The Effect of Lamaze and Traditional Childbirth Preparation on the Perception of Childbirth Pains in Multiparas

Patricia M. Sweeney
Loyola University Chicago

Recommended Citation
https://ecommons.luc.edu/luc_theses/3225
THE EFFECT OF LAMAZE AND TRADITIONAL CHILDBIRTH PREPARATION ON THE PERCEPTION OF CHILDBIRTH PAIN IN MULTIPARAS

by

Patricia M. Sweeney

A Thesis Submitted to the Faculty of the Graduate School of Loyola University of Chicago in Partial Fulfillment of the Requirements for the Degree of Master of Science in Nursing December 1981
ACKNOWLEDGMENTS

I wish to thank Dr. Elizabeth B. Brophy, my advisor, for her endless sharing of knowledge and time during this research study. I also wish to acknowledge the help given me by Dr. Linda W. Janusek and Dr. Dona J. Snyder as members of my thesis committee. In addition, I appreciate the cooperation of the staff of the hospital where the research was conducted.

I am particularly grateful to my husband, Peter Sweeney, whose continued support and interest in my graduate education greatly contributed to my success.
VITA

The author, Patricia Muench Sweeney, is the daughter of Henry Muench and Dorothy (Klaus) Muench. She was born June 14, 1955, in Milwaukee, Wisconsin.

Her elementary education was obtained in the parochial schools of Milwaukee, Wisconsin, and secondary education at Dominican High School, Milwaukee, where she graduated in May, 1973.

In September, 1973, she entered St. Mary's College, Notre Dame, Indiana, and in May, 1977 she graduated with honors and received the degree of Bachelor of Science in Nursing.

She worked as a professional nurse between 1977 and 1981 in the Chicago area. Her area of specialty was Maternal-Child Health, and her major area of interest was Labor and Delivery.

In May, 1980, she entered the Master of Science in Nursing program at Loyola University of Chicago and was granted a nurse traineeship. In January, 1982, she was awarded the degree of Master of Science in Nursing.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>ii</td>
</tr>
<tr>
<td>VITA</td>
<td>iii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>iv</td>
</tr>
<tr>
<td>CONTENTS OF APPENDICES</td>
<td>v</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Statement of the Question</td>
<td>2</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>2</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>5</td>
</tr>
<tr>
<td>Research Questions</td>
<td>5</td>
</tr>
<tr>
<td>Assumptions</td>
<td>5</td>
</tr>
<tr>
<td>II. REVIEW OF THE LITERATURE</td>
<td>6</td>
</tr>
<tr>
<td>Gate Control Theory</td>
<td>6</td>
</tr>
<tr>
<td>Pain Perception</td>
<td>8</td>
</tr>
<tr>
<td>Childbirth Preparation</td>
<td>10</td>
</tr>
<tr>
<td>Summary</td>
<td>16</td>
</tr>
<tr>
<td>III. METHODOLOGY</td>
<td>18</td>
</tr>
<tr>
<td>Setting</td>
<td>18</td>
</tr>
<tr>
<td>Subjects</td>
<td>19</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>23</td>
</tr>
<tr>
<td>Collection of Data</td>
<td>28</td>
</tr>
<tr>
<td>Summary</td>
<td>28</td>
</tr>
<tr>
<td>IV. ANALYSIS OF DATA</td>
<td>30</td>
</tr>
<tr>
<td>Hypothesis I</td>
<td>37</td>
</tr>
<tr>
<td>Hypothesis II</td>
<td>40</td>
</tr>
<tr>
<td>Research Question I</td>
<td>40</td>
</tr>
<tr>
<td>Research Question II</td>
<td>43</td>
</tr>
<tr>
<td>Summary</td>
<td>43</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>V. CONCLUSIONS</td>
<td>46</td>
</tr>
<tr>
<td>Limitations</td>
<td>53</td>
</tr>
<tr>
<td>Recommendations For Further Research</td>
<td>54</td>
</tr>
<tr>
<td>Significance of the Study</td>
<td>56</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>58</td>
</tr>
<tr>
<td>APPENDIX A</td>
<td>62</td>
</tr>
<tr>
<td>APPENDIX B</td>
<td>65</td>
</tr>
<tr>
<td>APPENDIX C</td>
<td>67</td>
</tr>
<tr>
<td>APPENDIX D</td>
<td>70</td>
</tr>
</tbody>
</table>
**LIST OF TABLES**

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age of Subjects</td>
<td>20</td>
</tr>
<tr>
<td>2. Years Married</td>
<td>22</td>
</tr>
<tr>
<td>3. Total Yearly Income</td>
<td>24</td>
</tr>
<tr>
<td>4. Length of Time from Five-Minute-Apart Contractions to Delivery</td>
<td>32</td>
</tr>
<tr>
<td>5. Length of Time in Hospital</td>
<td>33</td>
</tr>
<tr>
<td>6. Number of Times Pain Medication Received During Labor</td>
<td>34</td>
</tr>
<tr>
<td>7. Anesthetic Received for Delivery</td>
<td>35</td>
</tr>
<tr>
<td>8. Global Pain Rating Indices - PRI (G) Scores</td>
<td>38</td>
</tr>
<tr>
<td>9. Sensory Pain Rating Indices - PRI (S) Scores</td>
<td>41</td>
</tr>
<tr>
<td>10. Subjects Perceptions of the Pain Intensity (PI) of Childbirth</td>
<td>44</td>
</tr>
</tbody>
</table>
# CONTENTS OF APPENDICES

<table>
<thead>
<tr>
<th>APPENDIX</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Adapted McGill-Melzack Pain Questionnaire</td>
<td>62</td>
</tr>
<tr>
<td>B</td>
<td>Informed Consent</td>
<td>65</td>
</tr>
<tr>
<td>C</td>
<td>Demographic Data Sheet</td>
<td>67</td>
</tr>
<tr>
<td>D</td>
<td>Subjects' (PRI) G and PRI (S) Scores to the Adapted McGill-Melzack Pain Questionnaire</td>
<td>70</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

It has been shown that in a wide variety of people there are no significant differences in their thresholds for pain (Hardy, 1956; Guyton, 1976). People do, however, react very differently to pain, and it is commonly accepted that psychological factors most frequently influence one's perception of pain. Previous studies (Egbert, Battit, Welch and Bartlett, 1964; Jones, Bentler and Petry, 1966; Bobey and Davidson, 1970) indicate that manipulation of these psychological factors can alter a person's tolerance for pain. Thus, in the area of the pain of childbirth, preparation classes have been developed which center on the psychological factors involved. Some of these factors have a physiological basis. For women who so choose, these classes serve in addition to or as a substitute for the traditional form of childbirth preparation. The purpose of this study was to examine the differences in pain perception in those multiparas who had been involved in specialized childbirth preparation classes, specifically the psychoprophylactic or Lamaze method, and those who had been involved in the traditional form of childbirth preparation. In this study an attempt has been made to examine how patients perceive their childbirth pain. Patients generally do not have difficulty expressing the intensity of their pain, however, they often do have difficulty expressing the quality of their pain. Understanding the quality of a patient's pain
is helpful in assessing the effectiveness of comfort measures which may be provided. Nurses can thus intervene more effectively in assisting parents to cope with the crisis of childbirth, to develop more positive attitudes towards their infant and to achieve healthy parent-infant relationships.

Statement of the Question

What is the effect of Lamaze and traditional childbirth preparation on the perception of childbirth pain in multiparas, as reported during the early postpartum period?

Definition of Terms

Preparation - a series of actions or an instructional process, assisting an individual to be ready cognitively and/or affectively for some occasion or experience. In the present study, preparation for childbirth was focused upon and was operationalized in two ways.

Lamaze (LP) - a series of approximately six classes in which the goal is achieved through the use of education, relaxation, peer support, and Pavlovian principles of conditioned reflex training. A "significant other" (i.e., husband, girlfriend) learns how to serve as the expectant mother's coach throughout the childbirth experience. The instructors are accredited by the American Society for Psychoprophylaxis in Obstetrics. A "refresher" course is offered to those women who have participated in Lamaze classes during a previous pregnancy. The refresher course consists of approximately four classes.
Traditional (TP) - that preparation for childbirth which women receive through the course of their pregnancy, offered by their physician and his or her nurse, and/or that knowledge which is acquired on their own accord, such as through reading, listening to peers, etc. This process may also include general prenatal classes, other than those dealing with the psychoprophylactic method. Classes vary in number and content.

Stages of Pregnancy - the experience of childbearing and childbirth, described in three stages.

Antepartum - the period beginning with conception and ending with the onset of labor. It is during this period that the instructional preparation is provided.

Intrapartum - the period beginning with the onset of uterine contractions and ending with the birth of the placenta; also known as the period of labor and delivery. It is the pain perceived by the mother during this stage that was explored, since it is during this stage that childbirth occurs.

Postpartum - the period beginning with the birth of the infant and placenta and ending six weeks after the birth of the infant and placenta. It is during the first 24 hours of this period that the mother was asked to assess the pain perceived during the childbirth experience.

Multipara - a woman who has born at least one child. The present study was limited to women 22 to 37 years of age who had just given birth to their second or third child, whose previous pregnancy/pregnancies had been uncomplicated and who were not considered to be high-risk
(i.e., no history of chronic hypertension, heart disease, diabetes, renal disease, preeclampsia or eclampsia, bleeding disorders of pregnancy, multiple births, premature labor or previous delivery of a premature infant, previous stillbirth or neonatal death, or previous Caesarean section).

**Perception** - awareness of aspects of the environment or of experiences through physical sensation, observation, discernment. The individual perceives through the use of senses, past experiences, and emotional and psychological state and thus assigns meaning to a sensation.

**Pain** - a sensation of hurt, with both quality and intensity, which an individual perceives and reacts to as a result of her physical, emotional, psychological, social, cultural, and spiritual state. In the present study, pain was operationalized in four ways: (1) the overall perception of pain, a measure of which was obtained using the global score, obtained as a result of administration of the pain rating index (PRI) portion of the Adapted McGill-Melzack Pain Questionnaire (AMPQ) (Appendix A); (2) the sensory qualities of pain in terms of temporal, spatial, pressure, thermal and other properties, operationalized as a sub-score of the PRI portion of the AMPQ; (3) affective qualities of pain in terms of tension, fear, and automatic properties that are part of pain perception, operationalized as a sub-score of the PRI portion of the AMPQ; and (4) the pain intensity in terms of the quantity of pain that was perceived, operationalized in terms of one of five categories, i.e., mild, discomforting, distressing, horrible,
excruciating, in the pain intensity (PI) portion of the AMPQ (Melzack, 1975).

**Hypotheses**

I. There is no significant difference in perception of childbirth pain in women having received Lamaze preparation and women having received traditional childbirth preparation.

II. There is no significant difference in perception of the sensory qualities of childbirth pain in women having received Lamaze preparation and women having received traditional childbirth preparation.

**Research Questions**

I. How did the women having received Lamaze preparation and those having received traditional childbirth preparation perceive the affective qualities of their childbirth pain?

II. How did the women having received Lamaze preparation and those having received traditional childbirth preparation perceive the intensity of their childbirth pain?

**Assumptions**

I. It was assumed that individuals who responded to self-referrent stimuli were honest in reporting subjective experiences.

II. It was assumed that nurses and physicians were equally supportive of Lamaze-prepared and traditionally-prepared patients.

III. It was assumed that positive and/or negative nurse-patient relationships would have been equally distributed between the two groups being studied.
CHAPTER II

REVIEW OF THE LITERATURE

In the present study the effects of childbirth preparation on the women's perceptions of childbirth pain were explored. In reporting what has been reviewed in the literature, it was thought important to consider the multiple aspects of this focus as follows: the gate control theory of pain, pain perception, and childbirth preparation.

Gate Control Theory

Despite the fact that there are no significant differences in pain threshold from individual to individual (Hardy, 1956; Guyton, 1976), perceptions of and reactions to pain vary greatly following comparable degrees of painful stimuli. The most comprehensive explanation of pain perception thus far is the "gate control theory", developed by Melzack and Wall in 1965. According to this theory, a neural mechanism in the dorsal horns of the spinal cord (substantia gelatinosa) acts as a gate, which may close to prevent peripheral nerve impulses from traveling to the brain or open to allow the impulses to ascend, thereby modulating pain perception. Whether these gates are opened or closed depends on what other types of sensory impulses are simultaneously present. A predominance of impulses stimulating mechanoreceptor fibers (which are large and myelinated and rapidly transmit touch and pressure) closes the gate and inhibits pain impulses (which travel along the slower conducting, small and unmyelinated nerve fibers) from traveling to the
higher centers of the brain. These higher centers evoke a person's physical and emotional perception of and reaction to pain. Furthermore, inhibitory signals may be sent from the higher centers of the brain to the lower sensory pathways through descending cortical fibers, influencing transmission of pain signals to the brain and affecting pain perception. Anxiety and other emotions affect the opening and closing of the gate, thereby influencing pain perception. The gate control theory of pain helps to explain why people react differently to pain, why distraction of attention can decrease pain sensitivity, and why one's emotional and psychological state can influence one's perception of and reaction to pain (Melzack and Wall, 1965; Melzack, 1973; Melzack and Chapman, 1973; Guyton, 1976; Luce, Thompson, Getto, and Byyny, 1979; West, 1981).

Recently, opiate receptors and endogenous opiate-like substances called endorphins have been discovered in the substantia gelatinosa of the spinal cord and other areas of the central nervous system. Evidence from a number of studies implicates these substances in the transmission and perception of pain; however, this does not negate the gate control theory. In fact, endorphins have been incorporated into the gate theory. It is hypothesized that endorphins act as inhibiting neurotransmitters (i.e., closing the gate) in the substantia gelatinosa as well as in other areas along the pain pathway. Furthermore, endorphins may also be involved in mediating the integration of sensory information having to do with emotional behavior. Therefore, they most likely influence one's perception of and reaction to pain (Snyder, 1977). Endorphin levels have been found to be low in depressed patients as well as in
patients with chronic pain, which often involves depression (West, 1981).

Endorphins may cause euphoria and reduce anxiety. Methods used to decrease anxiety are associated with endorphin release, and a person with less anxiety requires less analgesia than a person with great anxiety. Endorphins alone may reduce pain, as people who have less pain than expected from an injury have been found to have high endorphin levels. In addition to methods used to reduce anxiety, distration may also achieve its pain-relieving effect by endorphin release, stimulated by a descending impulse (Snyder, 1977; West, 1981).

**Pain Perception**

Pavlov's studies (1927) illustrate how distraction influences pain perception. Pavlov showed that specific behaviors, which he referred to as reflexes, were responses to external stimuli. He identified two kinds of reflexes: unconditioned reflexes and conditioned reflexes. Pavlov referred to unconditioned reflexes as responses that a person naturally pairs with a specific stimulus before any learning occurs, such as blinking when a puff of smoke strikes one's eyeball. Conditioned reflexes can occur when one associates a neutral stimulus, such as a bell, with the unconditioned stimulus. If the conditioned stimulus repeatedly takes place just before the unconditioned stimulus, an individual will come to respond to the conditioned stimulus in a manner similar to his original response to the unconditioned stimulus alone. Pavlov's dogs, which received electric shocks, cuts, or burns followed repeatedly by the presentation of food, responded to these stimuli eventually as signals for food and failed to show even the most subtle signs of pain. Thus
Pavlov concluded that noxious stimuli can be prevented from producing pain or may be modified to provide the signal for eating behavior. Pavlov's studies support the theory that activities in the central nervous system may intervene between stimuli and sensation which disproves any simple psychophysical theory that pain is a primary sensation subserved by a direct communication system from skin receptor to pain center.

Beecher (1956) studied the influence of the individual's psychological state, specifically the effects of anxiety. He compared data collected from 150 men recently wounded in battle with that of 150 civilians subjected to surgery. The soldiers experienced great relief from anxiety at having escaped from the battlefield alive, while surgery was very anxiety-provoking for the civilians. The tissue trauma inflicted by surgery was far less than that of wounds in the same regions inflicted by high explosive shell fragments. Yet the pain arising from the surgeon's wounds was far greater than it was from the war wounds, and the civilian patients tended to require more narcotics than the soldiers. Thus it can be concluded that anxiety level and also distraction are important factors influencing pain perception. Chapman (1944) and Flaherty and Fitzpatrick (1978) also found anxiety to result in increased sensitivity to pain.

Egbert et al. (1964) studied the effect of education and encouragement on 97 surgical patients. "Special-care" patients were told what they might expect during the post operative period and were informed of the nature of the post operative pain they might experience. As methods of coping with pain, they were taught how to relax, how to
take deep breaths, and how to move so that they might remain more comfortable after the surgery. In comparing these patients with the control group it was found that the "special-care" patients requested significantly less narcotic medication during the first five post operative days, presumably because of less anxiety. Likewise, Jones et al. (1966) found that uncertainty concerning future pain seems to elicit anxiety and that information which reduced the uncertainty of future pain seems to reduce anxiety, thus functioning as a strong positive reinforcement for most subjects.

Studies have been conducted illustrating the importance of social relationships with significant others as influencing pain perception, especially in relation to childbirth. Cogan, Henneborn and Klopfer (1976) found that reports of the woman about childbirth pain appear to be related to the support of significant others, particularly her husband. "If the husband served as labor coach, less pain was felt by the wife" (p. 530). Similar results were reported by Henneborn and Cogan (1975), who found that those women whose husbands attended the labor and delivery reported less pain and had a significantly lower probability of receiving medication during labor than those women whose husbands did not attend the delivery. Thus it has been hypothesized that the patient's perception of pain is influenced by distraction, anxiety level, pre-pain education, and support of significant others.

**Childbirth Preparation**

**Lamaze Method** - The Lamaze method of childbirth preparation focuses on many of the factors which have been found to lessen one's perception
of pain and thus should serve to decrease the pain a woman perceives during childbirth. The Lamaze method employs the Pavlovian principles of conditioned reflex training. According to the American Society of Psychoprophylaxis in Obstetrics (ASPO), strong positive conditioning is established so that each uterine contraction, immediately upon being perceived, becomes the signal for the patient to initiate specific breathing techniques which vary with the different phases of labor. Thus distraction (in addition to relaxation) is accomplished. In addition, distraction is accomplished through the use of effleurage or soft, rhythmic rubbing of the abdomen in a circular manner. This use of touch also is effective in relieving pain by stimulating the large myelinated nerve fibers to "close the gates", probably through the release of endorphins (as discussed earlier). In addition, in the Lamaze method relaxation techniques are taught (ASPO), thus reducing the mother's anxiety level. Klusman (1975) concluded from his study that "childbirth education can reduce fear and anxiety" (p. 162). The women are provided with a thorough explanation of pregnancy, labor, and delivery (ASPO). Thus the uncertainty concerning future pain is reduced, and there is resulting less anxiety on the part of the woman. During the Lamaze classes, the husband learns how to actively support his wife as her coach throughout childbirth (ASPO). Thus, Lamaze-prepared women have a sense of control over their pain, which further diminishes both anxiety and pain (Melzack et al., 1973).

Despite the preceding evidence that Lamaze preparation should decrease a woman's perception of childbirth pain, studies in this area show conflicting results. Charles, Norr, Block, Myerling, and Myers
(1977) studied the effects of Lamaze preparation. A group of 95 women who had taken Lamaze classes were compared with a group of 154 women who had not taken the classes. Medical records, personal interviews, and self-administered attitudinal and socioeconomic data were obtained one to three days postpartum in a large metropolitan hospital. Each subject was questioned about her thoughts and feelings about the level of pain overall and at various stages during childbirth. It was found that among multiparas a substantially larger proportion of women who attended classes received no analgesic pain medication. The Lamaze-prepared women found that they were able to use techniques to control pain better, and they also reported significantly lower levels of pain during childbirth than did those women not having received Lamaze preparation. The authors also found that even though Lamaze-prepared women are somewhat different from traditionally-prepared women in parity, socioeconomic status, and psychological attitudes, "these differences do not account for the effects of training" (p. 50).

Zax, Sameroff and Farnum (1974), in their study of childbirth preparation (Lamaze), also found significant differences regarding the taking of pain medication. In this study the childbirth experiences of 70 primiparas and 48 multiparas taking childbirth preparation classes were compared with 41 multiparous women delivering at the same hospitals but not taking the classes. Originally the authors set out to include a second control group of primiparas not taking the classes, but did not find this to be feasible because of the popularity of the classes. In addition, data was collected from 1400 multiparas and 1015 primiparas delivering at one of the same hospitals for comparison purposes. The
findings were statistically significant. Fewer multiparas who attended Lamaze classes received pain medication during labor as compared to the group of 1400 multiparas who had not attended Lamaze classes and for whom data had also been collected.

Several studies have controlled for motivational factors in enrolling in Lamaze classes (Tanzer, 1968; Enkin, Smith, Dermer and Emmett, 1972; Huttell, Mitchell, Fischer and Meyer, 1972). These studies indicate that regardless of motivation, Lamaze preparation is associated with significantly less pain and/or medication.

On the other hand, there have been studies reporting that childbirth preparation does not have a significant effect on pain perception and the taking of pain medication during labor. Hughey, McElin, and Young (1978) compared the birth records of 500 consecutive Lamaze-prepared patients with the birth records of 500 hand-picked controls, matched for age, race, parity, and educational level. This study was retrospective in nature. It was found that Lamaze-prepared patients did not receive significantly less pain medication during labor than traditionally-prepared patients. The authors stated that this finding "probably relates to the general obstetric philosophy that less analgesia is better than more analgesia" (p. 644).

Davenport-Slack and Boylan (1974) studied the effect of 11 independent variables, one of which was childbirth preparation classes, on six dependent variables, one of which was self-report of pain. The authors found that childbirth preparation classes did not have an effect on self-report of pain. The major weakness of the study was that the question concerning pain was not well formulated. The women
were asked "How painful was childbirth, in comparison to other painful experiences you have had?" Perhaps the results of the study reflect the lack of specificity in the wording of this particular question.

Nettelbladt, Fagerstrom and Uddenberg (1976) conducted a study focused on the significance of self-reported childbirth pain in 78 primiparas. The authors found that childbirth preparation did not influence the woman's perception of pain. It is difficult, however, to interpret the data concerning childbirth preparation, much of which was neither presented nor analyzed. Furthermore, in the reports of this research, the proportion of the women receiving childbirth preparation was not indicated.

Traditional Method - Aradine (1973) described the ideal role of the obstetrical nurse in an office setting.

Both nurses and doctors participate in the supervision of normal pregnancies. The nurses carry the bulk of educational responsibilities; they help families understand pregnancy, prepare for hospitalization, labor and delivery, and family planning. Their technical skills are employed for measurements of vital signs, weight recording, urine testing, and for listening to fetal heart tones, conducting Leopold's maneuvers to assess position of baby, observing for edema and varicosities. Their history-taking, interviewing, and teaching skills are of utmost importance in the assessment, planning, provision, and evaluation of care designed to meet the individual needs of patients. Some routine prenatal clinic visits are conducted by the nurse alone, most by physician and nurse. The obstetrician is always available to see the patient if needed. He participates with his nursing colleague in patient education (p. 294).

However, it seems that in many cases little actual nursing care is given in physicians' offices. Winter and Last (1974) in their study of 126 nurses in office practice found that where a clerical worker was not employed, 22 percent of the nurses' time was spent in nursing tasks, and where a clerical worker was employed, 30 percent of the
nurses' time was spent in nursing tasks. These findings indicate that in physicians' offices, nurses' training and skills are seriously underused. Specifically, obstetrical nurses' skills are often underused. Much of their time is used in taking blood pressure readings, testing urine samples, weighing patients and preparing patients to be examined with little interaction between the nurses and patients. Some nurses have begun to improve the situation for both themselves and their patients by sitting and talking with patients, educating them, preparing them for childbirth and by doing a thorough physical assessment. In some offices and clinics, nurses conduct antepartal classes as part of the patients' care (Moore-Nunnally, 1974). Even the ideal role of the obstetrical nurse in providing clinical nursing service in an office setting, as previously discussed, has been implemented (Aradine, 1973).

In addition to doctors' offices, traditional prenatal classes are available through hospitals, universities, and public health departments, many times taught by obstetrical nurses. Topics discussed include infant care and bathing, proper nutrition, breast and bottle feeding, contraception, and differences between true and false labor. Breathing and relaxation exercises are often discussed, however, with much less emphasis than in the Lamaze method. Those prenatal classes conducted in a hospital setting often include a tour of the obstetrical department. Classes are often quite large, with 18 to 20 considered the ideal size for an informal class (Davis, 1979).
Summary

Studies have indicated that activities in the central nervous system play a significant role in one's perception of pain by intervening between stimulus and sensation. The gate control theory of pain helps to explain why, despite having similar thresholds, people react differently to pain. It has been noted that pain perception is influenced by distraction, anxiety level, pre-pain education, and support of significant others. The Lamaze method of childbirth preparation focuses on these areas and should serve to decrease the pain a woman perceives during childbirth. Nevertheless, studies in this area show conflicting results, some reporting less pain perceived with Lamaze preparation than with the traditional form of childbirth preparation and others finding no difference. It should also be noted that many of the studies reviewed included the woman's perception of pain only in terms of taking or not taking pain medication. In the present study an attempt was made to remedy this situation. Pain was studied in terms of quality and intensity, and differences in perception of childbirth pain between women having had Lamaze preparation and those having had traditional preparation were explored, using an adapted form of a tested pain instrument, the McGill-Melzack Pain Questionnaire (MPQ). The MPQ provides quantitative information about pain that can be analyzed statistically and is sufficiently sensitive to detect differences among different methods to relieve pain (Melzack, 1975). Ironically, nursing literature related to childbirth pain is scarce, with much of the pertinent research being found in psychological and medical literature. Hopefully, through the new knowledge obtained
in this study, nurses will gain additional insight so that they may assist couples to cope effectively with the crisis of childbirth, thereby potentiating healthy parent-infant relationships. Thus, in this study, an attempt has been made to answer the question, what is the effect of Lamaze and traditional childbirth preparation on the perception of childbirth pain in multiparas, as reported during the early postpartum period?
CHAPTER III

METHODOLOGY

The present study was ex post facto in nature. According to Polit and Hungler (1978) this means "that the research in question has been conducted after the variations in the independent variable have occurred in the natural course of events" (p. 178). Thus, the subjects previously placed themselves in one of two groups, either Lamaze-prepared or traditionally-prepared. In this study the effect of these variations in the independent variable was studied in terms of the subjects' perception of their childbirth pain.

Setting

The setting for this study was a 600 bed general, suburban hospital. It is a private, not-for-profit institution, affiliated with a large midwestern university. Its clientele are of all races and all socioeconomic classes. Contained within the hospital is a Level III Perinatal Center in which approximately 2500 deliveries are performed each year. The labor and delivery unit consists of six labor beds, four delivery rooms (one of which is used almost exclusively for Cesarean sections), and one birthing room. All of the rooms are private. There is no father's waiting room. Fathers are encouraged to attend and to participate in the labor and delivery experience. Childbirth preparation classes are not prerequisite to the husband's presence during labor and delivery. Registered
nurses are employed to provide actual patient care in the labor and delivery unit. In the majority of cases, the nurse:patient ratio is one:one. The postpartum unit consists of approximately 40 beds.

**Subjects**

The subjects who participated in this study were multiparous women who were approached on the postpartum unit within 24 hours after delivery. Most of the primiparous women who came to this institution at this time enrolled in Lamaze classes. Therefore, this researcher chose to study pain perception in multiparous women because of the feasibility of identifying a group who received traditional childbirth preparation.

Twenty multiparas who had received Lamaze childbirth preparation and 20 multiparas who had received traditional childbirth preparation were accidentally selected and approached individually. The Lamaze-prepared subjects ranged in age from 25 to 35 years, while the traditionally-prepared subjects ranged from 22 to 37 years of age (see Table 1).

The researcher introduced herself to each prospective subject and discussed the focus of the study with her in order to encourage her participation. Each patient who expressed interest was asked if she met the following criteria: (1) she must be married; (2) her husband must have been present for the labor and delivery; (3) she must be 22 to 37 years of age; (4) she must have just given birth to either her second or third child; (5) her previous pregnancy/pregnancies must have been uncomplicated; (6) she must not be considered high-risk; (7) she must have the ability to speak, understand, and write in the English language,
TABLE 1
Age of Subjects

<table>
<thead>
<tr>
<th>Preparation</th>
<th>Lamaze</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22-25</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>26-29</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>30-33</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>34-37</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>
and (8) she must not be retarded. In addition, the Lamaze-prepared patient must have been enrolled in either a complete class or a "refresher" course during her pregnancy, and the traditionally-prepared patient must have never been enrolled in Lamaze classes with a previous pregnancy. If the patient stated she met these criteria and agreed to participate in this study, this researcher asked her to sign the consent form (Appendix B). Each subject was also asked to complete a demographic data sheet (Appendix C), which was useful in furnishing descriptive data about the subjects.

All of the Lamaze-prepared (LP) subjects were of white ethnic background, while traditionally-prepared (TP) subjects included three black and two Asians as well as Caucasians. Sixty-five percent of the LP subjects were either of the Jewish or Protestant religion (5-Jewish; 8-Protestant) and 50% (10) of the TP subjects were of the Catholic religion with only 15% (3) being of the Jewish or Protestant religion.

Subjects ranged in "length of time married" from less than two years to greater than ten years (see Table 2). A difference was noted between the two groups in the area of education. Twenty-five percent (5) of the LP subjects had completed advanced degrees while only 5% (1) of the TP subjects had done so. Likewise, all of the LP subjects' husbands had completed either college or an advanced degree, while only 60% (12) of the TP subjects' husbands had done so. Similarly, 55% (11) of the LP subjects listed a profession other than being a mother when asked about their occupation, as compared to 20% (4) of the TP subjects. A greater number of LP subjects' husbands were professionals when compared to the TP subjects' husbands. However, in
TABLE 2

Years Married

<table>
<thead>
<tr>
<th>Years</th>
<th>Lamaze</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2-4</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>5-7</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>8-10</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Greater than 10</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>
response to "total yearly family income", twice as many (4) of the TP subjects listed greater than $40,000 as their total income than did LP subjects (2). It must be noted, however, that five LP subjects failed to complete this question. Total income ranged from approximately $9,000 to over $40,000 annually (see Table 3). Thus it may be noted that variations existed between the two groups of subjects in the areas of education, profession, and income.

Data related to number of pregnancies, length of labor, pain medication, etc. are described in Chapter IV. These areas seemed pertinent to the focus of this study and the understanding of the findings.

Instrumentation

An adapted form of the McGill-Melzack Pain Questionnaire (AMPQ), which provides multiple measures of pain, was used as the means of data collection in the present study. According to Melzack (1981), the McGill-Melzack Pain Questionnaire (MPQ) can be used to measure childbirth pain.

The MPQ was initiated in a study conducted by Melzack and Togerson in 1971, in which the authors studied qualities of pain. The researchers asked the subjects to classify 102 words, obtained from clinical literature relating to pain, into smaller groups that described different aspects of pain. The words were categorized into three major categories (sensory, affective, and evaluative), on the basis of the data obtained. Within the three major categories, words that were considered to be qualitatively similar by most subjects were grouped together, and each group was referred to as an "item." The second
TABLE 3
Total Yearly Income

<table>
<thead>
<tr>
<th>Preparation</th>
<th>Lamaze*</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>$9,000 - 16,000</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>$17,000 - 24,000</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>$25,000 - 32,000</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>$33,000 - 40,000</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Greater than 40,000</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

*Five Lamaze-prepared subjects failed to complete this question.
portion of the study conducted by Melzack and Torgerson consisted of an attempt to determine the pain intensities implied by the words within each item. Several patients, doctors and students were asked to assign a rank value of intensity to each word, using a numerical scale ranging from least (mild) to worse (excruciating) pain. They were asked to give a value of 1 to the word in each item implying the least pain, a value of 2 to the next word, etc. It became apparent that, although the exact intensity scale values differed among them, the patients, doctors, and students all agreed on the positions of the words relative to each other. This information was to become a part of the pain rating index (PRI) in the developing MPQ.

As a result of a preliminary study conducted in the development of the MPQ, it became apparent that many patients found key words to be absent. These words were then selected from the original lists which were used by Melzack and Torgerson, appropriately classified, and ranked according to scale values. Thus, certain miscellaneous items were added to the word lists of the questionnaire, thus forming the complete PRI portion of the MPQ. In its final form, the PRI portion of the MPQ is composed of 20 items or groups of descriptive words. The respondent is expected to identify those words which are descriptive of his/her perception of pain. To each response word, a numerical value is attached so that by adding the numerical value for each item, a global score and two subscores may be obtained.

As a result of the study done by Melzack and Torgerson, the MPQ was formulated. In addition to the PRI, the questionnaire includes a measure referred to as the present pain intensity (PPI), consisting
of one of the following five words: mild; discomforting; distressing; horrible; excruciating. In this study, the present pain intensity (or PPI) is simply referred to as the pain intensity (or PI).

Several correlations have been computed for the MPQ, which, taken together, "are highly significant statistically and indicate an internal consistency among different categories of the PRI and among the three indices in the questionnaire" (Melzack, 1975, p. 286). Based on N = 200, the intercorrelations among the various items are nearly all at the same level, ranging from 0.82 to 0.97, with the exception of one item, which is usually only used to describe dental pain and was not included in the present study. The patients' ratings of present pain intensity (PPI) significantly correlate (P is less than 0.01 in all cases) with the PRI for each category (correlation coefficients ranging from 0.18 to 0.49) and for all categories (correlation coefficient of 0.42), based on N = 248. The above correlations are based on pooled data obtained with individuals suffering a wide range of pain syndromes. "... correlation coefficients, based on data obtained with individual syndromes, are generally somewhat higher than those obtained with the pooled data" (Melzack, 1975, p. 287). In conducting test-retest studies (patients answered three questionnaires at intervals ranging from three to seven days), it was indicated that the stability of the MPQ ranged from 50% to 100%, with a mean consistency of 70.3% (Melzack, 1975). "It is apparent, then, that the questionnaire provides valid indices of some, at least, of the dimensions of pain ..." (Melzack, 1975, p. 286).
The AMPQ should thus be helpful in determining the effects of different preparations for childbirth.

Four types of data were obtained from the AMPQ in the present study. (1) Global pain rating index, PRI (G), consists of the global score of the rank values (the first word in an item having a value of 1, the second word having a value of 2, etc.) of all words chosen for all categories, i.e., sensory (S; items 1-8), affective (A; items 9-12), evaluative (E; item 13) and miscellaneous (M; items 14-16). (2) Sensory pain rating index, PRI (S), consists of the subscore of the rank values of the words chosen in the sensory category. (3) Affective pain rating index, PRI (A), consists of the subscore of the rank values of the words chosen in the affective category. (4) Pain intensity, PI is the word chosen as the indicator of pain intensity. The PI represents a qualitative index of pain whereas the other types of data represent quantitative indices.

Since the MPQ was not initially developed to obtain a measure of childbirth pain, a pilot study was conducted by this researcher in order to ascertain which items of the PRI portion of the questionnaire related to childbirth pain. Ten subjects who experienced childbirth within approximately the last year were asked to choose a word from each item which they felt described their childbirth pain and they were asked to eliminate any group of words which they felt did not apply. Three items, which were eliminated by more than 50% of the subjects, were excluded from the MPQ as it is used in the present study. One item, which primarily relates to dental pain, was excluded by this researcher prior to conducting the pilot study. Thus, in the PRI
portion of the AMPQ, the sensory category consists of 8 items (#'s 1-8), the affective category consists of 4 items (#'s 9-12), the evaluative category consists of 1 item (#13), and the miscellaneous category consists of 3 items (#'s 14-16). This yields a total of 16 items in the PRI portion of the AMPQ.

Collection of Data

After the subjects agreed to participate in this study, the instrument was administered individually, by this researcher in the patient's room on the postpartum unit, within 24 hours after the subject gave birth. The instructions were read out loud to the patient (see Appendix A). As suggested by Melzack, to ensure the questionnaire's accuracy, the words were read to the patient, and this investigator marked the responses herself (Melzack, 1975). The patient was encouraged to choose one word from each item, however, if she struggled to select a word, a score of zero was assigned to that item. The words were repeated more than once if necessary. The data collection involved approximately two months. Once completed, the responses were collated and the data analyzed.

Summary

The setting for this study was a 600 bed general, suburban hospital. Contained within the hospital is a Level III Perinatal Center in which approximately 2,500 deliveries are performed each year. The subjects who participated in this study were multiparous women who were approached in their room on the postpartum unit within 24 hours after delivery. Twenty multiparas who had received Lamaze childbirth
preparation and 20 multiparas who had received traditional childbirth preparation were accidentally selected and approached individually. Subjects were asked to sign a consent form and to complete a demographic data sheet. The Adapted McGill-Melzack Pain Questionnaire (AMPQ), which provides multiple measures of pain, was used as the means of data collection.
CHAPTER IV

ANALYSIS OF DATA

In analyzing the data in this study, information about the number of pregnancies, length of labor, and utilization of pain medication, etc. seemed relevant and essential to the understanding of the findings.

Nearly all (19 out of 20) of the LP subjects had just given birth to their second child, while half (10 out of 20) of the TP subjects had just given birth to their second child, and the remainder had just given birth to their third child. For the LP subjects, most (16 out of 20) had last given birth two to four years prior. Similarly, most (14 out of 20) of the TP subjects had last given birth two to four years prior.

The "length of total labor" ranged from 1-1/2 hours to 21 hours for LP subjects and from 1-1/2 hours to 17 hours for TP subjects. For LP subjects, 75% (15) had a total labor of 10 hours or less, while for TP subjects, 55% (11) had a total labor of 10 hours or less. The two groups were similar in the "length of time from five-minute-apart contractions to delivery." Only 2 of the LP subjects indicated that this length of time was less than 2 hours, while 5 of the TP subjects so indicated. However, 14 of the LP subjects indicated that this length of time was 4 hours or less, and 13 of the TP subjects so indicated. Length of time from five-minute-apart contractions to delivery ranged from 20 minutes to 14 hours for LP subjects and from
one-half hour to 12 hours for TP subjects (see Table 4). The "length of time in the hospital" until delivery ranged from 20 minutes to 12 hours for LP subjects and from 1/2 hour to 11 hours for TP subjects. Four LP subjects were in the hospital less than 2 hours, while only 2 TP subjects were in the hospital less than 2 hours. Sixty-five percent (13) of the LP subjects were in the hospital 4 hours or less, while 40% (8) of the TP subjects were in the hospital 4 hours or less until delivery (see Table 5). The "number of times pain medication was received" during labor ranged from 0 to 3 for both groups of subjects. Sixty-five percent (13) of the LP subjects did not receive medication while 50% (10) of the TP subjects did not receive medication (see Table 6). In addition, variations between the two groups of subjects were also noted in type of anesthetic received for delivery. Fifty percent (10) of the TP subjects received either caudal or epidural anesthesia (caudal - 9; epidural- 1), while none of the LP subjects received such anesthesia (see Table 7). This is significant in that the dependent variable in this present study is the subject's perception of childbirth pain. Thus, it may be noted that dissimilarities existed between the two groups of subjects in the length of time spent in the hospital prior to delivery, in the utilization of pain medication, and in the type of anesthetic received for delivery, while similarities were noted in length of labor.

Ninety percent (18 out of 20) of the LP subjects had been enrolled in a "refresher" Lamaze class, while two of the subjects had taken Lamaze classes for the first time with the current pregnancy. Seventy-five percent (15 out of 20) of the TP subjects had neither been enrolled
<table>
<thead>
<tr>
<th>Preparation</th>
<th>Lamaze</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>2-4</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>5-7</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8-10</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>11-13</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>14-16</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

TABLE 4
Length of Time from Five-Minute-Apart Contractions to Delivery
TABLE 5

Length of Time in Hospital

<table>
<thead>
<tr>
<th>Hours</th>
<th>Lamaze</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>2-4</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>5-7</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>8-10</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>11-13</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
TABLE 6
Number of Times Pain Medication Received During Labor

<table>
<thead>
<tr>
<th>Preparation</th>
<th>Lamaze</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Times</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 7
Anesthetic Received For Delivery

<table>
<thead>
<tr>
<th>Anesthetic</th>
<th>Lamaze</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Local</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>Pudendal</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Caudal</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Epidural</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
in Lamaze nor any type of prenatal class. Five of the TP subjects had at some time been enrolled in a prenatal class, four of them with a previous pregnancy and one of them with the current pregnancy. Three of the LP subjects indicated that they missed one of the classes that they should have attended. Sixty-five percent (13) of the LP subjects stated that the Lamaze classes helped them, 25% (5) stated that they were helped somewhat, and no LP subject stated that the classes did not help her during the childbirth experience. Of the five TP subjects who had enrolled in prenatal classes, one subject indicated that the classes had helped a lot, three subjects (including one subject who had been enrolled in the classes during the current pregnancy) indicated that the classes helped somewhat, and one subject indicated that the classes did not help at all.

When asked, "How supportive was your labor and delivery nurse?" 85% (17) of the LP subjects and 80% (16) of the TP subjects stated that their nurse/nurses were extremely supportive. When asked in what ways the nurse was supportive, the following responses were used frequently: by offering encouragement and praise, by being optimistic and reassuring, by providing information and explanations concerning progress, by helping with breathing techniques, by being friendly, personable, cheerful, and kind, by not interfering too much and by providing comfort measures. Some subjects stated that they would have appreciated additional psychological support during transition.

In order to answer the question, "What is the effect of Lamaze and traditional childbirth preparation on the perceptions of childbirth pain in multiparas, as reported during the early postpartum period?"
it was necessary to obtain measures of pain from a global score, two sub scores, and also from a qualitative index of pain. Four types of data were obtained from the Adapted McGill-Melzack Pain Questionnaire (AMPQ) for 20 Lamaze-prepared (LP) and 20 traditionally-prepared (TP) subjects. (1) Global pain rating index, PRI (G), global score, sensory (S; items 1-8), affective (A; items 9-12), evaluative (E; item 13) and miscellaneous (M; items 14-16). (2) Sensory pain rating index, PRI (S), items 1-8. (3) Affective pain rating index, PRI (A), items 9-12. (4) Pain intensity, PI is the word chosen as the indicator of pain intensity. (Each subject's PRI (G) and PRI (S) scores are listed in Appendix D.)

It may be noted that, in exploring this research focus, two hypothetical statements were posed as well as two research questions. This was necessary because of the lack of specificity in the data obtained in relation to the affective qualities of childbirth pain (Research Question I) and the intensity of childbirth pain (Research Question II).

**Hypothesis I**

The first hypothesis was: there is no significant difference in perception of childbirth pain in women having received Lamaze preparation and women having received traditional childbirth preparation. The data obtained using the AMPQ consisted of the PRI (G), which was a global score obtained in response to items 1-16, from 20 LP and 20 TP subjects. The PRI (G) scores ranged from 16 to 49 for LP subjects with a mean of 32.15 and from 18 to 56 for TP subjects with a mean of 34.3.
It may be noted (see Table 8) that 80% (16) of the responses from LP subjects fell between 27 and 38. In contrast, only 35% (7) of the responses from TP subjects fell between 27 and 38. The computed variance of the LP group of subjects was 47.92 and the computed variance of the TP group was 111.91.

The \( t \) test for independent samples was used to analyze the data in a two-tailed test at the 0.05 level of significance. The observed value of the \( t \) score was 0.76, which did not reach the critical value of 2.02 at the 0.05 level of significance with 38 degrees of freedom. Therefore, this researcher fails to reject the hypothesis that there is no significant difference in perception of childbirth pain in women having received Lamaze preparation and women having received traditional childbirth preparation. In other words, the manner in which LP and TP women perceive their childbirth pain is similar.

It was noted that the scores obtained from the LP subjects tended to cluster between 27 and 38, while the scores obtained from the TP subjects were spread over a wider range of scores (18-56). Consequently, an \( F \) test (Hays, 1973) was utilized to test whether or not there was a significant difference between the variances of the two groups. The obtained value of \( F \) was 2.34, which exceeded the critical value of 2.16 at the 0.05 level of significance with 19, 19 degrees of freedom.

It should be noted that the assumption of homogeneity of variance in the \( t \) test has been violated. However, Glass & Stanley (1970) specifically state that "If \( n_1 \) and \( n_2 \) are equal, violation of the homogeneous variances assumption is unimportant and need not concern us" (p. 297). Therefore, after analyzing the data, it may be stated
## TABLE 8

Global Pain Rating Indices - PRI (G) Scores

<table>
<thead>
<tr>
<th>Score</th>
<th>Lamaze</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-17</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>18-20</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>21-23</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>24-26</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>27-29</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>30-32</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>33-35</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>36-38</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>39-41</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>42-44</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>45-47</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>48-50</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>51-53</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>54-56</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
that the variance or "spread" of scores from the two groups of subjects were significantly different even though the means of the pain indices were not significantly different.

Hypothesis II

The second hypothesis was: there is no significant difference in perception of the sensory qualities of childbirth pain in women having received Lamaze preparation and women having received traditional childbirth preparation. The data obtained using the AMPQ consisted of the PRI (S), which was a subscore obtained in response to items 1-8, for 20 LP and 20 TP subjects. The PRI (S) scores ranged from 9 to 27 with a mean of 19.3 for LP subjects and from 10 to 29 for TP subjects with a mean of 19.7 (see Table 9).

The t test was used to analyze the data. The observed value of the t score was 0.25, which did not reach the critical value of 2.02 at the 0.05 level of significance with 38 degrees of freedom. Therefore, this researcher fails to reject the hypothesis that there is no significant difference in perception of the sensory qualities of childbirth pain in women having received Lamaze preparation and women having received traditional childbirth preparation. In other words, the manner in which LP and TP women perceive the sensory qualities of their childbirth pain is similar.

Research Question I

The first research question was: how did the women having received Lamaze preparation and those having received traditional
<table>
<thead>
<tr>
<th>Preparation</th>
<th>Score</th>
<th>Lamaze</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9-11</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>12-14</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>15-17</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>18-20</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>21-23</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>24-26</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>27-29</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
childbirth preparation perceive the affective qualities of their childbirth pain? The data obtained using the AMPQ consisted of the PRI (A), which was a subscore obtained in response to items 9-12, for 20 LP and 20 TP subjects. The PRI (A) scores ranged from 0-9 for both groups of subjects. These data were not analyzed statistically because over half of the LP subjects failed to answer three of the four items from the affective category, and over half of the TP subjects failed to answer two of the items from the same category. However, the subjects' responses were evaluated in a qualitative manner. Four items ( #'s 9-12) comprised the affective category. Item 9 consisted of the words tired and exhausting; item 10 consisted of the words sickening and suffocating; item 11 consisted of the words fearful, frightful and terrifying; and item 12 consisted of the words punishing, gruelling, cruel, vicious, and killing. Responses to the items were as follows:

<table>
<thead>
<tr>
<th>Item 9</th>
<th>Lamaze</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tiring</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Exhausting</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>No Word Chosen</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item 10</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sickening</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Suffocating</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>No Word Chosen</td>
<td>15</td>
<td>11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item 11</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fearful</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Frightful</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Terrifying</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>No Word Chosen</td>
<td>11</td>
<td>9</td>
</tr>
</tbody>
</table>
Research Question II

The second research question was: how did the women having received Lamaze preparation and those having received traditional childbirth preparation perceive the intensity of their childbirth pain? The data obtained using the AMPQ consisted of a qualitative index of pain, the PI, or the word chosen as the indicator of pain intensity for 20 LP and 20 TP subjects. Subjects were asked to choose the word from the group that was the best indicator of their pain intensity. The group of words consisted of mild, discomforting, distressing, horrible, and excruciating. Of the LP subjects, none chose the word "mild", 4 chose "discomforting", 11 chose "distressing", 2 chose "horrible", and 3 chose "excruciating." Of the TP subjects, 2 chose the word "mild", 7 chose "discomforting", 6 chose "distressing", 2 chose "horrible", and 3 chose "excruciating." (See Table 10.)

Summary

In conclusion, while this researcher failed to reject the hypothesis related to perception of childbirth pain in LP and TP women, analysis of the data did indicate a significant difference in the variance of the responses from the two groups of subjects. Also, in terms of the qualitative section of the AMPQ, specific items were omitted by both
Table 10

Subjects Perceptions of the
Pain Intensity (PI) of Childbirth

<table>
<thead>
<tr>
<th>Word Chosen</th>
<th>Lamaze</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Discomforting</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Distressing</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Horrible</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Excruciating</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>
groups, particularly those containing words with extreme negative connotations such as "terrifying", "killing", etc.
In order to explore the effect of childbirth preparation on pain perception during childbirth, 20 Lamaze-prepared (LP) and 20 traditionally-prepared (TP) multiparous women who met certain stated criteria were selected for participation in this study. The Adapted McGill-Melzack Pain Questionnaire (AMPQ) was used as the means of data collection. The data were analyzed and will be discussed in this chapter.

Hypothesis I - The first hypothesis was: there is no significant difference in perception of childbirth pain in women having received Lamaze preparation and women having received traditional childbirth preparation. In this hypothesis, "pain" is considered in a "global" or "over-all" fashion. Data analysis revealed that the means of the two groups of subjects were not significantly different but that the variances were significantly different. Within the LP group of subjects, scores in response to the AMPQ were clustered around the mean with only a few extreme scores, while a wide range of scores was observed in the AMPQ responses of the subjects in the TP group.

Lamaze preparation focused on childbirth education, relaxation, distraction, and support of a significant other. It seems that these factors may have altered the women's perceptions of childbirth pain.
to some extent and the women in the LP group perceived pain in a similar fashion. One may wonder if the LP women were better prepared than the TP women for the pain of childbirth—perhaps the LP women were better educated in relation to childbirth than the TP women, had a greater understanding of what was occurring within their bodies and of what to expect, were better prepared to relax during the childbirth experience, and were accompanied by "significant others" who had been educated in ways to be actively supportive during childbirth. As a result, the LP women perceived pain in a somewhat homogeneous manner.

In contrast, within the TP group of subjects, an extreme range of scores was observed in response to the AMPQ. One may wonder if their perception of childbirth pain was different because the TP women were not as well prepared as the LP women for the pain of childbirth—perhaps the TP women were not as well educated in relation to childbirth as the LP women, were not as able to relax during the experience, and did not have the assistance of "significant others" who were prepared to actively provide support during childbirth. Thus, a dissimilarity may have existed in the psychological and emotional states of the TP women and they perceived pain in a more heterogeneous manner than the LP women.

**Hypothesis II** - The second hypothesis was: there is no significant difference in perception of the sensory qualities of childbirth pain in women having received Lamaze preparation and women having received traditional childbirth preparation. Data analysis revealed no significant difference and this researcher has failed to reject this hypothesis. This seems to indicate that Lamaze preparation
did not alter perception of the sensory qualities of childbirth pain. One factor may have contributed to the fact that the LP and the TP women did not perceive the sensory qualities of their pain differently in retrospect, even as early as 24 hours after delivery. This factor may be that the "transition" stage of labor, which is usually considered to be the most painful stage (Clark & Affonso, 1979), seems to be amnesic. Many women seem to repress this stage almost as soon as labor is over. Thus, perhaps there is a difference in perception of pain at the time of childbirth, however, it may not be remembered after the experience is over. Psychologically this repression is not difficult to understand when considering the fact that many women give birth several times.

On the other hand, the LP and the TP women may have not perceived the sensory qualities of their childbirth pain differently at all. The difference may lie in the manner in which the two groups reacted to their pain. In attempting to understand the findings in this study, this researcher thought it was necessary to differentiate between pain perception and pain reaction. As defined in this study the perception of pain is viewed as that sensation of hurt (in this case childbirth pain) which the individual is aware of and assigns meaning to through the use of senses, past experiences, and emotional and psychological states. In contrast, the reaction to pain may be considered that behavior which follows the perception of a sensation of hurt (in this case, childbirth pain). Lamaze preparation focused on childbirth education, relaxation, distraction, and support of a significant other. In addition, the LP women were trained in the
the development of a conditioned response upon perceiving childbirth pains. Thus, these women may have reacted to their pain in a predetermined manner. It may be that the Lamaze preparation served as an anticipatory socialization process which was manifested more in pain reaction than in pain perception.

Research Question I - The first research question was: how did the women having received Lamaze preparation and those having received traditional childbirth preparation perceive the affective qualities of their childbirth pain? When looking at the words the subjects chose in the affective category (see pp. 42-43), certain interesting differences and similarities may be noted. Thirty-five percent (7) of the LP subjects chose the word "exhausting", while 50% (10) of the TP subjects chose the same word. Perhaps through Lamaze classes, the LP women were less anxious, had a sense of control over their pain, and were thus able to conserve energy. Fifteen percent (3) of the LP subjects chose the word "sickening", while 40% (8) of the TP subjects chose the same word. Perhaps through Lamaze classes the LP women were better educated in relation to childbirth and had a greater understanding of what was occurring within their body. Thus, fewer LP subjects as compared to TP subjects chose the word "sickening" to describe their childbirth pain. Five percent (1) of the LP subjects chose the word "terrifying", while 15% (3) of the TP subjects chose the same word. Fifty-five percent (11) of the LP subjects as compared to 45% (9) of the TP subjects did not choose any of the words relating to fear. The difference might again be related to the childbirth education provided by Lamaze classes and may have reflected knowledge of what to
expect during the childbirth process. The large number of subjects who did not select any of the words relating to fear perhaps also revealed an effective traditional childbirth preparation. Many of the TP subjects may have read a great deal about childbirth, perhaps even about the Lamaze method. Moreover, nurses in the labor and delivery areas generally are very supportive to clients during childbirth, providing explanations and teaching Lamaze breathing techniques to TP women. The large number of subjects who did not select any of the words relating to fear may also reflect qualities of a multiparous sample.

The last item in the affective category consisted of the words punishing, gruelling, cruel, vicious, and killing. Sixty percent (12) of the LP subjects and 60% (12) of the TP subjects did not select any of the words from this item. All of these words have negative connotations, and were not chosen by many of the subjects, probably because the end result of the childbirth experience, the birth of a child, is most often viewed as a joyous event and as one of the most special moments in the life of a married couple.

It may be noted that the words "exhausting", "sickening", and "terrifying" seem to be qualitatively "reactive" types of words. These words were more often chosen by the TP women than by the LP women, thus suggesting further that Lamaze preparation may have altered the women's reactions to their childbirth pain to a greater extent than their perceptions of childbirth pain.

Research Question II - The second research question was: how did the women having received Lamaze preparation and those having received traditional childbirth preparation perceive the intensity of
their childbirth pain? When looking at the words the subjects chose as their best indicator of pain intensity (see Table 9), some interesting ideas are formulated. No LP subject chose the word "mild", while 10% (2) of the TP subjects chose the same word. Twenty percent (4) of the LP subjects chose the word "discomforting", while 35% (7) of the TP subjects chose the same word. Perhaps the TP subjects repressed their pain sooner and to a greater degree than the LP subjects, who seemed to have a more realistic view of their pain. Fifty-five percent (11) of the LP women chose the word "distressing", while 30% (6) of the TP women chose the same word. However, only 25% (5) of each group of subjects chose either the word "horrible" or the word "excruciating". This may be related to the amnesic quality of childbirth pain which was stated earlier. In addition, these words have somewhat negative connotations, and, as discussed previously, subjects generally were noted not to select such words. This is especially apparent when noting that only 10% (2) of the LP and 10% (2) of the TP subjects chose the word "horrible". No relationship was found between the choice of the word "excruciating" and the length of labor. Furthermore, the taking or not taking of pain medication did not seem to be related to the manner in which the subjects' responded to the group of words used to obtain a measure of the pain intensity of childbirth.

An interesting similarity exists between the LP and the TP subjects' perceptions of the pain intensity of childbirth. Seventy-five percent (15) of the LP subjects and 75% (15) of the TP subjects chose one of the words "mild", "discomforting", or "distressing". This similarity of perceptions suggests further that Lamaze preparation may not have altered the woman's perception of childbirth pain to the
extent that it altered her reaction to such pain.

This study yielded further information, mostly based on the demographic data, which bears discussion. A similarity existed between the two groups of subjects in "length of labor", however, variations in the "length of time in the hospital" were noted. Sixty-five percent (13) of the LP subjects and 40% (8) of the TP subjects were in the hospital four hours or less until delivery. Perhaps as a result of the education received through Lamaze classes, the LP women had less need to enter the hospital early in their labor.

In terms of "number of times pain medication was received" during labor, 65% (13) of the LP subjects received no pain medication during labor, while 50% (10) of the TP subjects did not receive medication. This suggests again that while the LP women may not have perceived less pain during childbirth, they may have reacted differently to their pain, appearing to have had a greater sense of control over it, thus requiring less pain medication. Likewise, no LP subject received a regional (caudal or epidural) anesthetic while 50% (10) of the TP subjects received such an anesthetic. Perhaps the manner in which the TP subjects were reacting to their pain resulted in the obstetrician suggesting they receive a regional anesthetic.

Furthermore, no LP subject stated that the Lamaze classes did not help her during the childbirth experience. The LP women seemed to believe that Lamaze classes helped, that they had a sense of control over their pain, and that they were able to do something to control their pain, further decreasing their anxiety. As a result, LP women may have reacted differently to their pain. Moreover, for the evaluative
category in the questionnaire, subjects were asked to choose one of the following words: annoying, troublesome, miserable, intense, and unbearable. Ten percent (2) of the LP subjects chose the word "unbearable", while 20% (4) of the TP subjects chose the same word. Again, this may reflect the sense of control the LP women seemed to feel they had over their pain and also the anticipatory socialization process which may have been fostered through Lamaze preparation.

Limitations

Ordinarily, random selection of subjects is utilized to assure a normal distribution and homogeneous variance among the subject groups. Unfortunately, such is often not readily possible in nursing research because of the difficulty in obtaining a large group of clients who manifest the criteria identified for subject selection. Therefore, an accidental sample of subjects was chosen in this study.

In addition, ideally, a pre-and post-measure of the dependent variable is desirable. Again, as in other nursing studies, it is often either impossible or extremely difficult to obtain a pre-measure on variables such as pain or anxiety. Therefore, this researcher obtained only a post-measure of pain, thus leading to a research design that was not as strong as it would have been if a pre-measure of pain had been easily obtainable.

Another limitation of this study was that some of the subjects had the baby with them, i.e. "rooming-in." Perhaps as a result these women remembered their childbirth pain in a more positive manner than did those women who did not have their infants present. This may have
led to the subjects selecting different responses than they might otherwise have chosen if the infants had not been present in the same room while they responded to the questionnaire. In addition, 73% (29) of the subjects had just given birth to their second child (the remainder had just given birth to their third child). These subjects thus had a good idea of what to expect in terms of labor, and were in many cases noted to be comparing their second labor to their first (which was, in most cases, longer and more difficult). Indeed, their past experiences with childbirth pain would have affected latter perceptions of childbirth pain. These comparisons and past experiences may be reflected in the manner in which the subjects answered the questionnaire. Also, as they responded to the questionnaire, the different subjects may have had different stages of the childbirth experience in mind. Furthermore, the TP subjects were not a homogeneous group, which may have accounted for some of the heterogeneity in perceptions of pain within the group.

**Recommendations For Further Research**

This researcher suggests that this study be repeated, using a random selection procedure and a larger sample size. Two comparison groups of pregnant women who are planning to give birth at several hospitals within a geographical area could be randomly selected. Random selection of hospitals is also recommended. This would allow for greater generalizability of the findings than would otherwise result when random selection of subjects and hospitals does not occur, as well as when a smaller sample size and only one hospital are utilized.
It is also recommended in a future study that, if possible, a pre-measure of pain be obtained, i.e., having subjects respond to past pain, for example, the pain perceived after the extraction of a tooth. Including a pre-measure of the dependent variable would strengthen the quality of the research design.

Furthermore, this researcher suggests that in a future research study additional controls be added, such as not having the infant present in the room as the subject responds to the questionnaire, including only primiparous women in the study, and asking the subjects to respond to one stage of childbirth only, i.e., the "transition" stage. Thus the internal validity of the study would be improved. Moreover, this researcher recommends that in a future research study the race and educational preparation of subjects be controlled. In an ex post facto study, comparison groups which are as similar as possible enhance the interpretability of research findings.

A study could also be conducted to determine the effects the analgesia/anesthesia which the woman receives during the childbirth experience has on her perception of childbirth pain. Moreover, a future study could include some physiological measures of pain such as endorphin levels, urinary catecholamines, and/or corticosteroids.

This researcher further suggests that a research study be conducted to strengthen the Adapted McGill-Melzack Pain Questionnaire for its use in measuring childbirth pain. It is suggested that a study be implemented with the purpose of further adapting the McGill-Melzack Pain Questionnaire for its use in measuring childbirth pain. It would be desirable to include only those items found to be significant
in obtaining an accurate measure of childbirth pain. Reliable and valid tools for the measurement of childbirth pain are greatly needed in nursing research.

Significance of the Study

The most important contribution of this research study is the successful utilization of an adapted form of the McGill-Melzack Pain Questionnaire to obtain a measure of childbirth pain. This is the first time this instrument has been used to obtain a measure of pain related to childbirth. The potential for its further utilization in similar research studies must be studied and evaluated.

The data obtained in this study revealed a significant difference in the variances or "spread" of the global scores obtained from the Lamaze-prepared and the traditionally-prepared groups of subjects. Due to the preparation received through Lamaze classes, the Lamaze-prepared women perceived pain in a more homogeneous manner than did the traditionally-prepared women.

The data obtained in this study revealed no significant difference in perception of the sensory qualities of childbirth pain in the Lamaze-prepared and the traditionally-prepared groups of subjects. Perhaps the Lamaze preparation fostered a sense of control over the pain, and thus the Lamaze-prepared women may have reacted differently to their childbirth pain than did the traditionally-prepared women. It may be that the Lamaze preparation served as an anticipatory socialization process which was manifested more in pain reaction than in pain perception.
Hopefully, as a result of this study, maternal-child health nurses will have a better understanding of clients' perceptions of both the quality and intensity of their childbirth pain as well as an understanding of clients' reactions to their pain. This knowledge should be helpful to nurses in providing support for parents in assisting them to cope with the crisis of childbirth. The optimum resolution of childbirth is the parent's development of positive attitudes towards their infant as well as a strengthened marital relationship, thus yielding a healthy mother-father-infant triad.
BIBLIOGRAPHY


Chapman, W. P. Measurements of Pain Sensitivity in Normal Control Subjects and in Psychoneurotic Patients. Psychosomatic Medicine, 1944, 6, 252-257.


Luce, J. M., Thompson, T. L., Getto, C. J., and Byyny, R. L. New Concepts of Chronic Pain and Their Implications. Hospital Practice, April 1979, 14, 113-123.


APPENDIX A
APPENDIX A

ADAPTED MCGILL-MELZACK PAIN QUESTIONNAIRE

Directions read to subjects: "I'm going to read several groups of words used to describe pain. Choose the word from each group that best describes the pain you felt during your labor and delivery. If you are able to, select a word from each group, but don't pick more than one word from a group."

Code #: 

Pain Rating Index

Sensory

1) Jumping ___

Flashing ___

Shooting ___

2) Pricking ___

Boring ___

Drilling ___

Stabbing ___

3) Sharp ___

Cutting ___

Lacerating ___

4) Pinching ___

Pressing ___

Gnawing ___

Cramping ___

Crushing ___

5) Tugging ___

Pulling ___

Wrenching ___

6) Tingling ___

Itchy ___

Smarting ___

Stinging ___
7) Dull
   Sore
   Hurting
   Aching
   Heavy

8) Tender
   Taut
   Rasping
   Splitting

Affective

9) Tiring
   Exhausting

10) Sickening
    Suffocating

11) Fearful
    Frightful
    Terrifying

12) Punishing
    Gruelling
    Cruel
    Vicious
    Killing

Evaluative

13) Annoying
    Troublesome
    Miserable
    Intense
    Unbearable

Miscellaneous

14) Spreading
    Radiating
    Penetrating
    Piercing

15) Tight
    Numb
    Drawing
    Squeezing
    Tearing
16) Nagging
    Nauseating
    Agonizing
    Dreadful
    Torturing

Pain Intensity

1. Mild
2. Discomforting
3. Distressing
4. Horrible
5. Excruciating
APPENDIX B
APPENDIX B

INFORMED CONSENT

I Explanation of Study: The purpose of this study is to determine the effect your preparation for childbirth had on the pain you felt during labor and delivery. You will be asked to respond to a short questionnaire, concerning your perception of your childbirth pain. It will take about 15 minutes of your time.

II Individual providing explanation: The procedures and/or investigations described in the above paragraphs have been explained to me by Patricia Sweeney.

III Possible Benefits: It is not expected that you will benefit from your participation in this study; however it is hoped that from the information obtained through this study nurses will be able to offer couples additional support during childbirth.

IV Risks & Discomforts: There are no risks of which this researcher is aware to individuals who participate in this study. Since no names are to appear on the questionnaire, no one will know, except yourself, how you answered the questions.

V Explanation of investigators (& assistants) availability to answer questions: I understand that any inquiries made by me regarding the described procedure will be answered in accord with prevailing medical knowledge and judgment.

VI Explanation of ability to withdraw from study: I also understand that I am free to withdraw this consent and to discontinue participation in the described activities, treatment and research at any time without prejudice.
VII Consent to participate: I understand that the activities will be supervised by Dr. and whomever he may designate as his assistants. I have read this explanation of activities to be followed or have had it read to me. With this knowledge of the nature and purposes of the activities, treatment, the possible attendant discomforts and risks, the possible benefits and the possible alternative methods of treatment, I hereby authorize the performance of the activities described above:

(print name of participant)

VIII Confidentiality: I consent to the publication of any data which may result from this investigation for the purpose of advancing medical knowledge providing my name is not used in connection with such publication.

IX Payment for participation:

X Compensation disclaimer: I understand that in the event of physical injury resulting from the research procedures, medical treatment for injuries or illness is available through the Evanston Hospital. Payment for expenses for this treatment will be my own responsibility. I understand that further information may be obtained from the Office for Research of Evanston Hospital.

XI Alternate person to whom questions may be addressed: Mrs. Janet Emmerman, Representative of Protection of Human Subjects Committee; Tel: 492-6533 or Mr. Jeffrey Hillebrand; Tel: 492-4552.

XII Subject's Signature: Signature ____________________________ Date ____________________________

XIII Witness Signature: Signature ____________________________ Date ____________________________
APPENDIX C
Please answer the following questions. This information is helpful in furnishing descriptive data about you and will be useful when analyzing the results of the study. Your answers will be kept confidential. Your cooperation is greatly appreciated.

1. What is your age?

_____ (years)

2. What is your ethnic background?

American Indian
Black
Asian or Pacific Islander
Hispanic
White
Other

3. What is your religion?

Catholic
Jewish
Protestant
Other
None

4. For how many years have you been married?

Less than 2 years
2-4 years
5-7 years
8-10 years
More than 10 years

5. What is the highest level of schooling you completed?

8th Grade
High School
College
Advanced Degree
6. What is the highest level of schooling your husband completed?

- 8th Grade
- High School
- College
- Advanced Degree

7. What is your occupation?

8. What is your husband's occupation?

9. What is the total yearly income of your family?

- $8,000 or less
- $9,000-$16,000
- $17,000-$24,000
- $25,000-$32,000
- $33,000-$40,000
- Greater than $40,000

10. Have you just given birth to your second or third child?

- 2nd
- 3rd

11. What is the age and sex of your other children at home?

- _____(years) -- Girl; Boy
- _____(years) -- Girl; Boy
- _____(years) -- Girl; Boy

12. How long was your total labor?

- _____ hours

13. How long was it from the time your contractions became 5 minutes apart or closer until you delivered?

- _____ hours

14. How long were you in the hospital?

- _____ hours
15. How many times did you receive pain medication during labor?

None
1 time
2 times
3 times
More than 3 times

16. Did you participate in either Lamaze classes or prenatal classes?

Full Lamaze
"Refresher" Lamaze
Prenatal
Other
Neither

17. If you participated in either prenatal classes or Lamaze classes, how many classes did you miss that you should have attended?

______ number

18. If you participated in Lamaze classes or prenatal classes, do you think they helped your pain during childbirth?

Yes, alot
Yes, somewhat
No, not at all
Other

19. How supportive was your labor and delivery nurse?

Minimally supportive
Moderately supportive
Extremely supportive

20. In what ways was she supportive and in what ways could she have been more supportive?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

69
### APPENDIX D

**SUBJECTS' PRI(G)* AND PRI(S)* SCORES TO THE ADAPTED MCGILL-MELZACK PAIN QUESTIONNAIRE**

<table>
<thead>
<tr>
<th>Lamaze-prepared Subjects</th>
<th>PRI(G)</th>
<th>PRI(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>42</td>
<td>27</td>
</tr>
<tr>
<td>S2</td>
<td>32</td>
<td>21</td>
</tr>
<tr>
<td>S3</td>
<td>16</td>
<td>9</td>
</tr>
<tr>
<td>S4</td>
<td>35</td>
<td>14</td>
</tr>
<tr>
<td>S5</td>
<td>23</td>
<td>14</td>
</tr>
<tr>
<td>S6</td>
<td>34</td>
<td>24</td>
</tr>
<tr>
<td>S7</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>S8</td>
<td>49</td>
<td>25</td>
</tr>
<tr>
<td>S9</td>
<td>30</td>
<td>17</td>
</tr>
<tr>
<td>S10</td>
<td>36</td>
<td>21</td>
</tr>
<tr>
<td>S11</td>
<td>36</td>
<td>27</td>
</tr>
<tr>
<td>S12</td>
<td>31</td>
<td>16</td>
</tr>
<tr>
<td>S13</td>
<td>29</td>
<td>18</td>
</tr>
<tr>
<td>S14</td>
<td>30</td>
<td>18</td>
</tr>
<tr>
<td>S15</td>
<td>29</td>
<td>15</td>
</tr>
<tr>
<td>S16</td>
<td>27</td>
<td>19</td>
</tr>
<tr>
<td>S17</td>
<td>27</td>
<td>20</td>
</tr>
<tr>
<td>S18</td>
<td>38</td>
<td>23</td>
</tr>
<tr>
<td>S19</td>
<td>29</td>
<td>17</td>
</tr>
<tr>
<td>S20</td>
<td>35</td>
<td>21</td>
</tr>
</tbody>
</table>
Traditionally-prepared Subjects | PRI(G) | PRI(S)  
---|---|---  
S1  | 23 | 11  
S2  | 21 | 10  
S3  | 18 | 13  
S4  | 27 | 18  
S5  | 28 | 14  
S6  | 56 | 29  
S7  | 40 | 23  
S8  | 48 | 27  
S9  | 44 | 26  
S10 | 43 | 23  
S11 | 31 | 19  
S12 | 26 | 21  
S13 | 34 | 15  
S14 | 33 | 22  
S15 | 48 | 25  
S16 | 30 | 20  
S17 | 43 | 26  
S18 | 33 | 20  
S19 | 40 | 19  
S20 | 20 | 13  

*PRI(G) - a global score obtained in response to items 1-16 in the AMPQ.  
*PRI(S) - a subscore obtained in response to items 1-8 in the AMPQ.
The thesis submitted by Patricia M. Sweeney has been read and approved by the following committee:

Dr. Elizabeth B. Brophy, Director
Assistant Professor, Nursing, Loyola

Dr. Linda W. Janusek
Assistant Professor, Nursing, Loyola

Dr. Dona J. Snyder
Assistant Professor, Nursing, Loyola

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the Committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Science in Nursing.

11-23-81

Date

Director's Signature