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A Comparison of Perceptions of Labor and Delivery for First-Time Mothers With and Without Prenatal Education

Marla A. McDonnell
Grand Valley State University

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**A COMPARISON OF PERCEPTIONS OF LABOR AND DELIVERY FOR
FIRST-TIME MOTHERS WITH AND WITHOUT PRENATAL EDUCATION**

By

Marla A. McDonnell

A THESIS

**Submitted to
Grand Valley State University
in partial fulfillment of the requirements for the
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Thesis Committee Members:

Linda Bond, Ph.D., R.N.

Joyce French, Ph.D., R.N.

Sandra Hayes, M.S.N., R.N.

ABSTRACT

A COMPARISON OF PERCEPTIONS OF LABOR AND DELIVERY FOR FIRST-TIME MOTHERS WITH AND WITHOUT PRENATAL EDUCATION

By

Marla A. McDonnell

The purpose of this study was to determine if there was a difference in the perceptions of labor and delivery between first-time mothers who took prenatal classes and first-time mothers who did not take prenatal classes. The convenience sample consisted of mostly Caucasian, married, well-educated women with few minor pregnancy complications. Twenty of the subjects were first-time mothers who took at least four prenatal classes. Twenty of the subjects were first-time mothers who took three or fewer classes.

A nonexperimental descriptive design was used for this study. One questionnaire, the Childbirth Perception Questionnaire (Beaton & Gupton, 1990), was administered 18 to 24 hours after the women delivered by the researcher or her delegates.

The hypothesis that first-time mothers who took prenatal classes would have a more positive perception of labor and delivery than first-time mothers who did not take prenatal classes was not supported in this study. It was also found that there was no difference in perceptions between groups of ability to cope with pain, support from significant other, support from nurses, and use of technological interventions.

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CHAPTER 1

INTRODUCTION

Many women have positive memories of their labor and delivery experience. Some women, however, do not have such positive remembrances of their deliveries. Some women's accounts of their deliveries may sound like "horror stories", especially to those who are pregnant for the first time. Many healthcare professionals, including nurses, suggest that attendance at prenatal classes can affect a woman's perception of her labor and delivery because it gives her a better understanding of what can happen during these events. Sturrock and Johnson (1990) wrote that earlier studies and more recent work suggest "a psychological benefit of childbirth education in that women show a more positive attitude toward the birth experience and seem more in control as judged by nurses..." Lowe (1989) found that attitudinal changes toward labor and increased social support (by significant others) prompted by childbirth education may affect the perception of pain and, therefore, the perception of labor.

Often times, prenatal classes are offered to expectant couples by the hospitals at which they will deliver. Obstetrical nurses frequently teach these classes. It is essential for these nurse instructors to understand what information is important to attenders and strategies to recruit more nonattenders into the programs. DiMatteo, Kahn, and Berry (1993) made several recommendations regarding information on which childbirth educators should focus. They suggested that prenatal classes should stress the difference between self-control

(e.g., breathing pattern, responses to pain) and situational control (e.g., labor routines) because their studies showed that control during labor was related to positive perceptions of the experience. Couples need to realize that they can have self-control during labor, even if situational control is out of their hands. Childbirth education also should involve realistic discussions of the pain to be expected with contractions. The study done by Dimatteo et al. (1993), found that most of the first-time mothers reported they were not appropriately prepared for the degree of pain they experienced during labor. Class leaders need to discuss the varying degrees of intrapartum and postpartum pain women can experience as well as the varying emotions they can experience after having a baby, from joy to depression, so they are aware of what is "normal". Obstetrical nurses can play an important part in conveying this information and in presenting a realistic and thorough picture of what can happen during the course of labor and delivery.

As O'Meara (1993) states, effective childbirth educators must have a comprehensive understanding of pregnancy, labor, and childbirth. Obstetrical nurses do have this knowledge and are exceptional candidates for teaching prenatal education. When educators are seen as experts, those learning from them find more value in the information presented (O'Meara, 1993).

A woman's response to labor depends largely on her perception of reality. Lazarus and Folkman (1988) explain the ways in which a woman construes events determine her emotional and behavioral responses to the event. Thus, coping effectiveness depends upon accurate cognitive appraisal of a stress event. Effective coping in childbirth is influenced by an accurate appraisal of

labor. Prenatal education can assist a woman in developing an accurate appraisal of childbirth by providing her with accurate information about the subject. With an accurate childbirth appraisal, a woman's ability to cope during this experience should be increased.

Salmon and Drew (1992) explain that those who attended prenatal classes found the experience of labor more fulfilling and less distressing than those who did not attend the classes. Slade, MacPherson, Hume, and Maresh (1993) also state that women who attended prenatal classes had more realistic expectations about the labor process than those who had not attended classes. These two findings suggest that prenatal education can have a beneficial affect on labor. With this information, the nurse educator's role should be to convey as realistic a picture of labor for prenatal patients as possible without making it overly frightening. Realistic expectations of labor and delivery should help women to deal with this experience more easily which will, in turn, lead to positive perceptions of the events.

Halldorsdottir and Karlsdottir (1996) state that the experience of giving birth is a powerful experience which is affected by the woman's circumstances and expectations, her sense of self during labor, the labor itself, and the first hours of motherhood. Because this is such a powerful experience, memories and perceptions of it can affect a woman's decision to have more children. Negative memories can cause a woman to fear labor leading her to choose not to have more children. Waldenstrom, Olsson, Skold, and Wall (1996) found that negative and positive perceptions can coexist during the birthing process,

however, positive feelings and perceptions need to be more prevalent. Positive perceptions of the experience are crucial to a good memory of labor, which is important to a woman and her infant for initial bonding.

Many researchers agree (Dimatteo et al., 1993; Halldorsdottir & Karlsdottir, 1996; Pierce, 1994; Slade et al., 1993) that the main factor leading to satisfaction with labor is the patients' ability to maintain control during labor. When a patient loses control during labor, it affects her perception of her performance and affects the nurse caring for her. Information obtained in prenatal classes taught by obstetrical nurses may assist a woman in maintaining control during labor, leading to more satisfaction with labor. If this is true, then recruitment efforts for prenatal classes should be more intense. Many practitioners encourage women to attend prenatal classes because they feel the classes are beneficial in preparing women for the experience of labor. This thought leads to the purpose of this study.

Purpose

The purpose of this study is to determine if there is a difference in the perceptions of labor and delivery between first-time mothers who have attended childbirth classes and first-time mothers who have not attended childbirth classes.

CHAPTER 2

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

Theoretical Framework

Imogene M. King derived the theory of goal attainment from her conceptual framework of interpersonal systems. According to this theory nursing is a process of human interactions between nurse and client whereby each perceives the other

and the situation. "Through communication, they set goals, explore means, and agree on means to achieve goals" (King, 1981, p.144).

The major concepts in the theory that apply to this study are perception, interaction, communication, transaction, and stress. The definitions of these concepts follow. "Perception is each person's representation of reality. It is each person's subjective world of experience" (King, 1981, p. 166). Each woman has her own representation of how labor will proceed. Prenatal classes can shape this perception to meet the reality of the process of labor.

"Interaction is a process of perception and communication between person and environment and between person and person, represented by verbal and nonverbal behaviors that are goal-directed" (King, 1981, p. 145). This process occurs between nurse and client during prenatal classes to reach a goal of readiness for labor and delivery.

"Communication is a process whereby information is given from one person to another either directly in face-to-face meetings or indirectly through telephone,

television, or in writing" (King, 1981, p. 147). This process occurs during prenatal classes through face-to-face meetings between nurse and clients, through writing in booklets and handouts, and through videos.

"A transaction is an observable behavior of human beings interacting with their environment" (King, 1981, p. 147). This behavior of interaction occurs during prenatal classes between nurse and client and between clients.

"Stress is a dynamic state whereby a human being interacts with the environment to maintain balance for growth, development, and performance. It is an energy response of an individual to persons, objects, and events called stressors" (King, 1981, p. 147). Labor and delivery are stressors to women who experience them. Prenatal classes may help women to cope better with these stressors by giving them the strategies to deal with events.

The following are assumptions about nurse-client interactions related to the theory. Perceptions of nurse and client influence the interaction process. Goals, needs, and values of nurse and client influence the interaction process. Individuals have a right to knowledge about themselves. Individuals have a right to participate in decisions that influence their life, their health, and community services. Health professionals have a responsibility to share information that helps individuals make informed decisions about their health care. Individuals have a right to accept or to reject health care. Goals of health professionals and goals of recipients of health care may be incongruent (King, 1981).

The following propositions are drawn from the theory. If perceptual congruency is present in nurse-client interactions, transactions will occur. If nurse and client make transactions, goals will be attained. If goals are attained, effective nursing care will occur. If transactions are made in nurse-client interactions, growth and development will be enhanced. If role expectations and role performance as perceived by nurse and client are congruent, transactions will occur. If nurse or client or both experience role conflict, stress in nurse-client interactions will occur. If nurses with special knowledge and skills communicate appropriate information to clients, mutual goal setting and goal-attainment can occur (King, 1981).

According to King's Theory (1981), the relationship between a nurse and a patient who has had prenatal classes can move more easily to goal-attainment of a positive experience during labor and delivery than can one between a nurse and patient who has had no classes. Patients who have prenatal education are informed of what to expect during labor while in the hospital. They have information about what to expect from nursing care and the process of labor and delivery itself.

When a patient is well informed about what to expect during hospitalization her perception of the nurse's role and how events should proceed will be more congruent with the nurse's perception. As the propositions state, when perceptual accuracy is present, nurse and client can work together easily to make transactions. When transactions are made, the goal is attained, and the patient perceives a positive labor and delivery experience.

When a patient is not informed about what to expect during hospitalization, her perception of the nurse's role and how events should proceed may not be congruent with the nurse's perception. If perceptual congruency is not present, transactions between nurse and client may not occur as easily. If transactions do not occur, goals cannot be met. If goals are not met, the client's labor and delivery perceptions may not be positive.

Literature Review

Childbirth preparation classes have existed since 1946. The history of childbirth education classes and, in particular, the role of a pioneer Margaret Gamper was the focus of an article by Young (1986). Margaret Gamper led the first formal classes in Illinois for a few patients. The sixties and seventies saw a major trend toward "natural childbirth" and, therefore, a need for childbirth education. Margaret Gamper has written several books about prenatal education and she remains a consultant to the International Childbirth Education Association. Many patients have attended prenatal classes in an attempt to enhance their labor and delivery experience (Young, 1986).

There have been numerous studies (Hetherington, 1990; Lindell & Rossi, 1986; Sturrock & Johnson, 1990) reported focusing strictly on prenatal education. Several studies (Hetherington, 1990; Lindell & Rossi, 1986; Sturrock & Johnson, 1990) were found that focused on the effects of childbirth education on obstetric outcomes. Many of these studies found that attendance at childbirth classes was not a factor in reducing medical interventions during labor and delivery.

A study done by Sturrock and Johnson (1990) focused on two self-selected groups of patients. The first group was the control group of primiparas who did not attend birth classes. The second group was the experimental group of primiparas who attended at least two of a series of four prenatal classes. Several points of data were collected. The first point was duration of active labor, from four centimeters to complete dilation. The second point was duration of the second stage of labor, pushing to delivery. The third point was use or nonuse of pitocin. The fourth point was use or nonuse of analgesia. The fifth was the method of delivery, vaginal or Cesarean section. The sixth point was use or nonuse of forceps or vacuum assistance. The seventh and final point was one- and five-minute Apgar scores (Sturrock and Johnson, 1990).

In examining the results, no significant differences between groups were found. The authors wrote that a major limitation to their study was the differences in the two groups used for comparison. The women of the attending group were older, had more formal education, and were of higher socioeconomic status. The authors felt that these factors alone, without prenatal education, may have been the reason for the minor differences in the outcomes of the groups. The authors also felt the minimal number of classes required for the attenders may have also affected the results (Sturrock and Johnson, 1990).

A study done by Hetherington (1990) was designed to assess the impact of prepared childbirth classes at a large, inner-city hospital. Fifty-two eligible couples were chosen from the classes for the experimental group. The control group was obtained from computerized data of the same time period during

which the majority of the class attenders delivered. The groups were matched according to five variables, race, patient status, parity, marital status, and age.

In examining the findings, 51 percent of the controls were given Demerol compared to one-third of the experimental subjects. Only 17 percent of the experimental subjects received spinal or epidural anesthesia compared to 50 percent of control group. Fifty-one percent of the control group had forceps deliveries compared to 21 percent of the experimental group (Hetherington, 1990).

The results from the Hetherington (1990) study suggest that prenatal classes may have helped to empower women, to relieve anxiety, to increase relaxation, and to reduce pain perception. The subjects that took prenatal classes had better labor outcomes, such as fewer forceps deliveries and fewer Cesarean sections, than those controls without prenatal education (Hetherington, 1990).

One limitation to the Hetherington study discussed by the author was that the attitudes toward the health care system may have differed between the two groups. The women who sought prenatal education may have been more willing to work with health professionals (Hetherington, 1990).

A study done by Lindell and Rossi (1986) looked at 28 women who had taken prenatal classes and had been instructed in positioning and breathing techniques for second stage. All of those women met certain criteria, including term pregnancy, spontaneous initiation of labor, uncomplicated labor, no use of regional anesthesia, and no use of electronic fetal monitoring. The caregivers, nurses and midwives, were not to give any directions for the women's positioning

or pushing efforts, they were only to encourage the women to do as their bodies told them.

In examining the results, four primiparae were taught traditional positioning but only one used it exclusively; three primiparae were taught variety positioning and used this exclusively. Thirteen multiparae were taught traditional positioning, but only six used it exclusively; four multiparae were taught variety positioning and used it exclusively. These data suggested that most women who were taught traditional positions did not do as they were instructed. Those women who were taught to listen to their bodies and use a variety of positions did follow instructions. This was a small study, however, it showed that women should be encouraged to develop their own individual responses during birth rather than following old, standardized techniques that do not allow for individual responses to labor (Lindell and Rossi, 1986).

Only a few studies were found (Bramadat, 1990; DiMatteo, Kahn & Berry, 1993; Rautava, Erkkola, & Sillanpaa, 1991; Salmon & Drew, 1992;) that focused on prenatal education and women's satisfaction with labor. Some of the studies included relatively small samples and used self-report questionnaires as the main tool to obtain information. Most of these studies obtained results that supported the value of prenatal education in providing women with coping skills for a more satisfying labor and delivery.

A study conducted by DiMatteo, Kahn, & Berry (1993) used focus group meetings to assess themes from new mothers' descriptions of labor, delivery, and the postpartum period. They recruited English-speaking women between 15

and 22 weeks postpartum to participate in six focus groups facilitated by one of the authors. Four of the groups were assigned to complete a brief questionnaire about demographic characteristics and their pregnancies and deliveries. The groups were samples of convenience for which the cesarean section rate was higher than the national average. The women were asked to briefly describe their feelings about their deliveries immediately after birth and at one week and one month postpartum. The remaining two groups did not receive a questionnaire but were asked to think about these events. All six focus groups were tape-recorded and transcribed and later analyzed by two of the authors, who found themes for the discussions. The women described their physical and psychosocial experiences of labor and birth (DiMatteo et al., 1993).

DiMatteo et al. (1993) found five themes from the analysis of focus groups' responses. The first theme is loss of autonomy. Many mothers reported feelings of loss of personal control during the birthing process, often due to hospital procedure and policies. There were a few women who reported they did maintain personal control with techniques they learned during prenatal classes. The second theme was unexpected physical pain. Many of the women reported they were not prepared for the excruciating pain of labor and the pain and limitations they experienced after delivery, especially those mothers that had operative or instrumental delivery and no previous knowledge about labor. The third theme was unexpected emotional reactions. Many of the women described unexpected negative and sad emotions after delivery and some were disappointed in their performance during delivery. The fourth theme was

financial pressures. Some of the women described how their insurance coverage affected their birthing experiences, the nature of decisions made about prenatal care, and even the management of the birth itself. The fifth, and final, theme was support during labor and birth. Many of the women interviewed focused their attention on the person who supported them during labor and whether or not he or she was helpful. All of these themes appeared in each focus group.

There were a few limitations to this study. First, the transcription of discussions did not allow association of any given statement with its speaker and the type of birth she experienced. Full exploration of the themes was not possible. Second, the women's perceptions of their birth experience may have been skewed by the high cesarean section rate among the participants. The final limitation was that the focus group format may have encouraged women's emphasis on the negative aspects of their birth experience (DiMatteo et al., 1993).

A study developed by Rautava, Erkkola, and Sillanpaa (1991) was designed to investigate whether primiparas with greater basic knowledge of childbearing had a more positive attitude toward delivery. They also examined the data for differences that occurred in pregnancy outcomes between the study group and primiparas with a low level of basic childbirth knowledge. The study conducted in Finland used stratified randomized cluster sampling, which represented a sample of the whole population in the province. Public health nurses or midwives offered participation to 1582 women and 1443 (91.2%) consented.

Data were collected with questionnaires that were prepared and pretested. The first questionnaire to determine knowledge level was given to 1443 women, 1425 returned an adequately completed questionnaire. The second questionnaire consisted of sociodemographic factors, health behavior, social relations and way of life from childhood to present pregnancy. The third questionnaire inquired about childbirth events, including father's participation from beginning to delivery, and mother's experience from admission to delivery (Rautava et al., 1991).

The mothers were divided into two groups according to their knowledge levels. One group was designated the lower knowledge group (LG) and the other was designated the high knowledge group (HG). The study made three comparisons in the results. The first part of the results looked at pregnancy course and outcome. The second part of the results looked at differences in the newborns. The last comparison made in the results was childbirth experience (Rautava et al., 1991).

In looking at childbirth experience, the HG group had more positive impressions of their hospital admissions than did the LG group. The LG group considered the delivery room more pleasant than the HG group, however. There was no significant difference in labor pain relief or in frequency of subjective intolerable pain between groups. LG group fathers participated in antenatal education less frequently than HG group fathers and were also less frequently present at the delivery. HG group fathers had more positive attitudes toward the new family situation than did LG group fathers. LG group mothers wanted to

wait a long time to have another baby, whereas HG group mothers wanted to have another baby soon (Rautava, et al., 1991).

The tendency for LG mothers to have SGA and low birth weight babies may indicate that a low basic childbirth knowledge in early pregnancy is associated with risks which can be eliminated when childbirth education and social support are present along with careful obstetric follow-up. The LG group reported that their childbirth experiences disappointed and shocked them. In the study, no significant difference occurred in the experience of labor pain, but HG group mothers coped better with delivery and their attitudes toward their deliveries were more positive afterwards than those of LG group mothers. In summary, this study indicates those with more knowledge of labor and delivery, such as those that attend prenatal classes, can be expected to have more positive experiences during delivery. One limitation to the study was that it was not specific as to the type of pre-existing knowledge of the HG group (Rautava et al., 1991).

A study was conducted by Salmon and Drew (1992) to determine if there were differences in experiences of childbirth related to obstetric procedure (induction or cesarean section), antenatal preparation, and obstetric history (miscarriage or termination). All subjects were Caucasian and primiparas, or first-time mothers. They recruited 104 antenatal patients and 110 postnatal patients to complete a questionnaire. The questionnaire asked for information on expectations of labor (antenatally), satisfaction with labor (postnatally), and whether the women attended prenatal classes or not.

The results suggested that cesarean sections were less difficult but not as fulfilling as vaginal deliveries. The same was found for induced labors versus spontaneous labors. Inductions were easier and faster but not as fulfilling. Those women who attended community prenatal classes found labor less distressing and more fulfilling than those who did not attend any classes. There was no difference for women who had had a previous miscarriage, but those who had had a previous termination found delivery more distressing than others.

Some limitations were noted. The study was limited to Caucasian women and the samples were relatively small. Also, the authors did not mention if the questionnaire they developed was pretested or had established reliability or validity.

A study by I. J. Bramadat (1990), which was used as the basis for the current study, examined several hypotheses about women's perceptions of childbirth.

Hypothesis 1: Childbearing women will have moderate to high expectations for the birth experience (Bramadat, 1990, p. 20).

Hypothesis 2: Women who experience induction or augmentation of labor will report less positive perceptions of the birth experience than women who experience spontaneous labor, both at 24 to 48 hours and at four to six weeks postpartum (Bramadat, 1990, p. 20).

Hypothesis 3a: The discrepancy between expectations and perception of childbirth will be greater for women who experience induction or augmentation of labor than for women who have spontaneous labor, both at 24 to 48 hours and at four to six weeks postpartum (Bramadat, 1990, p. 21).

Hypothesis 3b: The discrepancy between expectations and perceived experience is more likely to be negative for women who have an induction or augmentation of labor than for women who have spontaneous labor, both at 24 to 48 hours and at four to six weeks postpartum (Bramadat. 1990, p. 21).

Hypothesis 4: Women who have a childbirth experience that is better than expected will be more satisfied with the birth experience than women who have a childbirth experience that is worse than expected (Bramadat, 1990, p. 21).

Hypothesis 5: Women who experience induction or augmentation of labor will report less satisfaction with childbirth than women who experience spontaneous labor, both at 24 to 48 hours and at four to six weeks postpartum (Bramadat, 1990, pp 21-22).

Hypothesis 6: Discrepancy between expectations and perception of the birth experience will be a better predictor of satisfaction with childbirth than expectations for childbirth, perception of the birth experience, or type of labor, both at 24 to 48 hours and at four to six weeks postpartum (Bramadat, 1990, p. 22).

A sample of 102 first-time mothers, recruited through prenatal classes at two tertiary care teaching hospitals in western Canada, were asked to complete questionnaires about birth expectations approximately one month before their due dates. The subjects were typically Caucasian, married, well-educated women who had few complications during the course of their pregnancy. In time frame one the subjects answered a demographic data form and the Childbirth

Expectations Questionnaire (Beaton & Gupton, 1990). They completed the Labor Agency Scale (antepartum form), which measured maternal expectations and perception of control during labor and delivery. They also completed the Antepartum Expectations Questionnaire, an investigator designed tool, to provide evidence that the Childbirth Expectations Questionnaire and the Childbirth Perception Questionnaire were measuring what they intended to measure (Bramadat, 1990).

Ninety-one of the 102 women also completed postpartum questionnaires about their birth experiences 24 to 48 hours after giving birth, time frame two. These included the Childbirth Perception Questionnaire, the Labor Agency Scale (postpartum form), the Postpartum Perception Questionnaire, measuring attitudes about labor and delivery experiences, and Satisfaction with Childbirth Experience Questionnaire. The researcher obtained data from charts using the Labor and Delivery Data Form and the Use of Technology Scale, a form used to determine how interventions were used during the subjects' labors. Eighty-five of the second group of women completed the same postpartum questionnaires again at four to six weeks after giving birth, time-frame three (Bramadat, 1990).

High questionnaire scores on all measures of maternal expectations supported the hypothesis that women would have high expectations for the birth experience. The hypothesis that women having induction or augmentation of labor would have a less positive perception of childbirth than women having spontaneous labor was supported by all measures of perception on the questionnaires. Questionnaire scores for discrepancy between expectations and

perception of childbirth supported the hypothesis that discrepancy scores would be higher for women who experience induction or augmentation of labor than for women who have spontaneous labor. Questionnaire discrepancy scores also supported the hypothesis that discrepancy results between expectations and perceived experience would be more likely to be negative for women who have induction or augmentation of labor than for women who have spontaneous labor. The fourth hypothesis was supported by satisfaction mean scores ($p < 0.0001$) of women whose birth experience was better than expected that were higher than the scores of women whose birth experience was worse than expected. Hypothesis five was partially supported. Women who had spontaneous labor had significantly higher ($p < 0.05$) satisfaction scores at time 2 than women who had augmentation of labor. No differences between groups were found at time 3. Hypothesis six and the prediction that discrepancy between expectations and perception of the birth experience would be the best predictor of satisfaction was not supported by expectation or discrepancy scores. The results showed that perception of control was the best single predictor of satisfaction with childbirth. In looking specifically at hypothesis four, women who attended prenatal classes generally had experiences as good as or better than expected and, therefore, were more satisfied with their birth experiences (Bramadat, 1990). These results support the importance of prenatal classes to a woman's positive perception of labor.

There were a few limitations to the study. The sample was limited to mostly Caucasian, married, middle-class women, not allowing for much generalizability.

Also, the subjects were recruited from tertiary care hospitals, possibly affecting the amount of interventions used during labor and delivery. Using a variety of hospitals could have allowed for more varied results (Bramadat, 1991).

Summary

All of the studies reviewed demonstrate that prenatal education and knowledge of the birthing experience does lead to a more positive perception of labor and delivery. Preparation for childbirth leads to a better sense of control for many women in the studies. Control was repeatedly found to be an important component of a satisfying labor. Knowledge did not impact perceptions of unexpected events, however, overall, experiences were reported to be more positive by those women who have been prepared for childbirth.

There is a minimal amount of current studies included in the literature review due to difficulty in finding studies that examined the combined variables of prenatal education and perceptions of labor and birth. The literature has been reviewed as recently as August of 2000. Even at this current time there is a paucity of research dealing with prenatal education combined with perceptions of labor and birth. Most of the studies found are four to ten years old ranging from 1996 to 1990. This fact indicates that it is now time for current studies to be done for the new millennium.

Implications for Study

The current study was designed to discover if attendance at prenatal classes makes a difference in perception of labor. The results of this study could have implications for prenatal classes and for nursing. If women who attended

prenatal classes did perceive labor as more satisfying, then all women should have an opportunity to be educated. The more satisfying a woman's labor, the better it is for the woman's future labor experiences and her family. A patient who has the coping ability to maintain control will make a nurse's role easier in assisting that patient to maintain control. With this incentive, nurses will be willing to support provision of prenatal classes to all women. Nurses can be influential in finding measures to provide information to everyone.

Hypothesis

First-time mothers who took prenatal classes will have a more positive perception of labor and delivery than first-time mothers who did not take prenatal classes.

Research Questions

1) Is there a difference in perception of labor and delivery between first-time mothers who have attended prenatal classes and first-time mothers who have not attended prenatal classes? 2) Is there a difference in perception of the ability to cope with pain between first-time mothers who have attended prenatal classes and first-time mothers who have not attended prenatal classes? 3) Is there a difference in perception of support from significant other between first-time mothers who have attended prenatal classes and first-time mothers who have not attended prenatal classes? 4) Is there a difference in perception of support from nurses between first-time mothers who have attended prenatal classes and first-time mothers who have not attended prenatal classes? 5) Is there a difference in perception of use of technological interventions between first-time

mothers who have attended prenatal classes and first-time mothers who have not attended prenatal classes?

Definition of Terms

The women for this study were women who were pregnant for the first time and delivered 18-36 hours previous to testing. Fifty percent of the subjects took at least four prenatal classes and 50% took three or fewer classes. The “no prenatal class” group changed from no prenatal classes to three or fewer classes due to the difficulty in obtaining subjects for this group. Prenatal classes were any classes, adding up to four, that a mother took to prepare her for childbirth. Perception of labor, for this study, was the emotions that surfaced when women remembered their labors. These emotions were classified as positive, determined by a high score (above 114) on the Childbirth Perception Questionnaire (Beaton & Gupton, 1990), or negative, determined by a low score (below 114) on the questionnaire.

CHAPTER 3

METHOD

Research Design

A non-experimental, descriptive design was used for this study. Quantitative data were obtained through the use of a postpartum questionnaire administered 18-24 hours after delivery. This design was chosen because the research question asked for a description of which group, prenatal class attenders or nonattenders, had a more positive perception of labor and delivery. The simple use of one questionnaire that poses no threats to participants made this design advantageous. The main limitation to this approach was the possibility of other influences other than prenatal classes on a positive labor perception, such as care by the nurses or partner participation.

These other influences along with the convenience method of selecting the sample could have been threats to the internal validity of this study. The influences other than prenatal classes were included on the questionnaire, which helped to control for these. Attainment of an adequate sample size to control for this threat to internal validity was difficult. Only forty subjects were obtained overall instead of the projected sixty. Because of the convenience method, the sample may not have been representative of the entire population, a threat to external validity, making it difficult to generalize the study.

Sample and Setting

The sample was chosen from the obstetrical unit of a 265-bed hospital. The unit handled approximately 80 to 100 deliveries a month. This number should have been adequate to obtain the desired sample size of 60 subjects over a period of six weeks. Many difficulties arose, however, so a sample size of 40 subjects was obtained over 12 weeks.

The population of the hospital from which the sample was taken generally consisted of 55-60% Black and 40-45% Caucasian. The convenience sample of 20 prenatal class attenders who were first-time mothers and 20 prenatal class non-attenders who were also first-time mothers was identified during admission procedures to the unit. All subjects were required to read and write English, to have a birth partner, to be eighteen years or older, and to have no major pregnancy complications. Every patient that met the criteria was asked to participate by the researcher or her delegates. They were read an explanation of this study and given an informed consent for the study after they delivered. The convenience method was used because the patients in this hospital were available and only those who agreed to participate could be used.

Instrument

The instrument that was used was "The Childbirth Perception Questionnaire" (CPQ) developed by J. Beaton and A. Gupton (1990). It was a five-point Likert-type scale with 35 items that was used to measure women's perceptions of their labor and delivery experiences (see Appendix A). The 35 items included four basic subscales representing coping with pain, support from partner/coach,

nursing support, and use of technological interventions (Bramadat, 1990).

Permission to use the questionnaire was obtained from the authors and included in the appendices (see Appendix B).

Each item of the CPQ fits into one of the four subscales. High scores on the coping with pain subscale indicate that women felt they coped with pain that was manageable. High scores on the support from partner/coach subscale indicate that women felt they received support from their partner/coach. High scores on the nursing support subscale indicate that women felt they received support from nurses. High scores on the use of technological interventions subscale indicate that women felt they had a minimum of medical intervention during their childbirth. High overall scores on the CPQ indicate that women had positive perceptions of their childbirth experience. For the purposes of this study the subscale scores and the overall score of the CPQ were examined.

The original 58-item questionnaire, "The Childbirth Expectations Questionnaire" (CEQ), from which the CPQ was derived, was pilot tested on 203 subjects. The results of the pilot test indicated high overall internal consistency (Cronbach's $\alpha=0.85$) and subscale alpha levels from 0.72 to 0.79 on the four factors that emerged through factor analysis. Based on factor and item analyses, the instrument was revised and retested with 104 women. Alpha coefficients remained acceptably high in the revised instrument with a total scale coefficient (Cronbach's α) of 0.81 and subscale alphas ranging from 0.67 to 0.82. The levels of reliability of the questionnaire, as assessed through a computerized text analysis program, were between the junior high and college

level. The questions of the CEQ were simply changed to the past tense for the CPQ. Validity of the CEQ was not discussed (Bramadat, 1990).

For the present study, the wording of the CPQ was changed to a sixth grade level and a small pilot study was done to test the readability for the population expected to participate. Three questionnaires were given to first-time mothers ranging in age from 20-22. The level of education ranged from 10th grade with a GED to one year of college. Two of the subjects were Black and one was Caucasian. All of the subjects were able to fill out the questionnaire without difficulty in reading it, indicating that the questionnaire was readable to the expected population. The reliability scores for the entire scale and for three subscales were between 0.60 and 0.70 (Cronbach's alpha) for the actual study. One subscale had a reliability score below 0.50.

Instrument Reliability

Internal consistency coefficients (Cronbach's alpha) were computed for the total instrument, the Childbirth Perception Questionnaire (Beaton & Gupton, 1990), and its subscales. Most coefficients obtained for this study were acceptable, 0.70 for the total scale, 0.71 for the Pain/Coping subscale, 0.71 for the Significant Other subscale, and 0.61 for the Nursing Support subscale. The Intervention subscale obtained a low coefficient of 0.42, indicating this subscale was not internally consistent for this study. Beaton and Gupton (1990) obtained a total reliability coefficient of 0.81 and subscale coefficients ranging from 0.67 to 0.82. A lower coefficient was obtained for this study probably due to the lower number of subjects (N=40) than the Beaton and Gupton (1990) study (N=104).

Procedure

When a first-time mother was admitted in labor, her chart was marked with a white sticker if she met the study requirements. Eighteen to 24 hours after the woman delivered, she was asked if she would be willing to participate in the study. If she was willing, she was read an explanation of the study (see Appendix C) and received an informed consent (see Appendix D) to read and sign. She was put in the prenatal class group or no prenatal class group according to her answer on the admission assessment. Once the consent was signed, the woman was given the "The Childbirth Perception Questionnaire" (Beaton & Gupton, 1990) to complete by herself, along with demographic information questions (Appendix E). The questionnaire was administered by the researcher or her delegates and took approximately ten to fifteen minutes to complete.

The informed consent included an explanation of the study and that no names would be used, only results, so that anonymity would be maintained. The informed consent and questionnaires were coded by numbers, so no names would need to be used. There were no risks to any patients in participating in this study and the care they received was not affected if they chose to drop out at any time.

The data was collected on the unit where the researcher works. An information session for the unit was given during a staff meeting to explain the purposes of the study and the cooperation needed. All of the staff were asked to assist the researcher in conducting the research. The delegates were given

written information on how to determine eligibility for the study and the method to approach the women about participation in the study. Copies of the coded informed consent and questionnaire were left on the unit in a designated area for the delegates, any co-worker who was willing and able, to administer to eligible, willing participants.

Permission to conduct the study was obtained from the Human Subjects Review Board of Grand Valley State University. After this was granted, approval was obtained from the health system's review committee to conduct the study within the institution. The study was then conducted after all approvals were obtained.

CHAPTER 4

DATA ANALYSIS

The purpose of this study was to determine if there was a difference in the perceptions of labor and delivery between first-time mothers who attended childbirth classes and first-time mothers who did not attend childbirth classes. A nonexperimental descriptive design was used for this study.

Data collection was projected to take six weeks to accomplish for this study. Due to several factors, data collection actually took approximately 12 weeks, from November 1999 to January 2000. Some problems encountered were a few patients refused to participate, some questionnaires were never returned and some were lost at some point between the patient and the collector. Since the data collection process took so long, only 40 total questionnaires were collected rather than the projected 60.

The Statistical Packet for the Social Sciences (SPSS-X) was used to analyze study data. For all analyses, the level of significance was set at the 0.05 level.

Description of the Sample

First-time mothers who delivered on the obstetrical unit of a 265-bed hospital in Southwestern Michigan took part in the study. Forty women agreed to participate and completed the questionnaires. Twenty of the participants took four or more prenatal classes and were placed in the "Prenatal Class" group. The second group of twenty women took between zero to three prenatal classes and was placed in the "No Prenatal Class" group because there was not enough

information gained with this number of classes for the participants to be adequately informed about labor and delivery.

Demographic Profile

All subjects were full-term when they delivered and had either minor or no complications during their pregnancies. They ranged in age from 18 to 34 with a mean age of 24.25 years, S.D.=4.55 (see Table 1). A majority of the subjects were Caucasian (70%). The rest of the subjects were either Black (27.5%) or Hispanic (2.5%) (see Table 1). Twenty-two of the subjects were married (55%) and 18 of the subjects were single (45%).

Total years of education ranged from 10 to 18 years with a mean of 13.38 years, S.D.=1.98. One subject did not answer the question. Four subjects who answered (10%) were not high school graduates. Fourteen subjects (35%) were high school graduates only. Twenty-one subjects (52.5%) attended one to six years of college (see Table 1).

Examining the mother's occupation, thirty-six subjects (90%) stated they had an occupation. Four subjects (10%) stated they had no job (see Appendix F). Examining the partner's occupation, thirty-four subjects (85%) stated they had an occupation. Six subjects (15%) stated they had no job (see Appendix G).

Twenty-four subjects (60%) took at least one prenatal class. Sixteen of the subjects (40%) took no prenatal classes. Of the 24 subjects who took prenatal classes, one hundred percent attended the hospital-based classes. Four subjects (10%) took one to three classes. Twenty subjects (50%) took four to seven classes (see Table 1).

Fourteen subjects (35%) stated they had a minor pregnancy complication such as first-trimester bleeding, mild preterm labor, or blood pressure elevation during labor. Twenty-five subjects (62.5%) stated they had no complications. One subject did not answer the question (see Table 1).

In summary, a majority of the subjects were Caucasian, married, and well educated. Few of the subjects had any complications during their pregnancies. All of the subjects who took prenatal classes attended the ones offered by the hospital (see Appendix H for a list of the class titles).

Table 1: Demographic Characteristics of Study Participants

Topic	Group	Frequency(N)	Percent(%)
Age	18-20	13	32.5
	21-25	12	30
	26-30	11	27.5
	30-34	4	10
Ethnicity	Caucasian	28	70
	Black	11	27.5
	Hispanic	1	2.5
Education	< High School	4	10
	Graduated HS	14	35
	College	21	52.5
	Missing	1	2.5
Number of Classes Attended	No Classes	16	40
	1 to 3 Classes	4	10
	4 to 7 Classes	20	50
Complication During Pregnancy	Yes	14	35
	No	25	62.5
	Missing	1	2.5

Data Analysis

Testing Results

There is one hypothesis guiding this research study with a related research question and four research questions related to the four subscales of the Childbirth Perception Questionnaire (CPQ). The results of the study are presented focusing on the hypothesis first followed by the individual research questions.

Hypothesis Testing Results

Hypothesis: *First-time mothers who took prenatal classes will have a more positive perception of labor and delivery than first-time mothers who did not take prenatal classes.*

Research Question: *Is there a difference in perception of labor and delivery between first-time mothers who took prenatal classes and first-time mothers who did not take prenatal classes?*

Mothers with positive perceptions of labor and delivery were those with high scores on the CPQ. First-time mothers who took prenatal classes did not have a more positive perception of labor and delivery than first-time mothers who did not take prenatal classes. According to the results, there was no statistical difference in the perception of labor and delivery for first-time mothers who took prenatal classes than for first-time mothers who did not take prenatal classes. The mean score for the "class" group was 123.5 with a standard deviation (S. D.) of 11.96. The mean score for the "no class" group was 123.0 with an S. D. of 9.16 (see Table 2). The difference in scores between the "class" group and the

"no class" group with a t-score of 0.144 were not significant ($p=0.886$), therefore, the hypothesis was not supported (see Table 2).

Table 2: Total CPQ Score Analyses by Childbirth Education Classgroup

CLASSGROUP	N	MEAN	S.D.	t	P	df
Classes	20	123.5	11.96	--	--	--
No Classes	20	123.0	9.16	--	--	--
T-Test	--	--	--	0.144	0.886	38

Table 3: CPQ Subscale Score Analyses for Childbirth Education Classgroups

	CLASSGROUP 1		CLASSGROUP 2		T-TEST		
	Classes (N=20)		No Classes (N=20)				
SUBSCALE	Mean	S.D.	Mean	S.D.	t	P	df
Pain-coping	33.45	7.43	29.77	6.68	1.649	0.107	38
Significant-Other	28.90	4.34	29.75	4.12	-0.636	0.529	38
Nursing Support	35.30	3.23	36.75	2.12	-1.677	0.103	32.8
Interventions	25.85	4.70	26.75	3.13	-0.713	0.481	38

Research Question 1 Testing Results

Is there a difference in perception of the ability to cope with pain between first-time mothers who took prenatal classes and first-time mothers who did not take prenatal classes?

Mothers with higher scores on the "coping with pain" subscale of the CPQ felt they had more ability to cope with pain than did mothers with lower scores. The

mean score on the “coping with pain” subscale for the “class” group was 33.45 with an S. D. of 7.43. The mean score on the same subscale for the “no class” group was 29.77 with an S. D. of 6.68 (see Table 3). The difference in scores for this subscale with a t-score of 1.649 was not significant ($p=0.107$), therefore, there was no statistical difference in perception of the ability to cope with pain between first-time mothers who took prenatal classes and first-time mothers who did not take prenatal classes (see Table 3).

Research Question 2 Testing Results

Is there a difference in perception of support from the significant other between first-time mothers who took prenatal classes and first-time mothers who did not take prenatal classes?

Mothers with higher scores on the “support from significant other” subscale of the CPQ felt stronger support from their partner or coach than did mothers with lower scores. The mean score on the “support from significant other” subscale for the “class” group was 28.90 with an S.D. of 4.34. The mean score on the same subscale for the “no class” group was 29.75 with an S.D. of 4.12 (see Table 3). The difference in scores for this subscale with a t-score of -0.636 was not significant ($p=0.529$), therefore, there was no statistical difference in perception of the involvement of the significant other between first-time mothers who took prenatal classes and first-time mothers who did not take prenatal classes (see Table 3).

Research Question 3 Testing Results

Is there a difference in perception of support from nurses between first-time mothers who took prenatal classes and first-time mothers who did not take prenatal classes?

A difference in perception was indicated by a difference in scores on the “support from nurses” subscale of the CPQ. A higher score indicated a more positive perception of support. The mean score on the “support from nurses” subscale for the “class” group was 35.30 with an S.D. of 3.23. The mean score on the same subscale for the “no class” group was 36.75 with an S.D. of 2.12 (see Table 3). The difference in scores for this subscale with a t-score of -1.677 were not significant ($p=0.103$), therefore, there was no statistical difference in perception of support from nurses between first-time mothers who took prenatal classes and first-time mothers who did not take prenatal classes (see Table 3).

Research Question 4 Testing Results

Is there a difference in perception of the use of technological intervention between first-time mothers who took prenatal classes and first-time mothers who did not take prenatal classes?

Mother's with higher scores on the “use of technological intervention” subscale of the CPQ had a more positive perception of the use of interventions than did mothers with lower scores. The mean score of the “use of technological intervention” subscale for the “class” group was 25.85 with an S.D. of 4.70. The mean score of the same subscale for the “no class” group was 26.75 with and S.D. of 3.13 (see Table 3). The difference in scores for this subscale with a

t-score of -0.713 was not significant ($p=0.481$), therefore, there was no statistical difference in perception of the use of technological interventions between first-time mothers who took prenatal classes and first-time mothers who did not take prenatal classes (see Table 3).

Other Possible Differences Explored

The possibility that ethnicity affected differences in perception of labor and delivery was examined using the t-test. Since there was only one Hispanic respondent, this group was omitted from the test. The mean score of the CPQ for the Caucasian group was 125.14 with and S.D. of 11.2. The mean score of the CPQ for the Black group was 119.21 with and S.D. of 7.6 (see Table 4). The difference between CPQ scores for ethnicity with a t-score of 1.610 was not significant ($p=0.116$), therefore, ethnicity did not influence the study results (see Table 4).

The possibility that marital status affected differences in perception of labor and delivery was also explored using the t-test. The mean score of the married group for the CPQ was 124.68 with an S.D. of 10.2. The mean score of the single group for the CPQ was 121.52 with an S.D. of 10.9 (see Table 4). The difference between CPQ scores for marital status with a t-score of 0.946 was not significant ($p=0.350$), therefore, marital status did not influence the study results (see Table 4).

Correlational statistics using Pearson Correlation were used to determine if a relationship between age, education, and the total CPQ score existed. No relationship existed between age and the CPQ score in this study ($r = -0.109$).

No relationship existed between education and the CPQ score in this study ($r = -0.035$). Examining these statistics, age and education did not influence the study results.

Table 4: CPQ Score Analyses for Ethnic Groups and Marital Status

	Group 1		Group 2		T-TEST		
	Caucasian (N=28)		Black (N=11)				
	Mean	S.D.	Mean	S.D.	t	p	df
Ethnicity	125.14	11.2	119.21	7.6	1.610	0.116	37

	Group1		Group 2		T-TEST		
	Married (N=22)		Single (N=18)				
	Mean	S.D.	Mean	S.D.	t	p	df
Marital Status	124.68	10.2	121.52	10.9	0.946	0.350	38

Summary

In summary, the research hypothesis was not supported by the data. It was found that there was no difference between groups for coping with pain, support from significant other, support from nurses, and use of technological interventions because the scores were not significantly different between groups.

CHAPTER V

DISCUSSION AND IMPLICATIONS

Study Summary

The purpose of this study was to determine if there was a difference in the perception of labor and delivery between first-time mothers who took prenatal classes and first-time mothers who did not take prenatal classes. Perception of labor and delivery was examined as a whole and in relation to coping with pain, support from significant other, support from nurses, and use of technological interventions.

The conceptual framework used to guide this study was Imogene King's (1981) Theory of Goal Attainment. Based on this theory, it was predicted that women who took prenatal classes should have a perception of the labor and delivery nurse's role that is more congruent with the nurse's perception of her role than women who did not take prenatal classes, and should, therefore, have smooth transactions between patient and nurse for goal attainment of positive perceptions of labor and delivery. It was also predicted that nurses should be interested in providing accurate prenatal education in order to make nurse-patient interactions smooth, which should, in turn, help patients to have positive perceptions of labor and delivery.

A convenience sample of 40 first-time mothers was obtained from the delivered population of the obstetrical unit of a 265-bed, midwestern hospital. A majority of subjects were Caucasian, married, well-educated women who

experienced only a few minor pregnancy complications. A nonexperimental descriptive design was used in which one questionnaire, the Childbirth Perception Questionnaire (Beaton & Gupton, 1990), was administered 18 to 48 hours after the subjects delivered.

Group assignments were determined by number of prenatal classes attended. Twenty of the subjects took classes and twenty of the subjects did not take classes. Subjects assigned to the "class" group attended a minimum of four prenatal classes. Subjects assigned to the "no class" group attended a maximum of three prenatal classes. The "no class" designation was changed from attendance at no classes to less than four due to the difficulty during data collection in obtaining enough subjects for this group. The Childbirth Perception Questionnaire (Beaton & Gupton, 1990) was administered to the subjects 18 to 48 hours after they delivered by the researcher or her delegates.

Discussion of Results

Perception of Labor and Delivery

The hypothesis was not supported by the results. The null hypothesis was, therefore, accepted. First-time mothers who took prenatal classes did not have a more positive perception of labor and delivery than first-time mothers who did not have prenatal classes. There was no difference in perception of labor and delivery between the groups. A possible reason for the lack of significant difference in scores for the entire scale and its subscales may have been due to the low number of subjects (N=40) obtained for the study. Had there been a

larger sample, the results may have shown a larger discrepancy in scores between the groups.

A few studies (Bramadat & Driedger, 1993; Crowe & von Baeyer, 1989; Lumley & Brown, 1993) found that attendance at prenatal classes can actually have a negative impact on patient perception of labor and delivery because the subject's expectations are raised by the knowledge they gain. These studies found that with increased knowledge of labor and delivery comes higher expectations for events to happen in a certain order. When these expectations were not met, the women's perception of the labor and delivery experience was more negative because events did not proceed as "planned". This factor could have altered the perceptions and responses of "class" subjects in the present study. Because of increased expectations a possible incongruency between patient and nurse's perceptions of events may also have been an influencing factor for some of the "class" subjects, using King's (1981) Theory as a basis for examining the results.

Both groups' scores were on the high level for the range of possible scores on the CPQ (35 to 175). The "class" group had a positive perception of labor and delivery with a mean score of 123.5 on the CPQ. The "no class" group mean score of 123.0 indicates a positive perception of labor and delivery for this group also. High scores for the "no class" group may have been due to lack of previous knowledge leading to low expectations about labor and delivery. Scores for both groups compare favorably with the overall scores on the CPQ in

the Bramadat (1990) study. The overall mean score in that study was 123.5 (S.D.=8.8).

Coping with Pain

The results indicated that there was no difference in perception of the ability to cope with pain between groups. Lowe's (1989) study found that childbirth preparation did not decrease anxiety and increase coping skills and, so, did not decrease the perception of pain for prepared women. Other studies (Bramadat & Driedger, 1993; Crowe & von Baeyer, 1989; Lumley & Brown, 1993) also found no affect on pain perception through childbirth preparation.

The "class" group's mean score on the pain subscale was 33.45. The "no class" group's score on this subscale was 29.77. The higher score for the "class" group does indicate a more positive perception of the ability to cope with pain than the "no class" group. This difference, however, was not statistically significant. The scores for both groups were on the moderate end for the possible range of scores for the "coping with pain" subscale (11-55). This indicated that both groups had a moderately positive perception of their ability to cope with pain. The results for this subscale in this study were more favorable than in the Bramadat (1990) study. Scores for the "pain" subscale in that study were on the negative end of the scale. The ability to cope with pain has been associated with a person's pain threshold. People who had high thresholds for pain had a better ability to cope with pain (Lowe, 1989). Many of the subjects for this study may have had high thresholds for pain leading to moderately high perceptions of their ability to cope with pain.

Examining the scores with King's (1981) Theory in mind, patients' and nurses' perceptions of the women's abilities to cope with pain may have been fairly congruent, leading to the moderately positive perceptions of the ability to cope with pain for this study. Many of the nurses may have expressed admiration for the coping skills of the women in this study, which would have helped the women to view their coping positively.

Support From Significant Other

The results obtained indicated no difference in perception of support from the significant other between groups. One influence may have been the fact that some of the "no class" group did attend up to three prenatal classes and, therefore, did have some prenatal education.

The "no class" group, with a mean score of 29.8 on the "support from significant other" subscale, actually had a more positive perception of support than the "class" group, with a mean score of 28.9 on the subscale. The "class" group may have had high expectations for support that were not fully met. In contrast, the "no class" group may have had no preconceived ideas about the support they should receive and, therefore, may have seen any support as positive.

The mean score for both groups was on the high end for the range of possible scores for the "support from significant other" subscale (7 to 35), which indicated a positive perception of support overall. These scores compare favorably to the scores on this subscale in the Bramadat (1990) study. Mean

scores for the “significant other” subscale were on the positive end for that study, also.

A few studies (Bramadat & Driedger, 1993; Crowe & von Baeyer, 1989; Lumley & Brown, 1993) found that simply the presence of a support person positively affected a woman’s perception of support given. This fact could have been an influence on the results for the present study. Examining the score with King’s (1981) Theory in mind, the patients’ and nurses’ perceptions of the support from the partners may have been fairly congruent, leading to the positive perception of support for this study. Many of the nurses may have given encouragement to the significant other, allowing for high partner involvement in the labor process.

Support From Nurses

The results for this subscale did not show a difference in perception of support from nurses between groups. One reason for the lack of difference may have been related to King’s (1981) Theory of Goal Attainment. The “no class” group, with a mean score of 36.8 for this subscale, actually had a more positive perception of support from nurses than the “class” group, with a mean score of 35.3 on this subscale.

The “class” group may have had high expectations for their labor and delivery experience, due to training, which may not have been congruent with the nurse’s expectations or the required situation. If nurse-patient perceptions of the nurse’s role and the situation were not congruent, transactions may have been impaired, leading to less positive birth perceptions. The “no class” group may have had

lower expectations, allowing for more congruent perceptions between patient and nurse of the nurse's role and the situation. Nurse-patient transactions should have been smooth if congruent perceptions existed, leading to positive perceptions of labor and delivery or goal attainment.

Mean scores for both groups were on the moderate end of the range of possible scores for the "support from nurses" subscale (8 to 56). This indicated a moderately positive perception of support from nurses, overall. The scores for this subscale did not compare as favorably to the scores in the Bramadat (1990) study. Scores on the "nursing support" subscale were particularly high for that study. A few studies (Bramadat & Driedger, 1993; Crow & vonBaeyer, 1989; Lumley & Brown, 1993) indicated that most women appreciated any support given from nurses, especially support gained from personal experience.

Use of Technological Interventions

The results indicated that there was no difference between groups in perception of technological interventions used between groups. The "no class" group, with a mean score of 26.8 on the subscale, had a more positive perception of the use of technological interventions than the "class" group, with a mean score of 25.9 on the subscale. These results could have been due to the possibility that the "class" group had more interventions overall than the "no class" group. The results also could have been due to the possibility that the "class" group saw the use of interventions more negatively than the "no class" group.

A few studies (Bramadat & Driedger, 1993; Crow & vonBaeyer, 1989; Lumley & Brown, 1993) indicated that, in this high tech society, people have come to expect more interventions so that their usage has been less distressing to patients today as they were years ago. With King's (1981) Theory in mind, since people have been more expectant of the use of technology in giving birth, perceptions of the need for interventions may have been fairly congruent between patients and nurses, leading to a positive perception of their use for this study.

The mean scores for both groups were on the moderate end of the range of possible scores for the "use of technological interventions" subscale (9 to 45). This indicated a moderately positive view of the use of technological interventions overall. This could have meant that not many interventions were used or that most of the subjects understood the need for the interventions used. The scores for the present study for this subscale were more favorable than the scores for the Bramadat (1990) study. Scores for the "interventions" subscale were on the negative end of the scale for that study.

Limitations

There were a few limitations to this study. The small sample size (N=40; 20 per group) may have contributed to the lack of statistically significant differences between the groups. Had the sample been larger, there may have been more group variation in scores more clearly reflecting differences. The fact that this was a convenience sample from only one hospital also made it difficult to generalize the results. The attainment of a sample with a higher percentage of

Caucasian participants also was not representative of the population from which the sample came. The fact that there were numerous delegates for questionnaire administration may have contributed to the difficulty in obtaining an adequate sample size in a timely manner. Initiation of this study during a time of a major change in the unit's care model from the traditional, separate postpartum and nursery to one of mother-baby couplet care may have also contributed to the difficulty in obtaining an adequate sample size in a timely manner. The staff had to adjust to this change in care model on top of assisting the researcher with questionnaire administration.

Due to the lack of participants, the use of subjects who had taken a minimal number of prenatal classes for the "no class" group may have contributed to the positive perceptions of that group. The scores for the "no class" group may have been lower, or less positive, if all the subjects for that group had not attended prenatal classes.

Another limitation was the timing of administration of the questionnaire at 18-36 hours after delivery, a necessity due to usual post-delivery discharge from the hospital within this time-frame. Usually by 24 hours post-delivery, a mother is just beginning to be able to comprehend information given to her. Any negative or positive memories of her delivery experience may have been magnified during this time since it was so close to the actual event. Waiting a longer time period after delivery, such as one week, to administer the questionnaire, may have allowed for more accurate and varied memories of the delivery experience for the women.

Implications and Recommendations

Implications for Nursing Practice

Study results suggest that perceptions of labor and delivery were not more positive for prenatal class attenders than for nonattenders and may indicate a need for re-evaluation of the information provided during prenatal education by nurses. As discussed earlier, DiMatteo, Kahn, and Berry (1993) suggested a discussion involving self-control versus situational control and realistic information about the pain of labor to be expected as a desirable component of prenatal education. More discussion may be required informing couples about the different technological interventions that are possible and the situations in which they may be required. Information should also be individualized as much as possible, as found in a study by Hallgren, Kihlgren, Norberg, and Forslin (1995).

The “support from nurses” subscale results indicate a possible problem with childbirth class attendance. The fact that the “class” group found support from nurses less positive than the “no class” group may indicate that prenatal class attenders develop high expectations for nursing support. Childbirth class content should also involve a realistic discussion of the nurse’s role, involving technological and emotional aspects. Class attenders should be encouraged to inform the labor nurse of their expectations of the nurse’s involvement in the labor process. Labor and delivery nurses should also be encourage to ask patients about their expectations for labor and delivery, technologically and emotionally. Class content needs to be comprehensive, including technical and

psychological information (Waldenstrom, Borg, Olsson, Skold, & Wall, 1996). A study by Cliff and Deery (1997) found that a majority of women felt that childbirth classes were too technical and did not address emotional and psychological issues. As discussed earlier using King's Theory of Goal of Attainment (1981), the more congruent the patient and nurse's perceptions of the nurse's role and the situation are, the more easily transactions are made, leading to the goal of every patient and nurse, a positive labor and delivery experience.

In reviewing the literature, the fact that few studies can be found dealing with prenatal education in the last five or six years suggests that it is time to begin this research again. The use of technology, especially in the area of childbirth, has increased tremendously in the last ten years. The content of prenatal education needs to reflect this trend and the fact that the world has entered a new millennium. Women and couples who attend prenatal classes today may find that the content is not up-to-date and that this will not help them. They may decide to drop out of the classes for this reason. Obstetrical nurses know the technology and philosophies being used for childbirth today and need to make sure that prenatal education reflects this knowledge in its content. With current, appropriate information presented, prenatal classes can allow for more effective transactions between patients and nurses, according to King's (1981) Theory.

The fact that some of the study participants only attended a few classes indicates a possible problem with maintaining the public's interest in childbirth classes, possibly due to lack of relevant information available in the classes. Since being well prepared can benefit patients because they usually know more

what to expect and are better able to cope with labor (Lowe, 1989), nurses need to find a way to make childbirth classes more "attender-friendly". As Cliff and Deery (1997) suggest, using a questionnaire at the beginning of a class series to determine what learning expectations couples have for their childbirth education would be a useful tool. Nurses could try to encourage and facilitate class participation more in the prenatal setting, especially with the lower income population. Nurses could also be instrumental in developing a birth plan that all patients can fill out and have in their files to facilitate congruent labor and delivery experiences between patients and nurses. Since nurses work so closely with the birthing population, they need to be the ones to find methods to bring childbirth education to everyone.

Recommendations For Further Research

Since there is such a lack of current research pertaining to childbirth preparation and perception of labor and delivery, as indicated earlier, many more studies need to be conducted in this area. Another study of this topic should involve a larger sample obtained from several different hospitals. Only one or two delegates should be used to assist the researcher in data collection to reduce the risk of lost material or lost subjects. A contract should be devised between the researcher and the delegates so that all expectations are known. Subjects for the "no class" group should be limited to those who did not take any prenatal classes. A study using both the Childbirth Expectations Questionnaire (Beaton & Gupton, 1990) prenatally and the Childbirth Perception Questionnaire

(Beaton & Gupton, 1990) in the postpartum period could further aid in determining if childbirth preparation does affect perception of labor positively.

Conclusions

This study contributes to the belief that childbirth education is always in need of revisions. The results indicate that there is a possible need for re-evaluation of the content taught during prenatal classes. It indicates this content should consist of realistic discussions about labor and delivery, including the expectations about the role of the labor nurse, from nurse and patient perspectives. Prenatal class content should also be current, reflecting the process of childbirth as it occurs in the new millennium. It does not prove or disprove the benefits of prenatal classes in preparing women for the labor and delivery experience, since the majority of results showed no difference between prenatal class attenders and nonattenders. This study also leads to new research suggestions that warrant further investigation, such as the need for a larger study using fewer delegates and both questionnaires, the Childbirth Expectations Questionnaire and the Childbirth Perceptions Questionnaire (Beaton & Gupton, 1990).

APPENDICES

APPENDIX A

Appendix A

DATE _____

CODE _____

CHILDBIRTH PERCEPTION QUESTIONNAIRE

This questionnaire is designed to describe women's perceptions of their labor and delivery experience. Your opinions along with those of other new mothers will be used to learn more about women and childbirth.

The questionnaire contains a number of statements, each of which says something different about your labor and delivery. We are interested in knowing what the labor and delivery experience was like for you. For each statement, decide how you agree or disagree with the view expressed. Think about the statement. Beside each statement, you will find five words used to describe your experience. There are no right or wrong answers. Your response is a matter of your personal opinion. The information you give will be completely confidential.

Thank you for your time and your help. Below are examples that may help you in completing the questionnaire.

EXAMPLES

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
A. I was very confident during labor and delivery	1	2	3	4	5
B. I needed to know more about labor and delivery than I possibly could	1	2	3	4	5

The answer to Example A, "Strongly Agree" indicates that you are quite certain that you were confident during your labor and delivery.

The answer to Example to B, "Neutral" indicates that you cannot quite decide whether to agree or disagree with this statement.

Circle the number under the word(s) which come closest to your own opinion.

PLEASE BE SURE TO MARK EVERY STATEMENT

With regard to my labor and delivery experience, I found that:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. My partner/coach was happy and excited.	1	2	3	4	5
2. The nurses were kind to me.	1	2	3	4	5
3. I avoided seeking help from the nurses.	1	2	3	4	5
4. I was unable to move with the pain of labor.	1	2	3	4	5
5. I was able to deal with labor.	1	2	3	4	5
6. I felt helped by the nurses' presence.	1	2	3	4	5
7. The nurses spent little time with me.	1	2	3	4	5
8. My plans for birth were ignored by the nurses.	1	2	3	4	5
9. My partner/coach felt quite helpless.	1	2	3	4	5
10. I was made to have routine procedures even if I didn't want them.	1	2	3	4	5
11. I asked my partner/coach for help.	1	2	3	4	5
12. I worried about the intensity of labor pain.	1	2	3	4	5

Circle the number under the word(s) which come closest to your own opinion.

PLEASE BE SURE TO MARK EVERY STATEMENT

With regard to my labor and delivery experience, I found that:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
13. There was little chance that I would end up having a cesarean section.	1	2	3	4	5
14. Lots of medical equipment and machinery were used.	1	2	3	4	5
15. I was afraid of panicking.	1	2	3	4	5
16. I experienced discomfort but not unbearable pain.	1	2	3	4	5
17. I felt comforted by the presence of my partner/coach.	1	2	3	4	5
18. I felt intense pain.	1	2	3	4	5
19. I had a childbirth free of medical intervention.	1	2	3	4	5
20. I wanted to have fetal monitoring.	1	2	3	4	5
21. I was afraid of being coward.	1	2	3	4	5
22. I was able to relax during labor.	1	2	3	4	5
23. The nurses offered me encouragement.	1	2	3	4	5

Circle the number under the word(s) which come closest to your own opinion.

PLEASE BE SURE TO MARK EVERY STATEMENT

With regard to my labor and delivery experience, I found that:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
24. There was little chance that forceps would be used.	1	2	3	4	5
25. The pain of labor was terrible.	1	2	3	4	5
26. I received personal attention from the nurses	1	2	3	4	5
27. My partner/coach told me what was going on.	1	2	3	4	5
28. The nurse allowed me to make decisions.	1	2	3	4	5
29. I was scared when I thought about the pain of labor.	1	2	3	4	5
30. I could have refused to have any procedures I thought not needed.	1	2	3	4	5
31. My opinion or that of my partner/coach was sought for all major medical decisions.	1	2	3	4	5
32. I used anesthetics and/or pain killing drugs.	1	2	3	4	5
33. The doctor made most of the decisions.	1	2	3	4	5

Circle the number under the word(s) which come closest to your own opinion.

PLEASE BE SURE TO MARK EVERY STATEMENT

With regard to my labor and delivery experience, I found that:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
34. I did not tell my partner/coach what I was feeling.	1	2	3	4	5
35. I was embarrassed by my behavior.	1	2	3	4	5

Beaton, J. & Gupton, A. (1990). Childbirth expectations: A qualitative analysis. Midwifery, 6, 133-139.

APPENDIX B

Appendix B



THE UNIVERSITY OF MANITOBA

FACULTY OF NURSING

Winnipeg, Manitoba
Canada R3T 2N2

Tel: (204) 474-7452
Fax: (204) 474-7682

October 28, 1998

Ms. Maria McDonald
2209 Morton Avenue
St. Josephs, MI
49085

Dear Ms. McDonald

Thank you very much for your expressed interest in the Childbirth Expectations Questionnaire (CEQ), which we have enclosed. We have also included a copy of the publications related to the CEQ. Enclosed is a copy of the tool as used by Dr. Ina Bramadat (past tense). She converted the tool early in its development and at that time it had one extra item. Please eliminate item 20 and renumber.

We hope you find this instrument helpful and give you permission to use the CEQ. We do ask, however, that you send us a summary of results from any study in which you utilize the CEQ. We look forward to hearing from you and wish you well in your research studies.

Sincerely,



Abnette Gupton RNMN PhD
Associate Professor

APPENDIX C

Appendix C

Explanation of Study to be Given by the Nurse

A registered nurse who works on this unit, Marla McDonnell, is conducting a study. She is also a Master's in Nursing student from Grand Valley State University. This study is a requirement for her graduation. She is conducting this study to determine if women who take prenatal classes have a different view of their labor and deliveries than women who do not take prenatal classes.

In order to gather the information for this study, she needs first-time mothers to complete a questionnaire. The questionnaire will take approximately 10 to 15 minutes to complete and will be administered approximately 18-36 hours after the women deliver.

This study will be completely anonymous. No names will be used for reporting the results. If you choose not to participate in this study or if you decide to drop out of the study, your care will not be affected in any way. You may choose to drop out of the study at any time.

If you have any questions about the study at any time, you may contact Marla McDonnell.

Marla appreciates your cooperation in agreeing to participate in this study. Please read and sign the attached Informed Consent, if you are willing to be a participant. Thank you.

APPENDIX D

Appendix D

Informed Consent

I understand that this is a study to identify if first-time mothers who take prenatal classes have a different view of labor and delivery than first-time mothers who do not take prenatal classes.

I also understand that:

1. participation in this study will involve 10 to 15 minutes to complete a questionnaire regarding my experience during labor and delivery.
2. I have been selected for participation because I am a first-time mother.
3. it is not anticipated that this study will lead to physical or emotional risk to myself or my infant.
4. the information I provide will be kept strictly confidential and the data will be coded so that identification of individual participants will not be possible.

I acknowledge that:

"I have been given an opportunity to ask questions regarding this research study, and that these questions have been answered to my satisfaction."

"In giving my consent, I understand that my participation in this study is voluntary and that I may stop at any time. If I stop, it will not affect the care I receive from my physician or the staff at Lakeland Medical Center—St. Joseph."

"The investigator, Marla McDonnell, has my permission to review the record of my labor and delivery for the purpose of gaining knowledge about the events of my labor and delivery."

"I can contact Marla McDonnell at 983-8528 or the chairperson of the Grand Valley State University Human Research Review Committee Paul Huizenga at (616) 895-2472. I may contact them at any time, if I have questions."

I acknowledge that I have read and understand the above information, and that I agree to participate in this study.

Witness

Date

Participant's Signature

Date

APPENDIX E

Appendix E

Code: _____

Sociodemographic Data

Please answer these questions to help determine similarities and differences between study participants.

1. Age (in years) _____
2. Ethnic origin: Please circle one of the following:
a) Caucasian b) Hispanic c) Asian d) Black e) Other (please indicate) _____
3. Education: Please indicate the last year of school completed:
4. Occupation:
a) Type of work (if applicable) _____
b) Occupation of husband/partner (if applicable) _____
5. Marital Status: Please circle one of the following:
a) Married b) Single c) Separated d) Divorced e) Widowed
6. Prenatal Classes:
a) Did you attend prenatal classes? _____
b) If yes, at what institution? _____
c) How many classes did you attend? _____
8. Have you had any problems/complications during this pregnancy? _____
If "yes", please indicate the type of problem/complication _____

APPENDIX F

Appendix F

Mother's Occupation

	Frequency	Percent
office staff	1	2.5
nurse asst	1	2.5
student	1	2.5
data entry	1	2.5
factory worker	3	7.5
no job	4	10.0
administration	1	2.5
waitress	1	2.5
adm asst	2	5.0
clerical	2	5.0
management	6	15.0
dog trainer	1	2.5
mcdonalds	1	2.5
lpn	1	2.5
computer	1	2.5
vet tech	1	2.5
graphic art	1	2.5
cust serv	2	5.0
financial	1	2.5
dietician	1	2.5
dental asst	1	2.5
nutritionist	1	2.5
cosmetologist	1	2.5
soc work	1	2.5
m	1	2.5
kennel help	1	2.5
trav agent	1	2.5
Total	40	100.0

APPENDIX G

Appendix G

Partner's Occupation

	Frequency	Percent
truck driv	1	2.5
summit poly	1	2.5
draft design	1	2.5
facotry worker	4	10.0
no job	6	15.0
contractor	1	2.5
carpenter	3	7.5
self emp	1	2.5
management	5	12.5
rad tech	1	2.5
roofing	2	5.0
dry wall painter	1	2.5
tool & dye	1	2.5
computer	1	2.5
fireman	1	2.5
minister	2	5.0
sales	1	2.5
financial	1	2.5
emp serv	1	2.5
exec chef	1	2.5
mechanic	1	2.5
maint director	1	2.5
laborer	1	2.5
pilot	1	2.5
Total	40	100.0

APPENDIX H

Appendix H

Lakeland Regional Health System's Childbirth Class Content

- I. New Beginning Class (suggested for first or second trimester)**
 - A. Good nutrition by a dietician**
 - B. Healthy lifestyle choices for pregnancy**
 - C. Video on fetal growth and development**
- II. Preparing for Childbirth Series (suggested for third trimester)**
 - A. Relaxation and breathing techniques (class 1)**
 - B. Physiology of labor and delivery with videos (class 2)**
 - C. Cesarean birth (class 3)**
 - D. Care of newborns (class 4)**
 - E. Breast and bottle feeding (class 5)**
 - F. Postpartum care (class 6)**

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