4. Had prior experience with children, such as babysitting caring for younger brothers & sisters, or working in a nursery.

YES NO

Very Important | Undecided | Little Importance | No Importance

5. Talked to other mothers about what it is like to be a mother.

YES NO

Very Important | Undecided | Little Importance | No Importance

6. Involved husband in the process of getting ready for the baby.

YES NO

Very Important | Undecided | Little Importance | No Importance

F FINALLY, YOU ARE ALMOST THROUGH! PLEASE CIRCLE YOUR RESPONNSE.

1. Are you: Married Widowed Single Divorced

2. Have you moved in the last six months? YES NO

3. If you attended parenting classes, did your husband attend with you?

YES NO Not Applicable

4. How many children do you have? _____

5. How would you rate your health at this time?
   Excellent Good Fair Poor

6. How would you rate your baby's health?
   Excellent Good Fair Poor

7. How old were you on your last birthday? _____

8. How old is your baby? months _____ weeks _____

9. What is the highest grade level in school you have completed?
   Junior High High School College
   Some College Advanced Degree

10. Are you presently employed outside of the home?
    Full time Part time Not employed

11. Do you plan to go back to work during the next year?
    Undecided YES NO

12. What is your profession? Or, what is the title of the last position you held?
    _____

13. The following questions are about your family background.
    a. Are both of your parents alive? YES NO

    b. If one of your parents is deceased, did he or she die before you were 11 years old? Yes NO Not Applicable

    c. Which parent is deceased?
    Mother Father Not Applicable

    d. Were you separated from either of your parents before you were 11 years old?
    Yes No

    e. Which parent were you separated from?
    Mother Father Both

14. What is your race or ethnic background?
    White Black Hispanic Other

G IT'S YOUR TURN TO EXPRESS YOURSELF. PLEASE ANSWER AS FREELY AS YOU LIKE.

1. What has been the most rewarding part of becoming a mother for you?

2. What has been the most difficult part of becoming a mother?

3. Do you think preparation for being a mother helped you?

4. What do you think has helped you the most in adjusting to being a mother?

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE.

APPENDIX C

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