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Factors that Influence Prepared Childbirth Couples' Use of Epidural Anesthesia for Labor and Delivery

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FACTORS THAT INFLUENCE PREPARED CHILDBIRTH COUPLES' USE OF EPIDURAL ANESTHESIA FOR LABOR AND DELIVERY

by

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ABSTRACT

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The purpose of this study was to identify factors that influence a Prepared Childbirth couple's decision to utilize epidural anesthesia for labor and delivery. Review of the literature indicated a high correlation between epidural use for uncomplicated labors and deliveries and a high incidence of maternal complications and low neonatal neurological and behavioral scores.

A sample of twenty-nine couples was used in this prospective, non-experimental field study for the research. Data were collected utilizing two developed demographic and factual event tools, Rotter's Internal-External Locus of Control Tool and Spanier's Dyadic Marital Adjustment Tool.

Three hypotheses were developed and data were analyzed utilizing Pearson r and Multiple Regression statistical procedures. The results of the research clearly indicated that internal locus of control and a high degree of marital adjustment are related to a decreased use of epidural anesthesia by Prepared Childbirth couples in labor and delivery. Additionally, analyses of the data demonstrated that a significant relationship existed between several variables and the use of epidural anesthesia by Prepared Childbirth couples for labor and delivery. These variables

were marital adjustment scores, locus of control, physician's view of epidural anesthesia and length of marriage.

These results clearly indicate the need for improved childbirth education, supportive nursing staff, a family centered maternity unit, a progressive physician, and a good husband-wife relationship. Improvement in these areas may decrease the anesthesia usage for women in labor, therefore, decreasing some of the associated risks of childbearing.

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CHAPTER 1

INTRODUCTION

Courses designed to prepare pregnant women and their spouses for active participation in the birth experience have long been established in several areas of the world. The most common type of prenatal course offered is the Prepared Childbirth class. These classes are a combination of several childbirth education principles such as: the importance of education of the couples to eliminate the fear-tension-pain cycle for the woman in labor by Dr. Grantly Dick-Reid (Dick-Reid, 1953), and the psychoprophylactic method (Karmel, 1965) developed by Dr. Fernand Lamaze in France. The new Prepared Childbirth classes stress education, relaxation, controlled breathing and active spouse participation in the birthing process.

The use of Prepared Childbirth techniques have been linked to fewer complications, shorter labors, more positive birth experiences and decreased usage of pain relief medications by women in labor. Despite overwhelming evidence in support of Prepared Childbirth techniques, large percentages of women are selecting epidural anesthesia. Complications of such excessive usage of anesthesia for childbirth is evidenced by the relatively high percentage of maternal-infant mortality and morbidity when compared to other equally educated countries. This is not surprising when you consider that epidural anesthesia in obstetrics

has three levels of toxic maternal reactions, ranging from mild, a dry mouth, to severe, total cardiovascular collapse. Infants have reportedly been born floppy with decreased muscle tone up to eight hours after delivery, and neurological behavioral scores for infants born to mothers who used epidural anesthesia were significantly lower than normal.

Marital adjustment, adequate support within the health care system, internal motivation and structured prenatal education all appear to be factors that have a potential to significantly influence a couple during labor and delivery. The action level of potential influence for each factor or combination of factors needs to be explored more fully. The results of this study will assist the educators in determining if the desired outcomes of the Prepared Childbirth training can be achieved through alteration of current educational techniques or if the influencing factors are related to individual life styles.

Theoretical Framework

Development of this research proposal was based on several theoretical perspectives of individual theorists. Several viewpoints have been incorporated to support the basic ideas the researcher plans to investigate.

Nola Pender and her work with the concept of social support and health form the foundation for a number of beliefs held true in prepared childbirth education.

> People with undifferentiated or minimal social support systems exhibit poorer coping behavior and emotional stability than do those with

> well-defined, mutually supportive relations. (Pender, 1982, p. 336).

Pender describes the types of social support systems, one being the natural or family group. The importance of the husband's presence and support during labor and delivery and a mature marital situation, have been cited by several authors (Kotler & Hammond, 1981).

Another type of support system is composed of care-givers or helping professionals (Pender, 1982). The importance of nursing staff and the physician-patient relationship in the positive outcome of the couple's childbirth experience is more fully understood by application of Pender's social support theories. Although the natural support system generally influences the individual or family to a greater extent, we cannot overlook the importance of this auxiliary support system.

Alderian psychology and Gestalt theory both support the idea that man cannot be studied independent from his environment. Man's behavior is a function of his interaction between himself and the environment (Corsini, 1973), therefore, upholding the belief that the hospital, nursing staff, physician and instructor must all influence a couple's response to labor in some form, be it positive or negative. Review of current literature demonstrates the need to properly understand these theories so that their application will lead to positive influences; such as shorter labors, decreased pain perception, fewer complications and more positive birth experiences (Genest, 1981; Mercer, Hackley, & Bostrum, 1983).

The Spanier Dyadic Adjustment Tool was used to assess the marital adjustment as a process of movement along a continuum which can be evaluated in terms of proximity to good or poor adjustment. Reliability of this tool on previous studies using Cronbach's coefficient alpha was .96 (Spanier, 1976).

Another popular theory discusses the difference between the Pain Management Model and the Mastery Model (Humenick, 1981). The latter equates the perception of control during birth with the reporting of positive birth experiences. In the Pain Management Model, the mother's perception of the birth experience is related to the availability of good analgesia and anesthesia.

Rotter's social learning theory maintains that the potential for any behavior to occur in a given situation is a function of the individual's expectancy that the particular behavior will secure the available reinforcement (Rotter, 1966). Thefore, a woman who has internal locus of control will perceive the attainment of a Lamaze delivery as positive and subject to personal control.

Externally motivated women are more susceptible to environmental influences, especially their husbands. It would be assumed that women who are externally motivated would only succeed in a Lamaze delivery with strong active support of their husbands (Windwer, 1976).

Review of Literature

In Genest's (1981) review on the history of Prepared

Childbirth, psychoprophylactic methods are described along with a discussion of the Gate-Control Synthesis. Research has suggested that prepared women experience less pain, use less medication, have fewer complications, a lower morbidity rate, short labors and more control during labor and delivery.

The author illustrates that the use of medication is often an indicator of levels of pain, when in actuality they are related more to the woman's preference, or preferences of the staff or physician.

Several laboratory controlled studies have been done that show a decrease in induced pain by those women using the techniques.

The author concludes by discussing one important often forgotten aspect of Prepared Childbirth, which is the positive feelings toward both labor and the new infants.

Analysis of each variable was performed using the t-test, and multiple step-wise regression for those variables with significant correlations. Results showed that among women who had Prepared Childbirth training, lower scores were found for sensory affective and total Pain Response Inventory scores. Pain Response Inventory is the total score on the McGill Pain Questionnaire. Complications during pregnancy were associated with lower pain scores, and age and socioeconomic status were associated with higher pain scores.

Results of the step-wise regression showed that childbirth training and practice, menstrual difficulties and socioeconomic status were the main predictors of the successful completion

of Prepared Childbirth by primiparas. Socioeconomic status and menstrual difficulties were the main predictors for the multipara mother.

Sasmor and Grossman's (1980) study on the different factors in childbirth education concluded that a need exists for national guidelines for childbirth education. A stratified random sampling technique was used to select the subjects. Seven hundred and seventy-six questionnaires were mailed and a total of 238 (30.7%) were fully completed and usable. The questionnaire was designed to collect information on training, population served, teaching strategies, course content and attitude for assessing client need.

The results of this study showed that the educators all have various backgrounds and types of educational prepration. The majority of childbirth education is received by well-educated, middle-class consumers. The majority of respondents felt that national guidelines were needed for education preparation but not for actual practice. No statistical data was presented by the authors. Tables were included that contained various results from the questionnaires.

Masterpasqua's (1982) article presents his research on childbirth education and it's influence on variables in a low income group. Three groups were selected from a local clinic and divided into: 1) attended prenatal education, 2) had not attended childbirth education when not offered by the clinic, and 3) did not attend childbirth education when offered by the clinic. Data was analyzed using an ANOVA. Assessment of data was quite extensive using several scales and a combination of

hospital records and client observations.

Results showed no significant difference on prenatal complications and perceptions during postpartum. The study did conclude that a significant difference on all variables existed between male and female infants and multiparas versus primiparas mothers in relationship to prenatal education. Additional conclusions were suggested by the author that are not supported by his statistical analysis.

Hallstead and Fredrickson (1978) studied the relationship between Prepared Childbirth education and outcome of labor and delivery. Two groups were randomly selected from hospital records and divided into those who had more or less than five hours of prenatal education. The hypothesis centered around the belief that prenatal education has a positive impact on the length of labor, length of hospital stay and health and alertness of the infant.

Data were analyzed using the Chi-square for nominal data and ANOVA for ordinal data. The following results were obtained: 1) no significant differences were seen between background variables, 2) education did not affect the length of labor, 3) the group with labor less than five hours had significantly less abnormal presentations, fathers participation in birth process, more breast-feeding and did not smoke, and 4) the group with labor longer than five hours were more often listed in the low risk group.

Tables are presented with the statistics and complete references are included. Areas for future research include a correlation between child abuse and complicated deliveries.

McGraw and Abplanalp (1982) studied the results of Prepared Childbirth couples in relationship to their original reason for taking classes. A convenience sample of 77 primiparas was selected. Personal interviews were used prior to labor to determine the subjects' reasons for taking Lamaze classes and who influenced their decision to take the classes.

Results were presented in table form and yielded the following information: 42.9% of the women took classes to gain information and only 24.7% took classes to decrease their medication use during labor and delivery. The individuals who influenced their decision most were: 44.1% friends, 28.8% husbands, and 27.1% responded no one.

This study concluded that the childbirth educators need to evaluate their population and motivation for taking classes. Then the instructors can develop their classes to be the most beneficial to all involved parties.

Susan Doering and Doris Entwisle (1975) published their exploratory study on the type of preparation during pregnancy and a woman's ability to cope with labor and delivery. This five-year study contacted 290 women who had delivered within nine weeks of the contact and interviewed them regarding their feelings surrounding the birth. No hypothesis was stated by the authors in the study. Subjects were randomly selected by referral from local Lamaze instructors and the participants themselves.

The study sample consisted of 269 women, 105 primiparas and 164 multiparas. The group tended to be homogeneous in

relationship to age, education, and socioeconomic status. The sample was separated into trained and untrained regarding childbirth education classes.

Analysis was done using the Chi-square test and yielded the following results:

1. A strong correlation existed between Lamaze training and level of awareness at birth.
2. A strong correlation existed between level of awareness and attitudes toward childbirth immediately postpartum.
3. A highly significant correlation existed between awareness at delivery and positive reactions to the newborn child.

In summary, this study concluded that preparation for childbirth leads to higher levels of awareness at delivery and, in turn, a significant impact on the mother's positive reactions toward the infant.

Statistical data on all aspects of analysis were included in the article. Also included was the tool and the exact method of interviewer procedures. Discussion was included regarding piloting of the tool, but reliability information was not included.

Willmuth, Weaver and Borenstein (1978) researched the relationship between Locus of Control and satisfaction with Prepared Childbirth. A sample size of 450 women who delivered at a medical center hospital over a 14 month period was used. Structured childbirth classes offered by the Visiting Nurses'

Association were attended by some of the women in the sample group.

The basic hypothesis of the study was that satisfaction with prepared childbirth is related to an internal locus of control. Data analysis of the study using the t-test yielded the following results: those couples who expressed their delivery as very satisfying tended to score lower on the Rotter Internal-External Locus of Control tool. A low score signifies internal locus of control; a person who perceives that the results of their actions are a result of their actions, not luck or chance. The basic hypothesis of the study was supported at a .025 level of significance.

Conclusions of the study included the belief that childbirth classes directly affect the outcome of delivery in regards to satisfaction. Internally controlled women may be enhanced by classes, where as external women may find less satisfaction by attending classes.

Neuromuscular control of prepared childbirth prepared women was studied by Bernardini (1983). A convenience sample of 93 women, all of whom were middle-class, caucasian and under the care of private physicians, was used. The two groups, a) self taught, and b) class taught, were compared for neuromuscular control and goal directedness. This study sought to demonstrate that the type of childbirth preparation, amount of practice, and goal directedness influence a woman's control in labor.

Results of this study showed that the type of

preparation, amount of practice, and goal directedness were directly related to control in labor. Self-taught women were not as controlled as classroom taught women. The more practice a self-taught woman had, the higher the degree of control she maintained. However, the amount of practice did not relate as significantly to control in the class-taught group. Overall, this study concludes that classroom instruction, encouragement to practice, and the ability to be goal directed are positively related to increased control of women during labor and delivery.

Willmuth (1975) performed a retrospecific study to determine why women are satisfied with their prepared childbirth experience. Results of the study showed a high correlation between satisfaction and maintaining control. The author additionally separates control into three categories. The first category was the control of pain perception; the second defined control as maintaining control over one's emotions and actions; and the third was the control maintained in the interpersonal relationships with the staff. Subject size and criteria for selection were included in this review. No statistical data or results were presented. Suggestions for further research include the use of the Rotter I-E tool, and applications for nursing education.

Moore (1983) performed a study to determine the validity of the popular concept that marital adjustment is attributable to the type of childbirth preparation engaged in by the couple.

Two groups were used and then compared on marital satisfaction, antepartum and postpartum. The total sample size was 107, however, no breakdown into group 1 or 2 was identified. Group 1 (PPM) consisted of couples who had attended Lamaze classes taught by (ASPO) American Society of Psychoprophylaxis in Obstetrics certified teachers in class sizes of 12 or smaller. Group 2 (HCM) consisted of couples who attended a hospital based childbirth course taught by various noncertified instructors.

A longitudinal study was performed and results were analyzed by use of an ANOVA. Results showed no significant difference in female scores between the two groups, but a significant difference was found between the male scores. All couples in both groups showed a significant increase in marital satisfaction after completion of their respective childbirth classes. Additional analysis showed that the PPM group had longer labors, used less medication, and increased levels of maternal infant bonding than the HCM group.

This study concluded that no type of education regarding improved communication and interaction skills will increase a couple's marital satisfaction. This study would have added more knowledge to this area of study if a control group had been used who had received no educational classes. Results of this study may have been influenced by participation in the study, or by the fact that these couples chose to work toward a common goal, and therefore, may have had a different marital relationship than did those couples who did not take any classes.

Mercer, Hackley and Bostrum (1983) hypothesized that: 1) the older woman has a more positive perception of the birth experience, 2) a woman who has a caesarean birth will have a less positive experience, 3) a woman who has regional anesthesia for caesarean delivery is more positive in her perception than one who receives general anesthesia, 4) the woman who uses less medication has a more positive perception of her delivery, and 5) the woman who has her mate present has a more positive experience.

A convenience sample of 294 women, ranging in age from 15-42, consisting of various ethnic and social levels was selected. Analysis was performed using the Kruskal-Wallis Chi Square test. Results showed the following: 1) a significant difference existed between age and perception of birth experience, 2) caesarean deliveries showed a significantly lower perception of their birth experience than did the vaginal deliveries, 3) no evidence was found to correlate any significant difference between type of anesthesia during caesarean deliveries and perception of birth experience, 4) women who used less medication during labor and delivery had a higher perception of their birth experience, and 5) women who had a significant other present for labor and delivery had a significantly higher perception of their birth experience.

Sharon Humenick (1981) reviewed the current literature that explores the aspect of satisfaction in childbirth by Prepared Childbirth couples and non-prepared couples. The two models presented are the Pain Management Model and the

Mastery Model. The Pain Management Model views pain management as the primary factor in childbirth satisfaction. According to this model, satisfaction can be gained through good analgesia and anesthesia, providing the baby experiences no ill effects.

Current literature does not support the Pain Management Model, rather it supports the Mastery Model as a source of the childbirth satisfaction. The Mastery Model states that a woman's perceived control during labor and delivery is directly related to her satisfaction. The extent to which a woman can master control over herself and her environment during labor and delivery appears to be the major factor in satisfaction in the birth experience. Issues in this article have extensive implications for prepared childbirth education in the future.

The effect of husband participation on reported pain and probability of medication during labor and birth, by William Henneborn, was published in the Journal of Psychosomatic Research in 1975. This study discussed the historical benefits of fathers' participation in the birth. This exploratory ex post facto study used a convenience sample of 49 deliveries. Criteria for inclusion in the study were: 1) completion of a childbirth course by both partners, and 2) completion and/or prompt return of all questionnaires. Results showed that group 1, those couples in which the husband attended both labor and delivery versus group 2, those couples in which the husband only attended labor, varied significantly. Group 1 reported more desire for participation

in the birth by both partners, more positive attitudes on the fathers' part toward participation, and a greater need to choose a hospital that allowed father participation, than did group 2. Length of labor was similar for both groups, however, group 1 had a lower incidence of episiotomies. Group 1 husbands reported that their wives experienced less pain in labor than did group 2 husbands. Additionally, group 1 wives reported less pain than group 2. Group 1 had a lower probability of receiving medication than did group 2. This study showed a significant relationship between husbands' participation and decreased perceived pain and decreased need for medications.

Some question can be raised as to the low number of included couples versus total number of survey births, 49 out of 317. Also, the final 49 births were divided, 38 couples whose husbands attended both labor and delivery and 11 couples in which the husband was present for labor only. No description of the tool used was included or discussed by the author. The method of data analysis was stated as the Mann-Whitney test, but no tables or actual computations were included in this article.

Hangsleben's (1983) study on the factors that effect the transition to fatherhood concluded that the quality of marriage plays a vital role in the adjustment of fathers. The study used a convenience sample of 53 fathers from a military prenatal clinic and three area prenatal classes. The ages and education varied, while all males involved were both caucasian

and middle-class.

A second important factor stressed by Hangsleben was fathers' participation in the labor and birth of the infant. The belief exists that the emotional impact of an infant's birth is directly related to an increase in the paternal-infant bonding. No impact on the presence of the father in relation to maternal outcome was discussed.

Doering (1983) opens her chapter by stating that drugs should be used during labor and delivery only if the expected benefits justify the potential risks. This article reviews maternal-fetal transport of medications and their effects on the neonate.

Spinal or epidural anesthesia has several potential risks. One such risk is maternal hypotension which, if excessive, can compromise blood flow to the placenta. This article also reviews the side effects and potential detrimental effects of narcotic use on the mother and fetus during labor and delivery.

Doering (1983) stresses both proper selection of the drug and client to provide the safest environment for both mother and child. A section of patient rights and responsibilities is included in this chapter and has potential implications for teaching prepared childbirth classes.

Dr. Lavin's (1982) article on the effects of Epidural Anesthesia on Fetal Heart Rate monitoring supports the belief that complications can occur as a direct result of epidural anesthesia. This chapter states the following alterations

in fetal heart rate due to epidural anesthesia: 1) epidural anesthesia using plain lidocaine causes tachycardia and decreased FHR variability in some patients, and 2) epidural anesthesia using lidocaine with epinephrine leads to decreased uterine activity.

Brownridge's (1983) article on accidental subarachnoid pethidine discusses a case study in which respiratory depression occurred after administration of a penthidine dose. Some hospitals use the epidural route for postpartum pain relief after caesarean section. The reported case discusses the signs of administration of medications into the subarachnoid space, such as vomiting, hypotension and drowsiness. The article stresses the need for close observation of patients receiving these types of regional anesthesias, by an anesthetist.

Smith's (1984) review of current nursing literature on epidural anesthesia in obstetrics covers all aspects of patient complications and benefits. Toxic reactions from local anesthetic agents used in epidural anesthesia occur when the level of the drug exceeds a critical level. This critical level is different for each individual. High levels can result from poor technique or large amounts of the drug.

Smith (1984) describes three levels of toxic reactions ranging from mild to severe. Reactions are manifested in the patient in the form of various symptoms, ranging from a dry mouth to cardiovascular collapse.

The infant receives various amounts of the local agents via the placenta. The amount of the drug transferred to the

fetus depends on the basic chemical composition of the drugs. Agents such as amides, seen in Bupivacaine, readily cross the placenta into the fetal circulation. Infants born with various levels of local agents in their circulatory system, were described as floppy and having decreased muscle tone up to eight hours after birth. Additionally, neurological behavioral scores for infants born from mothers who used epidural anesthesia were significantly lower than those of mothers who did not use the local agents for labor and delivery.

Included in the article are nursing strategies for improved care of those women who choose epidural anesthesia for labor and delivery. Also, a list of early signs and symptoms of toxic reactions are identified.

Lester, Heidelise and Brazelton (1982) performed a research study to prove the hypothesis that low levels of medications during labor and delivery have few differences in the Brazelton Neonatal Behavior Assessment Scale (BNBAS). The results of their study proved their hypothesis untrue, that when the combined results of medication effect length of labor and parity were tested, significant medication effects were detected in infants with even low doses of medications.

The sample size was 54 white, middle class infants from spontaneous vaginal deliveries, with medically uneventful pregnancies and deliveries. The sample was divided into groups according to type of medication used. Results were

analyzed by use of multiple regression. Tables of the Brazelton items, as well as statistical results were included. The conclusion states that the effects of drugs on neonates are potentiated by other factors, and these combinations should be considered when using medications on individuals during labor and delivery.

The effects of regional anesthesia on the neurobehavioral testing of the newborn shows a significant decrease in lower scores in the medicated group than the non-medicated infants (Dailey, Baysinger, Levinson, & Shnider, 1982). This article includes the names of several neurobehavioral assessment scales, as well as the complete Brazelton Neonatal Behavioral Assessment Scale.

Results of continuous testing concluded that mothers who receive epidural anesthesia have significantly lower infant scores than the infants of unmedicated mothers. No information regarding methodology is included. The conclusions are that anesthetic agents produce transient alterations in neurobehavior, and the extent and significance of these alterations are unknown. The indications are that further study is needed and that mothers should be urged to use the least depressive medications during labor.

Mcdonald and Krye's (1981) chapter on "Anesthetic Consideration in the Presence of Intrapartum Emergencies" dicusses all types of medication and their possible uses and disadvantages. Epidural anesthesia is suggested as the medication of choice when pain relief is required and moderate

fetal distress occurs. Advantages include decreased maternal anxiety, decreased circulating catecholamines, and increased uterine blood flow. Additionally, if a caesarean section should become necessary, the epidural anesthesia will provide sufficient pain relief. The authors also include that even correctly administered epidural anesthesia can be associated with several complications such as hypotension, decreased uterine blood flow, decreased uterine activity, prolonged labor and increased incidence of operative vaginal deliveries.

Beatty (1985) discusses the importance of the pregnant client's expectations for pregnancy, labor and delivery and their satisfaction with the birth experience. The author cites a case study and exemplifies the need for adequate communication skills in childbirth educators, as well as a team approach to prenatal education. A case is made for the belief that loss of control during labor and delivery results in anger from the clients and a poor birth experience.

Slauazza, Mercer, Marut, Shnider (1985) performed an exploratory study to test if differences existed between maternal perceptions of self-esteem, or perception of the neonate based on analgesia, anesthesia, and prepared childbirth preparation. The study utilized a convenience sample of 77 primiparous women who had uncomplicated pregnancies and normal labor and deliveries with healthy infants.

The researchers used a self developed tool to measure feeling about the delivery: Rosenberg's Self Esteem Scale and

Broussard's Neonatal Perception Inventories. Results were analyzed using tests appropriate for the level of data collected.

The results did not show any significant difference between the groups of clients who attended childbirth classes and those who did not attend childbirth classes. This contradicts previous research that has linked prepared childbirth classes to an increased enjoyment in the birth experience.

The women who received epidural anesthesia did not perceive the birth experience as positively as those who did not use any anesthesia, or analgesics, or those who used only a puedental anesthesia and no analgesics for pain. However, between the first testing at five hours and the second testing at forty-eight hours, all subjects viewed their childbirth experience more positively.

Schroeder (1985) performed a descriptive correlational study to determine the extent of congruency between the expected and the actual experience of control during childbirth. Incongruency results in dissatisfaction which prohibits the mother from focusing on the next task of childbearing, the nurturing of her infant.

The author used the Rotter Expectancy Reinforcement Theory as a basis, along with the beliefs of Levinson (1974) that environmental factors can alter a person's potential for internal or external locus of control. The tool was developed focusing on three areas: control of pain, control of emotion, and control of interpersonal relationships with

staff.

This article addressed content validity, construct validity, and reliability. The initial tool appeared to be sound and the author recommended further testings since it is believed that a new mother may have more difficulty assuming the role of a nurturing care-giver if her self-esteem is lowered by self perceived unsatisfactory labor.

Purpose

The problem exists that not all couples are equally successful in completing a prepared childbirth type of birthing experience. Several factors have been linked with a couple's outcome in labor and delivery, such as the nurse's attitude toward Lamaze, husband's presence in labor and delivery, the wife's locus of control, and the couple's level of marital adjustment. Analysis of these factors has not completely explained the reasons for continued use of epidural anesthesia rather than Prepared Childbirth techniques, regardless of the documented complications associated with its use.

The correlation between internal locus of control, high levels of marital adjustment and decreased use of epidural anesthesia by Prepared Childbirth couples in labor and delivery were investigated. Additionally, several independent variables were investigated in regards to their combined relationship on the Prepared Childbirth couples' use of epidural anesthesia.

Hypotheses

1. Perceived internal locus of control by the woman who has selected Prepared Childbirth methods for labor and delivery will significantly reduce the couple's use of epidural anesthesia for labor and delivery.
2. High scores of marital adjustment significantly reduce the use of epidural anesthesia by Prepared Childbirth couples in labor and delivery.
3. The combined influence of five independent variables: locus of control, marital adjustment, physician's rating of the safety of epidural use for normal labors, length of marriage, age of the wife and the physician's viewpoints on Prepared Childbirth will significantly influence the prepared childbirth couple's use of epidural anesthesia in labor and delivery.

The current review of the nursing and medical literature shows a definite trend toward the use of prepared childbirth methods. These methods are reported to be linked with fewer complications, lower morbidity, shorter labor and improved perception of positive feelings toward the infant at birth. Several factors, such as: socioeconomic status, age, marital adjustment, locus of control, husband's participation, physician support and peer support are discussed in relationship to their affect on the success of a prepared childbirth couple. Success is defined by several authors as the completion of a prepared childbirth birth experience, without excess medical intervention, for example, epidurals.

A small amount of nursing literature and a great deal of medical literature deals with the complications and side effects of regional anesthesia. Studies have shown that the effects of epidural anesthesia are separated into two categories: one, complications of the mother, and secondly, complications of the neonate. Epidural use has been related to longer labors, hypotension, increased use of forceps, increased caesarean births, paralysis and death in the mother. Complications in the neonate range from lower Apgar scores at birth to severe depression at birth and decreased neurological and behavioral scores for up to seven days post-delivery.

CHAPTER 2

METHODOLOGY

Research Design

This study was a prospective, non-experimental field study to determine what variables influence a prepared childbirth couple's choice to use anesthesia for a normal vaginal delivery. This design was selected for several reasons:

1) Its ease in administration and collection.
2) The lack of actual intervention which could have legal implications if not properly handled.
3) This study was informative to collect potential solutions to an increasing problem rather than experimental, with the purpose of affecting change.

Sample

The population used for this study consisted of Prepared Childbirth couples enrolled in a childbirth class, between January and March, 1986. A sample of thirty couples was obtained.

All subjects included in the sample met certain criteria. These were:

1) The couple had been married one year or longer at the time of delivery.
2) The couple was willing to participate,

as evidenced by signing the consent form (Appendix F).

3) The pregnancy and delivery was the first for both the husband and the wife.

4) No complications of pregnancy occurred. These were, but not limited to, pregnancy induced hypertension, systemic disease, multiple gestation, pre-term labor (less than 36 weeks), post-term labor (greater than 42 weeks).

5) A term healthy infant was delivered.

Setting

A yellow envelope containing all the tools (which are discussed later) was given to each couple upon arrival at their fourth Prepared Childbirth Class session in Portsmouth, at a local physician's office. The selected couples all delivered at one local community hospital between February and March, 1986. The hospital is located in Portsmouth, Virginia. Post-partum questionnaires were completed in the hospital by the wife of each participating couple and returned to the investigator. The couples were given a two week limit in which they must return the post-partum questionnaire to the investigator.

Tools

Four tools were used for this research. All four tools were paper and pencil, self-answer questionnaires. Two of the tools were developed by the researcher and two were previously developed time-tested tools.

The Pre-partum Questionnaire (Appendix A) consisted of sixteen open-ended questions and six fixed alternative questions. This questionnaire obtained demographic data and some information on the couple's perception of their physician's viewpoints towards epidural anesthesia.

Scoring of the tool was done for the purpose of determining a relationship between various demographic data, the couple's expectation of various outcomes in labor and delivery, and the actual childbirth experience.

The Postpartum Questionnaire (Appendix B) was also developed by the researcher. The purpose of the questionnaire was to obtain function data pertaining to the delivery and to the couple's perception of both the birth and the environmental conditions of the birth experience. Selection of the topics in the questions was based on personal experience by the researcher and review of the current literature on Prepared Childbirth. This questionnaire consisted of open-ended, forced choice and multiple choice questions.

This tool was scored utilizing unranked numbers to allow analysis by the computer, however, no cumulative score was obtained for this total.

The Rotter I-E Locus of Control Tool (Appendix C) was developed to obtain a score representative between his/her own behavior and the events that follow. The tool consisted of twenty-three question pairs in a forced choice format and six filler questions.

This tool was developed in 1966 (Rotter, 1966) and has

been tested and revised several times over the years. (Clark, 1975; Levinsons, 1973). The reliability of this tool was reported by Rotter to be .70. The internal consistency co-efficient and the discriminant validity of -.07 to -.35 was achieved when the tool was compared to Marlowe-Crowne Social Desirability Scale (Rotter, 1966).

Each paired question answer has an assigned score that is totaled for each participant, and the final score is used for interpretation. The scores range from zero to twenty-three, representing a continuum from internal to external locus of control. Zero representing most internal locus of control and twenty-three representing external locus of control.

The Spanier Dyadic Adjustment Tool (Appendix D) is a thirty-two question paper and pencil test using scaled answer format on thirty questions and forced choice format on two items. On the tool, answers ranged from one to five. "Yes" was assigned a value of one, and "No" a value of zero.

The total scores range from zero to one-hundred fifty three, zero representing low marital adjustment and one hundred fifty three representing high marital adjustment.

The original tool was tested by Spanier (Spanier, 1976) for content validity, criteria related validity and construct validity. The tool was compared with the Locke-Wallace Marital Adjustment Scale, as well as factor analysis to identify its construct validity. Reliability for each scale, such as dyadic adjustment, specific subscales for satisfaction

and the total tool was measured utilizing Cronbach's Coefficient Alpha which was .93

Procedure

Permission was obtained from a local physician to utilize his maternity patients and their Prepared Childbirth instructor for the purpose of the study. The physician agreed not to be informed of those patients participating in the study to avoid biasing the study results.

The pilot study of the tools was performed in late December, 1985. The Pre-partum tool (Appendix A) was pre-tested for face validity using a convenience sample of area Childbirth educators. The instructors ranked each item on clarity, ability of respondents to reply and bias. The tool was rated on a scale of one to five for each question, one being equal to poor and five being values as excellent. The scores were totaled and averaged for each individual instructor, yielding the following scores: 4, 4, 3.5, 4.4, 4. Evaluation of these results concluded that the tools were adequate for their intended use.

The Postpartum Questionnaire (Appendix B) was pre-tested for face validity by three certified childbirth educators. The resulting scores were: 3, 4.2 and 4.4 which was interpreted as satisfactory for the purpose of the research.

The pilot study sample consisted of fifteen married, middle class, white couples in one Prepared Childbirth Class. The Rotter I-E Locus of Control Tool (Appendix C) and the Spanier Dyadic Tool (Appendix D) were tested with this group.

The Rotter I-E Locus of Control Tool yielded an alpha reliability of .40. The author suggests that the low level of reliability obtained may be related to the homogenity of the sample group used. Upon individual analysis of each item, deletion of any one item would not result in an increased alpha co-efficient. The results of frequency testing on the pilot showed standard deviations ranging from .003 to .04 for all items. The author again concludes that the level of variance was not as high as expected, but satisfactory for the purpose of the study considering Rotter's report of the tools' high reliability and variability.

The pilot study on the Spanier Dyadic Adjustment tool, using Alpha reliability for analysis, an Alpha of .74 was obtained, which was considered very acceptable for use in the actual study. Item analysis showed that deletion of item number nineteen would increase the Alpha co-efficient to .80, therefore, the item number nineteen was deleted from the analysis in the actual research study. Frequency analysis was performed and item variance ranged from .48 to 4.8. It was concluded that although the variance on all items was not equally as valid, the overall variance of the tool was acceptable for use in the actual study.

After the pilot study was concluded, only the changes previously discussed were implemented. The study was begun on January 15, 1986 and completed March 15, 1986. The four tools, directions, consent form and self addressed return envelope were placed in a large envelope and distributed to

the childbirth couples during the 15 minute break at class two of the class series by the researcher. All couples were asked to open their packets and remove the first page, this page was the directions sheet (Appendix E). Next, the couples removed the consent form, signed it and then either returned the whole packet if they did not want to participate, or the consent form if they were willing to participate. The forms were returned to the front of the room by the students, collected by the researcher, then five minutes was allotted for questions.

Those couples who wished to participate took their packets home and were given one week to complete the first three questionnaires. At class five, all completed tools were collected by the researcher and then, the researcher stapled the fourth questionnaire, along with the envelope, into the students' childbirth manual. This manual would go with the students to the hospital and therefore, expedite the prompt return of the questionnaires.

All participating couples completed the fourth questionnaire within five days after delivery and returned it to the researcher via the pre-addressed envelope. All participants who had not returned the fourth questionnaire by ten days after delivery were sent a reminder in the form of a postcard.

Data was then scored according to each tool's guidelines and placed on computer cards for analysis. Additional comments and open-ended questions are compiled into a master list for

evaluation. A summary of the study and its' results were sent to the physician and the childbirth instructor for the purpose of sharing it with interested participants.

Operational Definition of Terms

Marital Adjustment: The degree of personal contentment and satisfaction a woman perceives in the couple's relationship was measured by the Marital Adjustment Tool. (Appendix D)

Internal-External Locus of Control: The degree to which a woman perceives a casual relationship between her own behavior and a reinforcement (Windwer, 1976), was measured by the Locus of Control Tool. (Appendix C)

Prepared Childbirth: A method of educating expectant couples that incorporates several of the popular childbirth theories and techniques, such as education, controlled breathing and relaxation.

Successful Outcome of a Prepared Childbirth Experience: Healthy infant and mother, parents view the birth experience as positive, non-use of epidural anesthesia.

Lamaze: A method of childbirth education developed by Dr. Fernand Lamaze, concentrating on breathing patterns and controlled relaxation.

Primigravida: For the purpose of this study, primigravida was defined as a woman who has not had a previous pregnancy. First trimester abortions were not included as a pregnancy.

Normal Labor and Delivery: Labor not to exceed fourteen

hours, expulsion stage not to exceed three hours. No use of augmentation of labor, low forceps delivery used in non-epidural deliveries, caesarean delivery, multiple births, fetal anomalies, fetal death and/or ruptured membranes over twenty-four hours. Fetal age between thirty-eight and forty-two weeks at onset of labor will be required.

Normal Pregnancy: A pregnancy in a healthy female with no underlying disease process, pregnancy induced disease, documented mental disorders and/or chemical dependence.

Pre-delivery Period: The time interval when couples will be half-way through Lamaze classes will constitute the pre-delivery period.

Epidural Anesthesia: A form of regional anesthesia used in labor and delivery for pain reduction. Various anesthetic agents introduced into the blind space surrounding the dura, interrupting the sensory nerve conduction in the proximal part of the body.

Control for Prepared Childbirth Couples: The ability to participate in the entire process of labor and delivery as instructed in their formal childbirth classes and per their own individual desire.

Method of Data Analysis

Data for hypothesis numbers one and two was analyzed utilizing the Pearson's Product Moment Co-efficient. Hypothesis number three was analyzed utilizing Multiple Regression Analysis. Frequency distributions were performed

on all demographic data, as well as all post-delivery statistics. The level of significance selected for data analysis was alpha .05.

The research was performed utilizing a non-experimental design, two tools developed by the author and two previously developed tools. A pilot study was performed and alteration in the tools performed according to the pilot study analysis. The study was performed over a three month time frame to maintain a high degree of patient confidentiality. Data was analyzed utilizing parametric statistics.

CHAPTER 3

RESULTS

The purpose of this study was to identify the factors that had significant influence on a Prepared Childbirth couple's use or non-use of epidural anesthesia. Analysis of the data collected in relationship to the first hypothesis examined the relationship between internal locus of control in the wife and the couple's decision to not utilize epidural anesthesia for labor and delivery. The second hypothesis explored the existence of a relationship between high levels of marital adjustment in prepared childbirth couples and their decision not to utilize epidural anesthesia for labor and delivery. Data analysis for hypothesis three determined what independent variables had the most significant influence on the prepared childbirth couple's decision to use or not use epidural anesthesia.

All study participants completed a Prepartum tool that contained demographic data. Frequency distributions were utilized to explore the demographic data of the sample. The data which reflects the study subject's age, years married, and educational level are presented in Figures 1a, 1b and 1c.

AGE OF THE PARTICIPANTS

Figure 1a

WIFE'S AGE	NUMBERS/PERCENT	
18 years	1	(03%)
19 years	3	(10%)
22 years	2	(06%)
23 years	2	(06%)
24 years	2	(06%)
25 years	4	(12%)
26 years	3	(10%)
27 years	3	(10%)
28 years	2	(06%)
29 years	2	(06%)
30 years	3	(10%)
31 years	1	(03%)
35 years	1	(03%)

* The total percentage is less than 100% because the individual percentages were rounded to the nearest whole number.

N = 29

AGE OF PARTICIPANTS

Figure 1b

HUSBAND'S AGE	NUMBERS/PERCENT	
19 years	1	(03%)
22 years	1	(03%)
23 years	1	(03%)
25 years	5	(17%)
26 years	1	(03%)
27 years	3	(10%)
28 years	6	(20%)
30 years	1	(03%)
31 years	5	(17%)
33 years	1	(03%)
34 years	1	(03%)
36 years	2	(06%)

* The total percentage is less than 100% because the individual percentages were rounded to the nearest whole number.

N = 29

The wife's age was evenly distributed between 19 and 30 years of age. 72% of the husbands' ages fell between ages 25 and 31.

YEARS COUPLES MARRIED

Figure 1c

TOTAL YEARS MARRIED	NUMBERS/PERCENT
One	5 (17%)
Two	9 (31%)
Three	5 (17%)
Four	2 (06%)
Five	1 (03%)
Six	2 (06%)
Seven	2 (06%)
Eight	3 (10%)

* The total percentage is less than 100% because the individual percentages were rounded to the nearest whole number.

N = 29

The years of marriage of the study participants ranged from one to eight years, with 65% being married one to three years.

The average level of completed education was college level for both spouses as depicted in Figure 2a and 2b. However, the women had a higher percent of Graduate School responses than did the men (17% versus 6%).

The first hypothesis dealt with the correlation between locus of control as perceived by the wife and the couple's use of epidural anesthesia. Data was analyzed utilizing a Pearson Correlation co-efficient to evaluate the correlation between internal locus of control scores and decreased use of epidural anesthesia by the Prepared Childbirth couple in labor and delivery. Data for hypothesis one is depicted in Figure 3a.

Scores on participants who used analgesia only and those who used no medication were combined for the purpose of this study. Analysis of the data utilizing alpha reliability co-efficient yielded a significance level of .02 for the Pearson r co-efficient. The Pearson r value obtained was .6223, indicating a relationship does exist between internal locus of control and decreased use of epidural anesthesia.

The Marital Adjustment tool was utilized to obtain a marital adjustment score for each couple. Mean scores are depicted in Figure 3b.

Scores on participants who used only analgesia and those who used no medication were combined for the purpose of the study. Using the Pearson correlation co-efficient for data analysis, the correlation between high marital adjustment scores of the couple pre-delivery and their decreased use of

EDUCATIONAL LEVEL OF GROUP MEMBERS

Figure 2a

HIGHEST LEVEL OF EDUCATION OF WIFE	NUMBERS/PERCENT
Less than High School	0 0
High School	9 (31%)
College	12 (41%)
Graduate School	5 (17%)
Other	2 (06%)
No Answer	1 (03%)

* The total percentage is less than 100% because the individual percentages were rounded to the nearest whole number.

N = 29

EDUCATIONAL LEVEL OF GROUP MEMBERS

Figure 2b

HIGHEST LEVEL OF EDUCATION OF HUSBAND	NUMBERS/PERCENT	
Less than High School	1	(03%)
High School	14	(48%)
College	11	(37%)
Graduate School	2	(06%)
Other	1	(03%)
No Answer	0	0

* The total percentage is less than 100% because the individual percentages were rounded to the nearest whole number.

N = 29

DATA ON ROTTER SCORES

Figure 3a

Number of Cases	Mean	
N = 9	19.8	Had Epidural
N = 10	11.2	Used Analgesia
N = 10	8.1	Used No Medication

N = 29

DATA ON MARITAL ADJUSTMENT SCORES

Figure 3b

Number of Cases	Mean Scores	
N = 9	70	Used Epidural
N = 10	85	Used Analgesia
N = 10	110	Used No Medication

N = 29

epidural anesthesia for labor and delivery was p = .031. The Pearson r value obtained was .5411, indicating a correlation between high marital adjustment and the couple's decreased use of epidural anesthesia. The r values for hypothesis one and two are depicted in Figure 3c.

The third hypothesis was explored utilizing a multiple regression for data analysis. Six independent variables were selected for analysis, and the level of significance for this researcher was set at alpha = .05. The results are summarized by Figure 4a.

P values of .025 were obtained for the variables: Rotter I-E Locus of Control Score, Marital Adjustment Score, physician's rating of epidural safety, and the years married. Therefore, these factors are significant influences on the couple's use of epidural anesthesia for labor and delivery. The age of the wife and the physician's view on Prepared Childbirth were not significant factors in this study.

r VALUES FOR PEARSON CORRELATIONS

Figure 3c

r Value	P Value	
.6223	.02	Rotter Tool
.5411	.031	Marital Adjustment Tool

alpha = .05

MULTIPLE REGRESSION FOR SELECTED VARIABLES

Figure 4a

VARIABLE	Df	P VALUE	MULTIPLE R
Rotter Tool	1, 24	.025*	.45
Marital Adjustment Tool	2, 23	.025*	.55
MD's Rating of Epidural Safety	2, 22	.025*	.62
Years Married	5, 20	.025*	.66
Age of Wife	6, 19	.10	.66
MD View of Prepared Childbirth	7, 18	.20	.66

* Denotes that these values meet or exceed the selected level of significance.

Alpha = .05

N = 29

CHAPTER 4

DISCUSSION

The purpose of this research study was to examine the factors that influence a couple's use of epidural anesthesia in labor and delivery. Four tools were used for data collection. The first was a demographic data sheet developed by the researcher. The second tool was the Rotter I-E Locus of Control developed by Julian Rotter. The third tool was a questionnaire on Assessing the Quality of Marriage and Similar Dyads by Graham Spanier. The fourth tool was a Postpartum Questionnaire developed by the researcher. Data collection was conducted over a three month period and a sample size of twenty-nine was used.

The first hypothesis examined the relationship between the wife's locus of control and her selection of epidural anesthesia for labor and delivery. The results showed a relationship between use of internal locus of control and decreased use of epidural anesthesia by the Prepared Childbirth couple. Internal locus of control signifies the couple's perception of an event being contingent upon their own behavior, rather than under the power of others, or as a result of luck and chance.

These results are consistent with current review of the literature.

The second hypothesis explored the relationship between the wife's perception of the couple's marital adjustment to the couple's use of epidural anesthesia for labor and delivery.

Data analysis yielded a significant relationship between high marital adjustment scores and decreased epidural usage in labor and delivery. These results are consistent with current review of the literature and are especially significant since the average length of marriage in the sample group was two years.

The final hypothesis investigated the possible inter-relationship between selected variables and their influence on the couple's use or non-use of epidural anesthesia for labor and delivery.

Analysis of this hypothesis by multiple regression showed that the influence of several independent variables is more significant than the influence of one variable alone. Locus of control, marital adjustment, the physician's views on anesthesia and the length of marriage were all significant influences on the Prepared Childbirth couple's decreased use of epidural anesthesia for labor and delivery. This is very important in evaluating childbirth programs in which a physician is an active team member. The analysis of factors, such as length of marriage may yield significant information, such as the possibility that those couples married longer may have developed a more stable married relationship which affords the wife needed support during labor and delivery. It is also significant that neither the wife's age, nor the physician's viewpoints on Prepared Childbirth had any significant effect on the couple's use of epidural anesthesia. Further studies of this type would allow us to develop factors

that are and are not significant influences for a prepared childbirth couple. This data would permit the health profession to concentrate on improving the areas that most significantly influence the couple's choice to use epidural anesthesia.

The researcher recommends that this type of research, exploring the variables that increase usage of epidural anesthesia should be continued. This study should be replicated utilizing large sample sizes and non parametric statistical analysis. Exploration of related factors, such as communication patterns and perceived support in couples who have been married for various time frames, should be instituted. This data would help the educators to develop a prenatal education program that develops deficient areas in the couple's relationship that affect their marital adjustment during pregnancy, labor and delivery.

Considering the positive influence that multiple factors had on decreased usage of epidural anesthesia in labor and delivery, it is suggested that further research should be performed exploring all aspects of potential influence, such as the hospital rules, nurse's attitude, Lamaze teacher's technique and personal life style factors before and after pregnancy was achieved. These recommendations must be fulfilled before specific actions can be developed that will decrease the use of epidural anesthesia in labor and delivery and therefore, decrease the risks associated with childbearing today.

Summary and Conclusion

Twenty-nine prepared childbirth couples participated in a non-experimental research project conducted between January and April of 1986. Data was obtained maintaining strict patient confidence and protection of Human Rights. Four paper and pencil questionnaires were utilized to obtain significant data. Research focused on establishing correlations between factors that have traditionally been associated with decreased use of medications in labor and delivery with actual use or non-use of epidural anesthesia by couples who had attended prepared childbirth classes.

Data analysis was performed using Pearson r and Multiple Regression equations. A strong correlation between internal locus of control and decreased use of epidural anesthesia, as well as high marital adjustment with decreased epidural use was documented. The combined influence of several factors was shown to be a very significant influence on the use of epidural anesthesia by Prepared Childbirth couples in labor and delivery. The most significant factors yielded from the study were: Locus of Control, Marital Adjustment, Years married and the physician's perception of epidural anesthesia. All results are consistent with current literature.

Conclusions

A significant relationship exists between Prepared Childbirth couples in which the wife is internally motivated and a decreased use of epidural anesthesia for labor and delivery.

A significant relationship exists between Prepared Childbirth couples with high marital adjustment and decreased use of epidural anesthesia for labor and delivery.

The combined influence of locus of control, marital adjustment, physician's view of epidural anesthesia safety and the couple's length of marriage significantly influence the Prepared Childbirth couple's use of epidural anesthesia for labor and delivery.

Significant evidence exists to justify further research in the area of Prepared Childbirth and its successes and failures with various couples. The benefits of family centered, Prepared Childbirth experiences are reflected in a decreased incidence of maternal complications, improved maternal-infant bonding, decreased neonatal complications, and an overwhelmingly positive birth experience. These factors, along with the risks associated with epidural anesthesia used during labor and delivery, provide evidence to seek methods of evaluating and improving the quality of maternal child health care and health education in the United States. The results will be healthy families, both mentally and physically.

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Code Number _____

Appendix A

PREPARTUM QUESTIONNAIRE

1. Name: _____

2. Age: _____ Husband's Age: _____

3. Expected Due Date: _____

4. Years Married: _____

5. Your occupation: _____

6. Husband's occupation: _____

7. Address: _____

8. Phone Number: _____

9. Your Education: (High School, College, etc.) _____

_____

10. Husband's Education: _____

_____

11. Is this your first baby? Yes _____ No _____

12. Obstetrician's Name: _____

13. Hospital you plan to delivery in: _____

14. Lamaze Instructor: _____

15. What type of delivery are you planning?

Prepared (Lamaze) _____ Epidural _____

16. Is your husband planning to attend:

Only Labor _____ Labor & Delivery _____

Only Delivery _____ Neither _____

17. Your doctor views your Lamaze preparation as:

Important _____ Unimportant _____

No opinion expressed _____

18. Does your doctor encourage alternatives to Lamaze such as epidurals?

Yes _____ No _____

19. How would your doctor rate the safety of medications, specifically epidurals for you and your baby?

a. No risk of complications.

b. Small risk of complication, but not important.

c. Feels epidurals have moderate risk and should not be used for normal uncomplicated deliveries.

d. Encourages you not to use epidurals.

e. Does not use epidurals for healthy uncomplicated deliveries.

20. Why did you choose to take Lamaze classes?

_____

_____

_____

21. If you are choosing a Lamaze delivery, please give at least one reason why?

_____

_____

_____

22. If you are choosing an epidural for labor and delivery, please give one reason why?

_____

_____

_____

Code Number _____

Appendix B

POSTPARTUM QUESTIONNAIRE

Please fill in this questionnaire and return it as soon as possible in the enclosed envelope.

1. Date of Delivery: _____

2. Sex of child: Male _____ Female _____

3. Length of labor from onset of regular contractions to fully dilated:

   Less than six hours _____ Six to twelve hours _____

   Thirteen to twenty hours _____

   Greater than twenty hours _____

4. Did your membranes rupture?

   Spontaneously _____ By the nurse _____

   By the doctor _____

5. Did you have an IV?

   Not at all _____ Only for delivery _____

   During labor and delivery (both) _____

6. Check any of the following that you had:

   C/Section _____ Forceps _____ Breech (no C/S) _____

   Diabetes _____ High B/P _____

   Abruption during labor _____

   Prolonged ruptured membranes (over 12 hours) _____

   Pitocin _____ Twins _____

7. Baby's Apgar score at five minutes: _____

8. Regarding medications, did you:

   Use none _____

   Use any type other than epidural _____

   Epidural, spinal or saddle _____

9. Did your husband:

   Attend both labor and delivery: _____

   Attend only labor: _____

   Attend only delivery: _____

   Attend neither: _____

10. If your husband was present during labor and delivery, would you rate his help as:

    Very important _____ Moderately important _____

    Not important _____

11. Did you consider the birth of your baby to be:

    Very satisfying _____ Moderately satisfying _____

    Not satisfying _____ Disappointing _____

12. Would you use the same method of childbirth again?

    Yes _____ No _____

    Why? _____

    _____

    _____

13. Would you rate your doctor's support of your Lamaze childbirth as:

    Very accepting and helpful _____

    Not accepting, but helpful _____

    Not accepting, not helpful _____

14. How would you rate the support of the nursing staff in regards to Lamaze?

Very helpful and encouraging _____

Didn't seem to have preference _____

Not helpful or encouraging _____

15. List at least two complications of epidurals that you learned from class or your physician.

_____

_____

_____

16. Place of Labor: Labor Room ____ Birthing Room ____

17. Place of delivery:

Labor Room _____ Birthing Room _____

Birthing Chair _____ Delivery Table _____

18. How would you rate your Lamaze class?

Very informative and helpful _____

Very informative, but not helpful _____

Neither informative, nor helpful _____

19. Would you recommend Lamaze class to a friend?

Yes _____ No _____

20. Please feel free to add any additional observations and comments.

_____

_____

_____

_____

_____

21. Did you smoke before or during pregnancy?

Yes _____ No _____

22. Did you take any non-prescription medications during your pregnancy?

Yes _____ No _____

23. Did you drink alcoholic beverages during your pregnancy?

Yes _____ No _____

Appendix C

ROTTER'S INTERNAL-EXTERNAL LOCUS OF CONTROL TOOL

Number _____

Date _____

Directions: Circle the item that relates most to your personal feelings.

1. a. Children get into trouble because their parents punish them too much.

   b. The trouble with most children now a days is that their parents are too easy with them.

2. a. Many of the unhappy things in people's lives are partly due to bad luck.

   b. People's misfortunes result from the mistakes they make.

3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.

   b. There will always be wars, no matter how hard people try to prevent them.

4. a. In the long run, people get the respect they deserve in this world.

   b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

5. a. The idea that teachers are unfair to students is nonsense.

   b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

6. a. Without the right breaks, one cannot be an effective leader.

   b. Capable people who fail to become leaders have not taken advantages of their opportunities.

7. a. No matter how hard you try, some people just don't like you.

   b. People who can't get others to like them don't understand how to get along with others.

8. a. Heredity plays the major role in determining one's personality.

   b. It is one's experiences in life which determine what one is like.

9. a. I have often found what is going to happen will happen.

   b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10. a. In the case of the well prepared student, there is rarely, if ever, such a thing as an unfair test.

    b. Many times, exam questions tend to be so unrelated to course work that studying is really useless.

11. a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.

    b. Getting a good job depends mainly on being in the right place at the right time.

12. a. The average citizen can have influence in government decisions.

    b. This world is run by the few people in power, and there is not much the little guy can do about it.

13. a. When I make plans, I am almost certain that I can make them work.

    b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

14. a. There are certain people who are just no good.

    b. There is some good in everybody.

15. a. In my case, getting what I want has little or nothing to do with luck.

    b. Many times, we might just as well decide what to do by flipping a coin.

16. a. Who gets to be the boss often depends upon who was lucky enough to be in the right place first.

    b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.

17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.

    b. By taking an active part in political and social affairs, the people can control world events.

18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.

    b. There really is no such thing as "luck".

19. a. One should always be willing to admit mistakes.

    b. It is usually best to cover up one's mistakes.

20. a. It is hard to know whether or not a person really likes you.

    b. How many friends you have depends on how nice a person you are.

21. a. In the long run, the bad things that happen to us are balanced by the good ones.

    b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22. a. With enough effort, we can wipe out political corruption.

    b. It is difficult for people to have much control over the things politicians do in office.

23. a. Sometimes I can't understand how teachers arrive at the grades they give.

    b. There is a direct connection between how hard I study and the grades I get.

24. a. A good leader expects people to decide for themselves what they should do.

    b. A good leader makes it clear to everybody what their jobs are.

25. a. Many times, I feel that I have little influence over the things that happen to me.

    b. It is impossible for me to believe that chance of luck plays an important role in my life.

26. a. People are lonely because they don't try to be friendly.

    b. There's not much use in trying too hard to please people, if they like you, they like you.

27. a. There is too much emphasis on athletics in high school.

    b. Team sports are an excellent way to build character.

28. a. What happens to me is my own doing.

    b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29. a. Most of the time, I can't understand why politicians behave the way they do.

    b. In the long run, the people are responsible for bad government on a national, as well as on a local level.

Any additional comments: _____

_____

_____

_____

_____

Appendix D

DYADIC ADJUSTMENT SCALE

Most persons have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

	Always Agree	Almost Always Agree	Occasionally Disagree	Frequently Disagree	Almost Always Disagree	Always Disagree
1. Handling family finances	5	4	3	2	1	0
2. Matters of recreation	5	4	3	2	1	0
3. Religious matters	5	4	3	2	1	0
4. Demonstrations of affection	5	4	3	2	1	0
5. Friends	5	4	3	2	1	0
6. Sex relations	5	4	3	2	1	0
7. Conventionality (correct or proper behavior)	5	4	3	2	1	0
8. Philosophy of life	5	4	3	2	1	0

	Always Agree	Almost Always Agree	Occasionally Disagree	Frequently Disagree	Almost Always Disagree	Always Disagree
9. Ways of dealing with parents or in-laws	5	4	3	2	1	0
10. Aims, goals, and things believed important	5	4	3	2	1	0
11. Amount of time spent together	5	4	3	2	1	0
12. Making major decisions	5	4	3	2	1	0
13. Household tasks	5	4	3	2	1	0
14. Leisure time interests and activities	5	4	3	2	1	0
15. Career decisions	5	4	3	2	1	0

	All the Time	Most of the Time	More Often Than Not	Occasionally	Rarely	Never
16. How often do you discuss or have you considered divorce, separation, or terminating your relationship?	0	1	2	3	4	5

	All the Time	Most of the Time	More Often Than Not	Occasionally	Rarely	Never
17. How often do you or your mate leave the house after a fight?	0	1	2	3	4	5
18. In general, how often do you think that things between you and your partner are going well?	0	1	2	3	4	5
19. Do you confide in your mate?	0	1	2	3	4	5
20. Do you ever regret that you married? (or lived together)	0	1	2	3	4	5
21. How often do you and your mate "get on each other's nerves?	0	1	2	3	4	5
22. How often do you and your partner quarrel?	0	1	2	3	4	5

	Every Day	Almost Every Day	Occasionally	Rarely	Never
23. Do you kiss your mate?	4	3	2	1	0

	All of Them	Most of Them	Some of Them	Very few of Them	None of Them
24. Do you and your mate engage in outside interests together?	4	3	2	1	0

How often would you say the following events occur between you and your mate?

	Never	Less than once a month	Once or twice a month	Once or twice a week	Once a Day	More Often
25. Have a stimulating exchange of ideas.	0	1	2	3	4	5
26. Laugh together	0	1	2	3	4	5
27. Calmly discuss something	0	1	2	3	4	5
28. Work together on a project	0	1	2	3	4	5

These are some things about which couples sometimes agree and sometimes disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks. (Check yes or no)

	YES	NO	
29.	_____	_____	Being too tired for sex.
30.	_____	_____	Not showing love.

31. The dots on the following line represent different degrees of happiness in your relationship. The middle point, "happy", represents the degree of happiness of most relationships. Please circle the dot which best describes the degree of happiness, all things considered, of your relationship.

0	1	2	3	4	5	6
Extremely Unhappy	Fairly Unhappy	A Little Unhappy	Happy	Very Happy	Extremely Happy	Perfect

32. Which of the following statements best describes how you feel about the future of your relationship?

__5__ I want desperately for my relationship to succeed, and <u>would go to almost any length</u> to see that it does.

__4__ I want very much for my relationship to succeed, and <u>will do all I can</u> to see that it does.

__3__ I want very much for my relationship to succeed, and <u>will do my fair share</u> to see that it does.

__2__ It would be nice if my relationship succeeded, but <u>I can't do much more than I am doing</u> now to help it succeed.

32. Cont'd

1 It would be nice if it succeeded, but I refuse to do any more than I am doing now to keep the relationship going.

0 My relationship can never succeed, and there is no more that I can do to keep the relationship going.

Appendix E

GENERAL DIRECTIONS

Thank you for participating in this research study. Please remember you are under no obligation and may drop out at any time.

Please read and sign the consent form and return it to your Lamaze instructor (both husband and wife). At home, in your spare time, please set aside one hour to complete questionnaire numbers 1, 2, and 3. The couple may fill out questionnaire number 1 together, but only the wife fills in numbers 2 and 3. Please do not jointly fill out questionnaire numbers 2 and 3, as this will alter the research results.

During delivery, please record the types of medication and medical intervention (monitor, I.V., forceps) that you have during labor, if any. After you have delivered, please fill out questionnaire number four and send it to me in the self-addressed envelope provided.

Information regarding the study will be given to you after delivery. At no time will any information be given to anyone outside of the research team. At no time will your answers be connected with your name. Please feel free to answer all questions honestly and to contact me at any time.

Thank you for your participation

Terri

Code # _____

Appendix F

OLD DOMINION UNIVERSITY

INFORMED CONSENT FORM

Prepared Childbirth Research Project

Investigator: Terri Chambers

Date:

This is to certify that I, _____, agree to participate as a volunteer in the Prepared Childbirth Research Project conducted by Terri Chambers. My participation will be in the form of answering questionnaires before and after delivery of my infant. I understand that I may withdraw from this project at any time, without penalty or prejudice.

I understand that answers to all my questions regarding this research will be available to me after completion of the last quetionnaire. If I have any questions during or after the study, I may contact Terri Chambers at 628-3417. I further understand that no data will be released to any persons outside the research team, that can be identified with me. I understand that no further information will be given to my physician or hospital I plan to deliver at.

I understand that no medical or psychological assistance will be made available to me by either Old Dominion University or any member of the research team as a result of any physical or emotional harm I may experience as a result of this research project. I have been informed that I have the right to contact

the Old Dominion University Institutional Review Board for the Protection of Human Subjects should I wish to express any opinions regarding the conduct of this study. I further understand that all or a portion of the records concerning this study may be reviewed by the U.S. Food and Drug Administration.

Comments: _____

_____

_____

_____

Signature of Volunteer: _____ Date: _____

Signature of Husband: _____ Date: _____

Witnessed by: _____ Date: _____