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Pre-Natal Learning Needs Perceptions of Expectant Parents and Childhood Educators

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PRE-NATAL LEARNING NEEDS:
PERCEPTIONS OF EXPECTANT PARENTS AND
CHILDBIRTH EDUCATORS

by

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A Thesis Submitted to the Faculty of
Old Dominion University in Partial Fulfillment of the
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Approved by:

Sue Young (Director)

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ABSTRACT

Pre-natal Learning Needs:
Perceptions of Expectant Parents and
Childbirth Educators

Cynthia Divens Sweeney
Old Dominion University, 1987
Director: Sue Young, RN, MSN

The purpose of this study was to examine the differences between the unique learning needs of expectant parents and those perceived by childbirth educators. A purposive sample of 40 expectant parents and ten childbirth educators completed the Expectant Parents Learning Needs Tool (EPLNT) and a demographic inventory developed by the researcher. Subjects were classified into five groups based on their status as first-time fathers, repeat fathers, first-time mothers, repeat mothers, and childbirth educators. Data were analyzed using t-tests for independent samples and an ANOVA for group differences. The results showed significant differences in the learning needs between the expectant parents and childbirth educators.

DEDICATION

This thesis is a dedication to the love and support provided to me by my family and friends. Without their support the following pages would not have become a reality. I would like to thank my friend, Pat Keifer, who provided loving supervision for my children, never allowing me a reason to quit. I would also like to thank Lynn Chiaverotti for her flexibility in helping me whenever needed.

I am thankful for my parents, Mr. and Mrs. Arthur Divens Sr., who instilled in me the desire to pursue goals, to continue to try, and to always do my best. I am also thankful for my loving children, Corinne, Catherine, and Robert who kept me laughing through the rough spots. A special thank you is given to my husband, Bob. His care and concern are reflected by these typed pages. He never let me down and was always ready to type and encourage. His love truly guided me to the light at the end of the tunnel.

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Chapter 1

Introduction

Until a century ago, childbirth was associated with pain and fear and stigmatized as a life threatening, rather than a life giving event. Women learned from the Bible that they could expect to give birth in pain and from their mothers that there was nothing they could do about it (Hassid, 1985). The implementation of modern childbirth classes developed out of the need to reduce pain and to educate expectant parents about health and hygiene (Hassid, 1985).

More than thirty years have elapsed since the pain free childbirth (accouchement sans douleur) techniques of Ferdinand Lamaze were introduced in the United States. Until recently childbirth education classes have focused on the preparation of the expectant mother for the labor and delivery experience. With the advent of holistic health care in the Seventies, family centered maternity care has been advanced and is still evolving.

The state of pregnancy must be recognized for the unique demands placed on the expectant mother and the family at large. Pregnancy is a period of identity reformulation, a period of reordering interpersonal relationships and interpersonal space, and a period of

personality maturation (Rubin, 1974). Pregnancy is not just the labor and delivery experience, nor is it limited to new parents expecting their first child. Changes in family dynamics also occur with the prospect and subsequent birth of an additional child. Pregnancy, birth and parenting are not necessarily easier for experienced parents, yet because of the popular belief that they are, repeat parents often have much less access to information regarding their special needs. Many repeat parents are encouraged to attend only childbirth review classes which focus entirely on relaxation and breathing techniques for labor and delivery. Such advice denies the uniqueness of each pregnancy and the effect of a new child on an established family (Jimenez, et al, 1979). There are also tasks (Rubin, 1974) unique to each trimester of the pregnancy which provide expectant parents with distinct learning needs.

As health educators, nurses need to be aware of both client needs and course objectives when structuring health education classes for the client's benefit. Nurses involved in childbirth education classes should appraise the structure of these classes to determine if the needs of expectant parents are being met. The principles of counseling, teaching, learning, and the

nursing process apply as the nurse engages in the provision of care to expectant families (Roberts, 1976).

Purpose

This study examined the differences between the unique learning needs of expectant parents and those perceived by childbirth educators. The learning needs of repeat fathers were compared with those of first-time fathers; learning needs of first-time mothers were compared with those of repeat mothers; learning needs of expectant fathers were compared with those of expectant mothers and the learning needs of expectant parents were compared with those of the child birth educator. These differences were explored based on the importance placed on learning needs gleaned from the literature and the participants regarding pregnancy and childbirth.

Problem Statement

What are the unique learning needs of first-time fathers, repeat fathers, first-time mothers, and repeat mothers? Do the learning needs of expectant parents differ from the teaching objectives of the childbirth educator? One childbirth educator (Sumner, 1976) speculates that expectant parents come to childbirth education classes with their own concerns and questions-- an "agenda" of what they would like to learn. According to adult learning theory, adults are

motivated to learn as they experience needs and interests that learning will satisfy (Knowles, 1984). Roberts (1976) prioritized four broad areas of prenatal education to which she felt expectant mothers should be exposed. These areas were: 1. Information in response to specific problems, questions, or experiences of a woman at the particular time of her pregnancy; 2. Information essential for a woman to have for her own or her baby's health and safety; 3. Anticipatory guidance to facilitate the woman's efforts to deal realistically with the pregnancy and childbirth; and 4. Information regarding pregnancy progression, childbirth, or institutional policies that may be helpful but not related to the immediate needs of the woman. The research literature, however, does not address the bio-psycho-social learning needs of expectant parents, nor is any distinction made between the learning needs of primigravida families and those of multipara families.

Traditionally, child birth education classes have been conducted in the last trimester of pregnancy (Hassid, 1985). Rubin (1974) describes four "maternal tasks of pregnancy" which are worked on concurrently to varying degrees in each trimester, so that all are completed by the end of the third trimester. These four

broad, interdependent tasks are: 1. seeking safe passage for herself and her child through pregnancy, labor, and delivery; 2. ensuring the acceptance of the child she bears by significant persons in her family; 3. "binding-in" to her unknown child; and 4. learning to give of herself. Childbirth education classes offer the opportunity to address the unique tasks of each stage of the pregnancy and to offer the opportunity for lifestyle education by addressing such topics as nutrition, smoking, and fitness as well as relaxation. Currently, the emphasis in childbirth education classes is on the labor and delivery experience. Topics such as diet, exercise, and the use of drugs and alcohol may or may not be addressed. If such topics are discussed in the last trimester of pregnancy then the relative importance must be addressed. Damage to the fetus by the mother's use of alcohol occurs in the first trimester, yet the consequences of the use of alcohol by the mother are discussed in the last trimester of the pregnancy. Since nursing is concerned with health promotion as well as health maintenance, it would seem to be more efficacious to introduce fitness and health oriented classes early in the pregnancy (Ciliska, 1983). Repeat parents are often not encouraged to attend childbirth education classes since they are perceived to already be prepared

for childbirth by virtue of their past experience. (Jimenez, et al 1979). Some educators feel that repeat parents take up class space which could be used by new parents. Repeat parents therefore are given low priority. Nurses must determine what the parent's learning needs are with regard to childbirth education classes so that expectant parents as adult learners will acquire and assimilate information that is useful to them. This study sought to document the rationale for class structure by exploring the unique learning needs of these specific groups of adult learners.

Theoretical Framework

Adult learning theory and Orem's (1985) self-care theory, provide a theoretical framework for exploring reasons that expectant parents participate in childbirth education classes. Adult learning theory emphasizes the uniqueness of the adult learner compared to the child. Orem (1985) describes the role of the nurse and the client in the provision of health care.

In 1926 Lindemann laid the foundation for adult learning theory. Prior to this, learning theory did not reflect the differences between adults and children. Lindemann (1926) found that adult learning could best be achieved through motivation, based on the experienced needs and interests of the learner. Lindemann's theory

proposes that adult learning is self-directed, as well as life-centered or problem centered. The foundational stones of adult learning theory proposed by Lindemann (1926) include:

1. Adults are motivated to learn as they experience needs and interests that learning will satisfy; therefore, these are the appropriate starting points for organizing adult learning activities.
2. Adults' orientation to learning are life-centered; therefore, the appropriate units for organizing adult learning are life situations, not subjects.
3. Experience is the richest resource for adult learning; therefore, the core methodology of adult education is the analysis of experience.
4. Adults have a deep need to be self-directing; therefore, the role of the teacher is to engage in a process of mutual inquiry with them rather than to transmit his or her knowledge to them and then evaluate their conformity to it.
5. Individual differences among people increase with age; therefore, adult

education must make optimal provision for differences in style, time, place, and pace of learning.

Knowles' work in the Seventies further expanded on Lindemann's work in his description of the adult learner. Knowles (1984) found that as individuals mature their readiness to learn becomes less a product of biological maturation and academic pressures and more a product of the requirement to perform developmental tasks associated with evolving social roles. The social role of mother or father is the culmination of many developmental tasks over time, not just the single event of childbirth.

The adult learning experience is life-centered (Lindemann, 1926 and Knowles, 1984) rather than subject centered. If the learning experience is applicable to the learner's personal life experiences, there is a greater desire by the adult learner to assimilate and apply the information. The experience that the adult learner brings to a learning situation must be analyzed. As Lindeman's seminal work (1926) demonstrated, individual differences among people increase with age and experience. Adult education offerings should maximize these differences by designing the class content to fit the unique learning needs of these

individuals. The life experiences of the multipara will be different from those of the primigravida just by virtue of their childbearing experience. These differences should be addressed when planning adult classes to provide the optimal environment for learning.

The theory of self-care proposed by Orem (1985) provides the framework for nursing's role as it pertains to expectant parents as adult learners. The central concept of care is that the individual is capable of providing care for self or for persons dependent on that individual. This self-care includes learned behaviors that purposely regulate human structural integrity, functioning and human development. Propositions associated with self-care include (Orem, 1985):

1. Self-care is learned within social groups through interaction and communication.
2. Self-care actions are deliberate for the purpose of meeting known needs.
3. Requisites (needs) for self-care are identified by human beings and their environments.
4. Requisites for self-care may be common to all (universal), or a function of developmental stages.

Orem (1985) suggests that self-care requires both

learning and use of knowledge as well as enduring motivation and skill. When the individual develops a self-care deficit which cannot be met through his own efforts, the role of the nurse is to provide the necessary action or information to alleviate the deficit. A self-care deficit occurs when the individual experiences a health limitation which may not be managed through self-care techniques, and which, legitimizes them as recipients of nursing care (Orem, 1985). Orem proposes that the concept of self-care deficit considers the following:

1. People have specific capabilities for self-care action.
2. People's abilities are a function of age, developmental state, experience, social/cultural input, health and available resources.
3. If the values of health care needs and capabilities are determined, a relationship statement can be made regarding the adequacy of self-care capabilities.
4. People are legitimate recipients of nursing care when care needs exceed capabilities or when this state can be

foreseen to exist in the future.

Orem has organized self-care requisites into three categories: universal, developmental, and health deviation. Universal self-care requisites are common to all human beings and are associated with life processes and structural and functional integrity such as maintaining optimal health. Developmental self-care requisites occur within the life cycle which might adversely affect health, pregnancy is an example. Health deviation self-care requisites are associated with a dysfunctional or illness state, such as toxemia in pregnancy.

Nursing's role in the provision of care is to regulate the self-care capabilities of people so that a state of self-care may be retained, maintained, or re-obtained (Orem, 1985). Orem proposes that:

1. Nurses interact with legitimate clients who have existent or projected self-care deficits.
2. Nurses determine requisites, and formulate courses of action to meet care requisites.
3. Nurses assess potential of people to develop self-care abilities.
4. Nurses and clients act together to produce self-care and regulate client's self-care

capabilities.

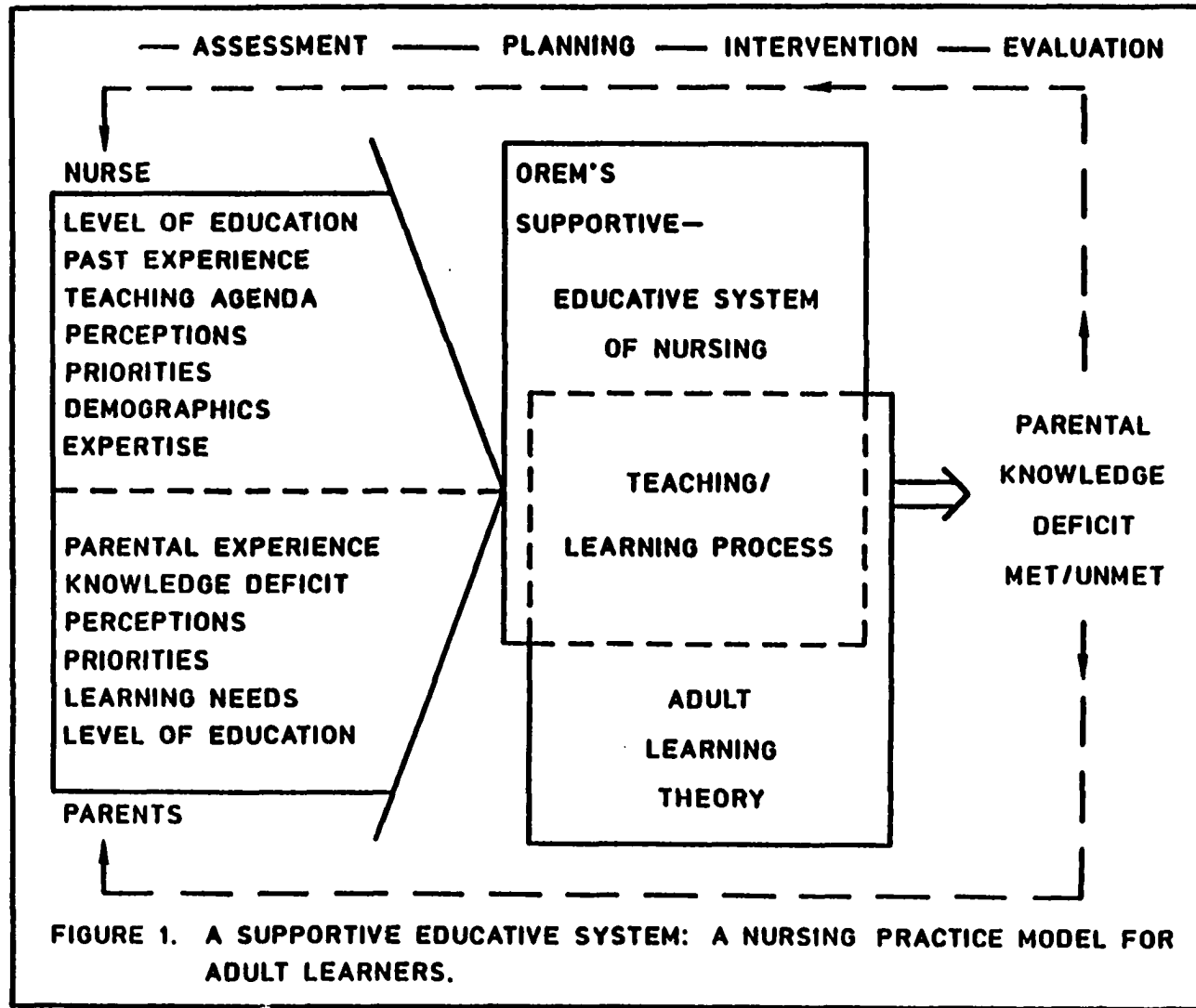
Orem further distinguishes three basic variations in the provision of nursing care: the wholly compensatory system, the partly compensatory system, and the supportive-educative system. In the wholly compensatory system the client is physiologically or psychologically limited in the accomplishment of self-care. The partly compensatory system has a limit on energy expenditure by the client that requires some self-care assistance. In the supportive-educative system, the client can physically perform self-care activities, but lacks knowledge or skill, or may be psychologically unprepared. The nurse's role is to provide support, guidance, and teaching (Orem, 1985).

In the case of expectant parents, there is a self-care deficit expressed by their desire to participate in childbirth education classes. Expectant parents not only have the universal requisites (Orem, 1985) to maintain life processes, but also developmental requisites related to the pregnancy and impending birth of a child. The nurse interacts with the parents within the supportive-educative system described by Orem (1985) to provide support and information as needed. The nurse as the childbirth educator meets the parent's self-care deficit by providing the appropriate childbirth

information.

The combined theoretical framework used in this study is conceptualized by the model in Figure 1. Figure 1 represents the components of adult learning theory and self-care theory as they relate to the nurse's role in meeting the learning needs of expectant parents. This model can be utilized to apply the nursing process to derive strategies and rationale for the development of childbirth education classes.

As shown in Figure 1, Orem's theory of self-care and components of adult learning theory are combined to frame parental learning needs and provide teaching strategies. The educator and client enter into the supportive-educative nursing system (Orem, 1985) where learning needs are processed through this framework to produce a satisfying learning experience for expectant parents by meeting knowledge deficits. The nurse as educator assesses the variables inherent in expectant parents that influence their learning needs. Knowledge deficits are assessed by the educator based on the characteristics of the parents and their expressed learning needs. Assessment is an ongoing process throughout the parent-educator interaction. The educator must be cognizant that some of the assessed variables, such as prior parenting experience are



applicable to the educator and may influence teaching strategies. This concept is depicted in the model by the dotted line separating the characteristics of the educator and the expectant parents. Once knowledge deficits are determined they are processed within the theoretical framework of self-care and adult learning theory. Learning needs are matched with appropriate teaching strategies. The educator continually processes within this framework, through summative evaluation, to determine if parental learning needs are met. If not, further assessment is required of both the parental learning needs and the educator's expertise in developing appropriate strategies. If through this summative process the educator determines that strategies and learning needs are appropriate then these strategies are implemented. After the expectant parents have completed childbirth education classes, concepts of adult learning theory still apply, as adult learners are self-directed in meeting knowledge deficit. Through formative evaluation, the educator determines if parental knowledge deficits are met or unmet. If knowledge deficits are not met, then the nursing process is initiated through the reassessment of influencing variables so that appropriate strategies can be designed to meet the expressed knowledge deficit.

To alleviate deficits in self-care and health maintenance, the objectives prescribed in childbirth education classes must meet the needs of expectant parents as a group and as individuals. Through the combined theoretical framework of adult learning theory and self-care theory, the learning needs of expectant parents participating in childbirth education classes and the role of the nurse-educator can be determined so that an optimal program of instruction is provided.

Definitions of Terms

For the purposes of this study the following operational definitions are offered:

1. Childbirth Education Class: An adult education class structured to teach Lamaze techniques and principles of natural childbirth to expectant mothers and fathers in preparation for the childbirth experience.
2. Childbirth educator: An individual who met the requirements to be an instructor as designated by either the American Society for Psychoprophylaxis in Obstetrics (RN's or Teachers) or the Council of Childbirth Education (RN's).
3. Learning need: The goal for becoming

informed in some specific content area.

For this study, the term was operationalized as measured by the parents responses on the Expectant Parents Learning Needs Tool.

4. Lamaze childbirth preparation: The use of relaxation techniques to enhance the childbirth experience as described by Dr. Ferdinand Lamaze.
5. Childbirth experience: The experiences unique to the developmental task of bearing a child, covering the period of gestation, parturition, and six weeks post-partum.
6. Expectant father: The adult male who assumed the parenting role both biologically and socially for the unborn child. This term was not limited to the first-time father.
7. Expectant mother: The pregnant female adult who assumed the parenting role both biologically and socially for the unborn child. This term was not limited to the first-time mother.
8. First-time mother: The female parenting

partner who had never experienced childbirth.

9. First-time father: The male parenting partner who had never participated in the childbirth experience.
10. Repeat mother: The female parenting partner who had previously experienced childbirth and assumed the social role of mother.
11. Repeat father: The male parenting partner who had previously taken part in the childbirth experience and assumed the social role of father.

Assumptions

For the purposes of this study it was assumed that all participants were cognitively aware of their reasons for participating in childbirth education. A second assumption was that questionnaires were completed individually and were not a joint effort by any of the participants in the study.

Limitations

One limitation of this study was that only those expectant parents who were participating in childbirth education classes were used. Typically childbirth education classes are predominantly middle class

individuals who seek active participation in the childbirth process (Garziano, et al, 1979). Therefore, the sample may not have been representative of the population at large. In addition a non-probability purposive sample was used in order to utilize the limited number of accessible participants.

Literature Review

In reviewing the literature, multiple studies (Muiswinkle, 1974; Waleko, 1974; Norr, 1980; May, 1982; Glazer, 1980; Humenick, 1982.) pertaining to the management of pregnancy and the childbirth experience were discovered. There are also studies (Vinal, 1982; Whitely, 1979; Gaziano, 1979; Worthington, 1982) which compare the various types of childbirth preparation to determine which is the most efficacious in pain control; however, there are no empirical studies within the last ten years which identify the differences in the structure and content of childbirth education classes. Therefore, the focus of this literature review was to derive from the current literature factors affecting the learning needs of expectant parents.

Glazer (1980) designed a study to determine levels of anxiety and concerns of pregnant women using a randomly selected sample of 100 pregnant females, 52 from prenatal clinics and 48 from private medical

practices. Participants demonstrated ability to read, write, and understand English; were willing to participate; were pregnant; and gave written consent. Three instruments were used: the Taylor-Manifest Anxiety Scale (a true-false questionnaire to detect anxiety levels), a concerns questionnaire (a sixty-two question multiple choice tool to elicit the concerns of pregnant women), and an information sheet for demographic data. These data were analyzed for concerns and anxiety level within specific trimesters as well as during the entire pregnancy. The researcher found that 90% of all participants were concerned for the baby's health and normalcy. Fifty percent of the women in their first trimester were concerned with their appearance, childbirth, and medical care. In the second trimester concerns focused on medical care, childbirth, and subsequent pregnancies. In the third trimester concerns pertained to self, childbirth, finances and subsequent pregnancies. Anxiety scores measured on a 0-50 scale with 50 indicating a high anxiety score, ranged from 3-39 with a mean score of 17.19. Clinic clients had a higher anxiety level than private clients.

In this study Glazer concluded that the basic concerns of pregnant females revolved around the health of the baby and that high anxiety levels are associated

with younger women who are less educated, married or involved in a relationship for a shorter time, and less wealthy. This study did not specifically address the learning needs of expectant mothers and fathers participating in childbirth education classes, nor was a theoretical framework identified. The researcher did recommend replicating this study with another population having different characteristics and targeting childbirth information to determine the concerns of the expectant mother.

The impact of parity on psychological and psychosocial experiences of labor and delivery was researched by Norr, Block, Charles and Meyering (1980). Using 118 primipara and 131 multipara private obstetrical clients, the researchers interviewed the participants regarding their childbirth preparation and experience one to three days post-partum. A self-administered questionnaire on social characteristics, relevant attitudes, and each woman's overall assessment of her degree of pain and pleasure experienced in labor was used. In addition hospital records were reviewed for the medical management of the subjects' labor experience. The researchers also examined mothering behaviors during the hospital stay as well as comparing mothers who had experienced prepared

childbirth classes to those who had no formal childbirth preparation to determine the physiological quality of their labor. The researchers found that: repeat mothers worried more about what childbirth would be like; Lamaze childbirth preparation had a significant positive impact on at least the psychosocial aspects of the birth experience; repeat mothers received less support from significant others during labor; childbirth-prepared repeat mothers had a slightly better subjective birth experience than prepared first-time mothers; and repeat mothers prepared for childbirth through formal classes less than first-time mothers.

In this study by Norr and colleagues, the researchers concluded that the benefits of parity were primarily limited to biological and obstetrical factors, suggesting that repeat mothers need as much or more emotional support as women having a first baby. The researchers acknowledged that results should not be generalized to the entire population of pregnant women since the sample was representative of urban, middle class women, giving birth in a large metropolitan hospital.

The maternal concerns of pregnancy were examined by Light and Fenster (1973). A 60 item questionnaire containing ten categories of concern was administered to

202 maternity clients during their hospital stay following childbirth. Participants responded yes (did worry) or no (did not worry) to each item. Frequency count and cross-tabulation were used to analyze these data. Subjects were grouped by number of pregnancies and educational level for statistical analysis. Subjects delivered by cesarean section were omitted. The results revealed there were highly significant differences between first-time mothers and repeat mothers in relation to the frequency of concerns expressed. Repeat mothers reported higher incidence of concerns about: being able to care for the family ($p < .001$); having more children than wanted ($p < .01$); and determining which contraceptive to use after the baby's birth ($p < .001$). First-time mothers reported higher incidences of concerns about: caring for the baby's physical needs ($p < .001$); accepting more responsibility ($p < .001$); the pain in childbirth ($p < .05$); the baby being overdue ($p < .05$); birth defects due to smoking and/or drinking ($p < .01$); birth defects the baby may inherit ($p < .05$); managing the added expense of having a baby ($p < .001$); being able to follow the diet prescribed ($p < .01$); and medication taken and its effect on the baby ($p < .01$).

Light and Fenster concluded that there were

significant differences in the concerns of repeat mothers and first-time mothers. The study also noted that 87 percent of all the participants expressed concern for the baby's health. This study did not address paternal concerns and was limited to surveying concerns after the threat of childbirth had passed.

The involvement of the father in pregnancy was examined by May (1982). A stratified sample of 100 expectant fathers at various stages of their partners pregnancy were interviewed during the pregnancy. Subjects met the following criterion: their partners were experiencing an uncomplicated pregnancy, the pregnancy was the first for both partners, and the couples were living together (although not necessarily married) at the time of conception and intended to parent the child together. The semi-structured interviews with the expectant fathers focused on the man's perception of the impact of the pregnancy on his life and his subjective experience as the pregnancy progressed. Data over a two year period were analyzed for recurring themes and for emergent concepts using comparative analytic techniques. These techniques were not discussed.

The researchers identified a repeated pattern of three phases of father involvement: an announcement

phase in which the man feels joy for a wanted pregnancy or pain and shock for an unwanted pregnancy; a moratorium phase in which the man puts conscious thought about the pregnancy aside while adjusting to the reality of it; and a focusing phase in which he redefines himself and the world around him in terms of his future fatherhood. They suggest that further examination of the experiences of more diverse groups will determine the validity of these phases. In addition it was suggested a relationship may exist between role preparation and the man's subsequent effectiveness and satisfaction in the birth and early parenting.

In a study conducted by Maloney (1983) 100 expectant parents were surveyed during a pre-childbirth class and post-delivery to examine clients' expectations for attending childbirth education classes. The sample was comprised of 43 fathers and 57 mothers, of these 100 participants, 50 had enrolled in childbirth education classes, but had not yet attended and 50, who had attended were parents of a healthy infant. Two questionnaires were used to investigate four areas of probable interest to expectant parents. First, respondents were asked their reasons for enrolling in the class. Next pre-class respondents were asked to rate their interest on a Likert scale in 19 common

childbirth education subjects while post-natal respondents were asked to rate the usefulness of each of these. The third area investigated teaching methods frequently used and the final area asked respondents to comment on supplemental programs such as early pregnancy classes and cesarean classes.

Using content analysis and Chi-square statistics, the researcher found that fathers were more interested in factual information regarding childbirth, labor, infant development, and childcare. They were relatively less interested in role definitions and coping mechanisms. Mothers, conversely expressed interest in gaining confidence and improving ability to cope and were less interested in facts. The researcher recognized the limitation of a small and nonrandomly selected sample. This study did not examine the perceived learning needs of childbirth educators as compared to those expressed by expectant parents. This study did suggest that periodic reassessments of the pertinency and appropriateness of childbirth education for expectant families are essential to keep this resource vibrant.

The studies cited above relate to this researcher's study, by identifying selected unique aspects of the childbirth experience. In the review of literature

there was a lack of research documenting the learning needs of expectant parents and childbirth educators. The above studies identified the levels of anxiety and concerns which occur within individual trimesters as well as the impact of parity on the childbirth experience. It is the unique aspects of the childbirth experience combined with the unique learning needs of the adult learner in comparison to the childbirth educator which were addressed in this researcher's study.

Hypotheses

1. There is no significant difference in the learning needs of repeat mothers and first-time mothers participating in childbirth education classes.
2. There is no significant difference in the learning needs of first-time fathers and repeat fathers participating in childbirth education classes.
3. There is no significant difference in the learning needs of expectant fathers and expectant mothers.
4. There is no significant difference in the learning needs as perceived by childbirth educators and expectant parents.

Chapter II will examine the methods utilized by this researcher to examine the learning needs of expectant parents participating in childbirth education

classes. This chapter includes the presentation of research design, the development and refinement of the tool, and the methods utilized by the researcher to conduct the study.

Chapter 2

Methodology

Research Design

A non-experimental exploratory descriptive research design was used to determine the learning objectives of expectant parents participating in childbirth education classes. Descriptive studies are not concerned with relationships among variables. Their purpose is to observe, describe, and document aspects of a situation (Polit and Hungler, 1983). A non-experimental exploratory design, by definition, lacks the manipulation or treatment of the groups being studied. Since no previous research had been done in this area, a non-experimental approach was most appropriate and provides the documented basis upon which to build future research (Polit and Hungler, 1983). Group membership, the independent variable of this study, was classified as childbirth educators, expectant first-time fathers, first-time mothers, repeat fathers, and repeat mothers. The response of the expectant parents and the childbirth educators based on their learning objectives was the focal point for this study.

Threats to internal and external validity were considered in the use of this non-experimental design. Internal validity refers to the extent to which it is

possible to make an inference that subject responses resulted in any observed differences (Polit and Hungler, 1983). Selection was a potential threat to the internal validity of this study. It was impossible to determine if subject responses may have been due to other social, demographic, or personal characteristics of the participants beyond their status as childbirth educators or expectant parents.

External validity refers to the generalizability of the research findings to other settings or samples (Polit and Hungler, 1983). A potential threat to external validity in this study was the Hawthorne effect. The Hawthorne effect is the effect that subjects may behave in a particular manner largely because they are aware of their participation in a study (Polit and Hungler, 1983). The childbirth educators and expectant parents may select a response because they anticipate that it is the appropriate response expected by the researcher rather than their actual response. Through the use of confidentiality and anonymity for subjects' responses it is hoped that this threat was minimized or alleviated.

Sample

The target population of this study included all expectant parents participating in childbirth education

classes and childbirth educators. The accessible population included expectant parents attending childbirth education classes in the selected setting and instructors of those classes.

The study sample consisted of those parents and childbirth educators who agreed to participate. The expectant parents were further grouped into four categories: first-time fathers, first-time mothers, repeat fathers, and repeat mothers. The participants included an equal number of each of the five groups (one group of educators and four categories of expectant parents).

Setting

The study was conducted in a suburban area of southeastern Virginia. Childbirth education classes in this area were used to provide convenient access to the population under study. The classes were located within middle income neighborhoods using local churches, schools, or hospital classroom settings.

The class size typically ranged from eight to ten couples and were taught by one childbirth educator. The childbirth education classes were held weekday evenings or Saturday for three hours, one session per week for 6-8 weeks. Data collection occurred at the beginning of the first class session. This was done to prevent

responses from being contaminated by information presented in class. The selection of childbirth education classes was limited to those that espouse the teachings of the Lamaze method.

Tool

Data were collected through the use of three instruments developed by the researcher. The Childbirth Educator's Demographic Questionnaire (Appendix A) and the Expectant Parent's Demographic Questionnaire (Appendix B) was used to describe the participants in the study. The demographic data collected included age, marital status, number of children, level of education, occupation, income, and whether the participants had attended childbirth preparation classes. Childbirth educators were asked if they were certified to teach and by what organization, their occupation, and the length of time that they have been teaching childbirth education classes. Childbirth educators also responded to two open-ended questions (see Appendix A).

Expectant Parents Learning Needs Tool

The Expectant Parent's Learning Needs Tool (EPLNT) (Appendix C) was developed to determine the learning needs of expectant parents in childbirth education classes and to explore if childbirth educators held the

same priority for topics. A review of the literature revealed no tool that could be utilized to examine these learning and teaching objectives. The tool was developed based on topics identified in the literature as well as in the experiences of the researcher.

The EPLNT was a two part questionnaire. The first part consisted of two open ended questions which inquired about their reasons for attending classes and what they hoped to learn. The second part consisted of eight broad topics common to the childbirth experience. Within each of the eight broad topics, sub-topics derived from the literature were listed. Incorporated into the tool were learning objectives specific to each of the traditional trimesters of pregnancy.

Using a four point Likert scale, participants were asked to rate these in terms of their importance to them as expectant parents. A four point scale was chosen to force responses at one end of the scale or the other in order to avoid "fence sitting" (Polit and Hungler, 1983). The measurement choices ranged from one to four with one representing "little importance" and four representing "great importance". The resulting ordinal data were treated as interval data for the purpose of testing the null hypothesis. Data transformation for statistical analysis is supported by Nunnally (1975) to

permit the use of more powerful statistical methods as long as the rank order of the data are not manipulated. The premise utilized by Nunnally to support this technique is that the statistically derived results of parametric testing of ordinal and interval data differ very little.

Reliability of the EPLNT

Reliability of an instrument is the degree of consistency with which it measures the attribute it is supposed to be measuring (Polit and Hungler, 1983). The EPLNT is a tool designed to measure the learning needs of expectant parents. Since this tool is administered one time it is most important that the measurement be internally consistent. An instrument is said to be internally consistent to the extent that all of its sub-parts are measuring the same characteristic (Polit and Hungler, 1983). One measure of internal consistency is Cronbach's alpha. An acceptable alpha for group-level comparisons is approximately .70 (Polit and Hungler, 1983). Results from the pilot study indicated an unacceptable alpha due to the structure of the tool's original rank-order format. The tool was redesigned using a four point Likert rating scale and retested using Cronbach's alpha. An alpha of .96 was achieved.

Validity of EPLNT

Validity refers to the degree to which an instrument measures what it is supposed to be measuring (Polit and Hungler, 1983). Content validity is the extent to which the instrument samples the types of factors under study. Content validity was assessed by three maternal child health nurses who were experienced in childbirth education. Face validity involves an analysis of whether the instrument is clear and appears to be a valid scale. Face validity was determined by two expectant couples. The two couples were asked to review the tool for clarity and to make written comments regarding the appropriateness of the questionnaire. As a result of the comments received some of the medical terminology was changed to make it more easily understood by the study's participants.

The data obtained was of a descriptive nature, at the ordinal level of measurement. Since comparisons were made among more than two independent groups and the data analyzed at the interval level, analysis of variance was used. In addition descriptive statistical techniques were applied. To examine differences between two independent groups, analysis was based on the use of the T-test for group differences.

Procedure

The study proposal and the tools developed by the researcher were submitted to the Old Dominion University, School of Nursing's, Committee for Protection of Human Subjects. Approval was granted and a pilot study was initiated.

To ascertain the reliability and validity of the researcher's tool a pilot study was conducted prior to its administration in the formal research setting. It also permitted the researcher to scrutinize the data collection procedures for any needed refinements.

The pilot study was conducted using 22 participants. Of these, two were childbirth educators, five were first-time fathers, five were primigravidas, five were repeat fathers, and five were repeat mothers. These participants were representative of those included in the final study. Permission to seek potential participants from these classes was obtained from the individual instructors.

After analyzing the results and refining techniques used in the pilot study, data collection began. On the first day of their childbirth education class, expectant parents and the childbirth educator were given a verbal explanation of the study and were asked to complete the demographic questionnaire and the ÉPLNT. The

questionnaires took approximately 20 minutes to complete and were placed in a sealed collection container by the participant after completion. Couples were asked to complete the questionnaires separately and not to divulge their responses to their partner until the data collection was completed.

Completion of the questionnaire represented individual consent from each participant. Permission to seek participants from the childbirth education classes was obtained from individual educators conducting the class. The local coordinator authorized access to the educators by providing a list of their names. Each educator was initially contacted by letter (Appendix D) and a follow-up telephone call to verify their participation and to arrange for the data collection. On the first day of their childbirth education classes expectant couples and childbirth educators were given a verbal explanation of the study by the researcher. Childbirth educators not conducting classes at the time of the data collection were contacted by a letter (Appendix E) asking them to complete the enclosed questionnaire and return it by mail. The voluntary nature of the study was emphasized. Anonymity and confidentiality was assured since no personal identifying data was requested. The completed

questionnaires were placed in the designated receptacle by the subjects at the end of the first class hour and collected by the researcher.

Although the potential risks to subjects in this study were minimal there was the possibility of some anxiety in responding to the questionnaire. It was anticipated that the participants' personal interest in describing the learning needs of expectant parents overcame this anxiety.

Data obtained from the questionnaires were analyzed using the Statistical Package for the Social Sciences (SPSSX) (Norusis, 1983). The results of data analysis as well as the methods of analysis used are presented graphically and descriptively in the following chapter.

Chapter 3

Results

This study sought to examine the unique learning needs of expectant parents and the teaching needs of childbirth educators. In addition the learning needs of repeat fathers were compared with those of first-time fathers; learning needs of repeat mothers were compared with those of first-time mothers; learning needs of expectant fathers were compared with those of expectant mothers and learning needs of expectant parents were compared with those perceived by childbirth educators. These differences were explored based on the importance placed on learning needs gleaned from the literature and from the participants regarding the childbirth experience.

Description of the Sample

The target population of this study was all expectant parents attending childbirth education classes and childbirth educators. The accessible population included expectant parents attending childbirth education classes in the selected setting and instructors of those classes. A purposive sample of 50 expectant parents and ten childbirth educators was obtained. The participants were divided into five groups. Group one consisted of ten first-time fathers.

Group two consisted of ten repeat fathers. Group three consisted of ten first-time mothers. Group four consisted of ten repeat mothers. Group five consisted of ten childbirth educators. Table 1 summarizes demographic data obtained for the five participant groups.

Table 1

Demographic Characteristics of Expectant Parents and Childbirth Educators

Characteristic	Grp I n= 10	Grp II n= 10	Grp III n= 10	Grp IV n= 10	Grp V n= 10
<u>Ages</u>					
\bar{x}	27.7	33.8	24.0	30.5	36.1
s.d.	5.8	6.3	3.0	4.3	7.5
<u>Years of Education</u>					
8-11	0	1	0	0	0
12-15	10	3	8	5	2
16-18	0	6	2	5	8
\bar{x}	13.3	14.0	13.0	15.5	16.1
s.d.	1.16	1.8	1.1	2.0	1.38

First-time fathers and mothers were younger and had

a lower level of education than repeat mothers and fathers. First-time fathers ranged in age from 22 years to 41 years and first-time mothers ranged in age from 18 years to 28 years. Repeat fathers ranged in age from 25 years to 45 years and repeat mothers ranged in age from 24 years to 38 years. The expectant parents were all married and in the last trimester of pregnancy. The mean income of first-time parents was \$15,000-\$20,000. The mean income of repeat parents was \$30,000-\$35,000 per year. None of the first-time parents had previously had children, attended childbirth classes, or witnessed a Lamaze childbirth. Repeat parents had between one and seven children, with the mode being one. They had previously attended childbirth education classes, and had witnessed a Lamaze childbirth.

Childbirth educators were older than parents and had a higher level of education. They ranged in age from 25 to 50 years of age (\bar{X} = 36). Six were married, three were divorced or widowed, and one had never been married. Seven of the childbirth educators were nurses and three were primary school teachers. Two of the nurses had obtained their nursing education through a junior college program or a hospital diploma program and five had received a B.S. in Nursing. Childbirth educators had between one and four children (\bar{X} = 2). The

children were primarily school-aged. The educators had an average of five years experience in childbirth education and all were certified to teach childbirth education classes. Eight had attended childbirth classes when pregnant and had experienced a Lamaze delivery.

Analysis

The Expectant Parents Learning Needs Tool (EPLNT) was developed by the researcher to explore the learning needs of expectant parents and to determine if childbirth educators held the same priority for learning needs (Appendix C). The EPLNT was a two part questionnaire. The first part consisted of two open-ended questions regarding the expectant parent's reasons for participating in childbirth education classes. The second part consisted of eight broad topics common to the childbirth experience and sub-topics related to these general categories. A four point Likert scale was used to rate these areas for learning in terms of their importance to expectant parents.

Reliability for the EPLNT

A coefficient alpha was calculated for the EPLNT to determine if an acceptable reliability had been obtained. Table 2 shows the results of the coefficient

alpha for the participants' response to the total EPLNT
and by each category.

Table 2

Alpha Reliability for Topics and for Total EPLNT

Categories	Alpha
General Topics n= 50	.45
Emotional Changes n= 50	.59
Hospital Procedures n= 50	.74
Health Maintenance n= 47	.83
Physical Changes n= 50	.80
Care of Newborn n= 48	.89
Labor n= 50	.86
Delivery n= 48	.82
Complications in Pregnancy n= 49	.84
Total EPLNT n= 42	.96

The coefficient alpha for specific categories representing the learning needs of expectant parents ranged from .59 for Emotional Changes to .89 for Care of the Newborn. The General Learning needs portion represented the specific major categories within the EPLNT. The obtained alpha of .45 represented decreased consistency within this portion and was expected since each topic represented unique areas of knowledge. The alpha for the total EPLNT was .96. The variation in sample size seen in Table 2 was due to differences in participant response rate. Polit and Hungler (1983) state that a level of .70 coefficient alpha (reliability) is sufficient for group comparisons. Thus, the reliability of the EPLNT was deemed acceptable for this study.

In addition to a coefficient alpha the product moment correlation coefficient also known as Pearson r was computed to determine how closely the responses to the eight general categories correlated to participant responses to the sub-categories. The Pearson r is both a descriptive and inferential measurement. As a descriptive statistic, the correlation coefficient summarizes the magnitude and direction of a relationship between two variables (Polit and Hungler, 1983). Perfect correlations are plus or minus 1.00. As r

approaches plus or minus 1.00, the strength of the correlation increases. The Pearson r for the responses to the general topics of the EPLNT correlated with the responses to the sub-topics of the EPLNT are shown in Table 3.

Table 3

Pearson r Correlation of General Topic Responses to Sub-topic Responses

Topic	Pearson r	p-value
Emotional Changes	.4871	.000
Hospital Procedures	.3489	.007
Health Maintenance	.6272	.000
Physical Changes	.3750	.004
Care of Newborn	.5433	.000
Labor	.4744	.000
Delivery	.4721	.000
Complications in Pregnancy	.4963	.000

$p < .05$

The Pearson r for the EPLNT ranged from .3489 ($p = .007$) for Hospital Procedures to .6272 ($p = .000$) for Health Maintenance. Although not strong, there is a significant positive correlation between responses to

the general categories of the EPLNT and the responses to the sub-topics of the EPLNT. This substantiates the supposition that participant responses to rating the broad categories of the EPLNT will be consistent with their rating of the sub-topics.

Testing Research Hypothesis

Hypothesis One

Research hypothesis one explored the differences in the learning needs of first-time mothers and repeat mothers. The basic parametric statistic used to test differences in group means is the t-test (Polit and Hungler, 1983). The first-time mothers and repeat mothers represented independent samples, therefore the t-test for independent samples was calculated. Table 4 displays the results of the t-test for independent samples of first-time mothers and repeat mothers.

Table 4

Topical Differences Between First-time Mothers and Repeat Mothers

Topic	t Value	Probability
Emotional Changes	-2.449	0.030
Hospital Procedures	1.124	0.276
Health Maintenance	0.632	0.535
Physical Changes	0.480	0.637
Care of Newborn	1.095	0.289
Labor	2.449	0.037
Delivery	1.964	0.081
Complications in Pregnancy	2.714	0.024

p= .01

Differences between the learning needs of first-time mothers and repeat mothers were determined at the .01 level of significance. Although there were no statistically significant differences in how first-time mothers and repeat mothers rated the importance of Emotional Changes in Parents and Siblings (p= .03) to their learning needs and in their need for information regarding Labor (p= .037) and Complications in Pregnancy (p= .024), it is interesting to note that some

differences may exist in these areas.

Table 5 depicts the rating response to the sub-topics of Emotional Changes in Parents and Siblings for first-time and repeat mothers. Repeat mothers placed a higher priority for learning on the preparation of siblings for the new baby's arrival than did first-time mothers.

Table 5

Emotional Changes Sub-topics Rating Response by
First-time Mothers and Repeat Mothers

Sub-topic	\bar{x}	s.d.
Emotional Changes in the Mother		
First-time mother	3.0	.943
Repeat mother	2.8	.789
Sexual Relationship of the Couple		
First-time mother	3.0	.816
Repeat mother	2.4	.699
Preparing Children for the New Baby		
First-time mother	1.5	1.080
Repeat mother	3.5	.850
Emotional Changes in the Father		
First-time mother	3.5	.850
Repeat mother	2.9	.876
After Delivery Depression		
First-time mother	3.5	.707
Repeat mother	2.3	.823
Dealing with Grandparents		
First-time mother	2.6	1.075
Repeat mother	2.3	.949

Note: These responses are based on a one to four Likert Scale. One= Little Importance; Four= Great Importance.

Table 6 presents the rating responses by first-time mothers and repeat mothers to the sub-topics of Labor. First-time mothers placed a higher priority on information regarding the calculation of the baby's due date, signs of false labor, signs of true labor, what effacement means, what dilation means, when to call the doctor, and medications for pain.

Table 6

Labor Sub-topics Rating Response by First-time Mothers and Repeat Mothers

Sub-topic	\bar{x}	s.d.
Calculating the Baby's Due Date		
First-time mother	3.5	.527
Repeat mother	2.3	1.059
Signs of False Labor		
First-time mother	3.6	.699
Repeat mother	2.9	.994
Signs of True Labor		
First-time mother	3.8	.632
Repeat mother	3.2	.789
Relaxation Techniques in Labor		
First-time mother	3.8	.422
Repeat mother	3.8	.422

Table 6 (continued)

Labor Sub-topics Rating Response by First-time Mothers
and Repeat Mothers

Sub-topic	\bar{x}	s.d.
Duration of Labor		
First-time mother	3.6	.516
Repeat mother	3.7	.438
Stages of Labor		
First-time mother	3.7	.675
Repeat mother	3.6	.516
What is Effacement?		
First-time mother	3.3	.949
Repeat mother	2.8	.919
What is Dilatation?		
First-time mother	3.6	.699
Repeat mother	2.9	.994
When to Call the Doctor		
First-time mother	3.5	.707
Repeat mother	3.1	.876
Back Labor		
First-time mother	3.4	1.075
Repeat mother	3.2	.789

Table 6 (continued)

Labor Sub-topics Rating Response by First-time Mothers
and Repeat Mothers

Sub-topic	\bar{x}	s.d.
Medication for Pain		
First-time mother	3.4	1.075
Repeat mother	3.2	1.135

Note: These responses are based on a one to four Likert Scale. One= Little Importance; Four= Great Importance.

The rating response by first-time mothers and repeat mothers to the sub-topics of complications in pregnancy is presented in Table 7. First-time mothers and repeat mothers hold the same high priority for information pertaining to an overdue pregnancy. First-time mothers placed a higher priority for learning regarding placenta previa, danger signs in pregnancy, the emergency delivery outside the hospital, diabetes in pregnancy, the signs of early labor, high blood pressure, and placenta abruptio; than repeat mothers.

Table 7
Pregnancy Complications Sub-topics Rating Response by
First-time Mothers and Repeat Mothers

Sub-topic	\bar{x}	s.d.
Placenta Previa		
First-time mother	3.8	.422
Repeat mother	3.1	.876
Danger Signs in Pregnancy		
First-time mother	3.7	.675
Repeat mother	3.5	.707
Emergency Delivery Outside of the Hospital		
First-time mother	3.7	.483
Repeat mother	3.3	.823
Diabetes in Pregnancy		
First-time mother	3.1	1.197
Repeat mother	2.9	.994
Signs of Early Labor		
First-time mother	3.4	.843
Repeat mother	3.2	.789
High Blood Pressure in Pregnancy		
First-time mother	3.2	.919
Repeat mother	2.8	.919

Table 7 (continued)

Pregnancy Complications Sub-topics Rating Response by
First-time Mothers and Repeat Mothers

Sub-topic	\bar{x}	s.d.
Overdue Pregnancy		
First-time mother	3.4	.843
Repeat mother	3.4	.699
Placenta Abruptio		
First-time mother	3.5	.726
Repeat mother	3.3	.823

Note: These responses are based on a one to four Likert Scale. One= Little Importance; Four= Great Importance.

To summarize, no statistically significant differences were found between the learning needs of first-time mothers and those of repeat mothers. Hypothesis one was, therefore accepted indicating that there were no significant differences in the learning needs of first-time mothers and repeat mothers participating in childbirth education classes in this study.

Hypothesis Two

The second hypothesis explored the differences in

the learning needs of first-time fathers and repeat fathers participating in childbirth education classes. The t-test was used to examine group differences between the independent samples of first-time fathers and repeat fathers. Table 8 displays the results of the t-test for the differences between first-time fathers and repeat fathers.

Table 8

Topical Differences Between First-time Fathers and Repeat Fathers

Topic	t Value	Probability
Emotional Changes	0.980	0.34
Hospital Procedures	0.249	0.80
Health Maintenance	0.277	0.785
Physical Changes	0.847	0.41
Care of Newborn	0.739	0.47
Labor	2.058	0.05
Delivery	2.449	0.03
Complications in Pregnancy	-1.964	0.08

p= .01

Differences between the learning needs of first-time fathers and repeat fathers were determined at

the .01 level of significance. Though no statistically significant differences were determined, some differences in the importance of Labor ($p = .05$) and Delivery ($p = .03$) may exist.

The response in rating the sub-topics of Labor are displayed in Table 9. First-time fathers placed a higher priority than repeat fathers for information regarding all aspects of labor. First-time fathers rated information regarding the stages of labor as a high priority more frequently. Calculating the baby's due date had the lowest priority for first-time and repeat fathers.

Table 9

Labor Sub-topics Rating Response by First-time Fathers
and Repeat Fathers

Sub-topic	\bar{x}	s.d.
Calculating the Baby's Due Date		
First-time father	2.6	1.265
Repeat father	2.2	1.229
Signs of False Labor		
First-time father	3.4	.843
Repeat father	3.0	.667
Signs of True Labor		
First-time father	3.8	.422
Repeat father	3.4	.516
Relaxation Techniques in Labor		
First-time father	3.9	.316
Repeat father	3.7	.483
Duration of Labor		
First-time father	3.8	.422
Repeat father	3.5	.527
Stages of Labor		
First-time father	4.0	.000
Repeat father	3.3	.675

Table 9 (continued)

Labor Sub-topics Rating Response by First-time Fathers
and Repeat Fathers

Sub-topic	x	s.d.
What is Effacement?		
First-time father	3.2	.291
Repeat father	3.2	.919
What is Dilatation?		
First-time father	3.8	.422
Repeat father	3.3	.823
When to Call the Doctor		
First-time father	3.8	.632
Repeat father	3.4	.843
Back Labor		
First-time father	3.5	.707
Repeat father	3.6	.516
Medication for Pain		
First-time father	3.5	.972
Repeat father	3.6	.516

Note: These responses are based on a one to four Likert Scale. One= Little Importance; Four= Great Importance.

Response rate for the sub-topics of Delivery are

shown in Table 10. First-time fathers rated information regarding cesarean birth, the episiotomy, the traditional delivery room, and the birthing room at a higher priority than repeat fathers. Repeat fathers rated information regarding use of a birthing chair, use of forceps, and multiple births higher than first-time fathers.

Table 10

Delivery Sub-topics Rating Response by First-time
Fathers and Repeat Fathers

Sub-topic	\bar{x}	s.d.
Position of the Baby for Delivery		
First-time father	3.6	.516
Repeat father	3.5	.707
Medication and Anesthesia Available		
First-time father	3.2	.632
Repeat father	3.1	.994
Cesarean Birth and it's Use		
First-time father	3.7	.483
Repeat father	3.1	.994
What is an Episiotomy?		
First-time father	3.2	.919
Repeat father	2.9	1.101
Traditional Delivery Room		
First-time father	3.0	1.155
Repeat father	2.4	.843
What is a Birthing Chair?		
First-time father	2.2	1.398
Repeat father	2.4	1.075

Table 10 (continued)

Delivery Sub-topics Rating Response by First-time
Fathers and Repeat Fathers

Sub-topic	\bar{x}	s.d.
Use of Forceps		
First-time father	2.9	1.101
Repeat father	3.1	.994
Multiple Births (twins, etc.)		
First-time father	2.3	1.414
Repeat father	2.7	1.252
Premature Birth		
First-time father	3.5	.850
Repeat father	3.6	.516
Birthing Room		
First-time father	3.2	1.093
Repeat father	2.8	1.033

Note: These responses are based on a one to four Likert Scale. One= Little Importance; Four= Great Importance.

To summarize, no significant differences were found between the learning needs of first-time fathers and repeat fathers participating in this study. Hypothesis two was therefore accepted.

Hypothesis Three

The third hypothesis explored differences between the learning needs of expectant fathers as a group and expectant mothers as a group. Using the t-test with a .01 level of significance, differences between these independent samples were calculated based on group mean. Table 11 reveals the differences in the learning needs of expectant fathers and expectant mothers.

Table 11

Topical Differences Between Expectant Fathers and
Expectant Mothers

Topic	t Value	Probability
Emotional Changes	-1.148	0.26
Hospital Procedures	-0.559	0.58
Health Maintenance	0.209	0.83
Physical Changes	0.549	0.58
Care of Newborn	0.880	0.38
Labor	-0.788	0.43
Delivery	-0.447	0.66
Complications in Pregnancy	1.116	0.281

$p = .01$

Expectant fathers and expectant mothers had no significant differences in their priority of rating information regarding the learning objective topics. Therefore there were no significant differences in the learning needs of expectant mothers and expectant fathers. These findings resulted in an acceptance of hypothesis three.

Hypothesis Four

The fourth hypothesis dealt with the differences in

learning needs between expectant parents as a group and those perceived by childbirth educators. The t-test was used to examine differences between these two independent samples. The results of the t-test are presented in Table 12.

Table 12

Topical Differences Between Expectant Parents and Childbirth Educators

Topic	t Value	Probability
Emotional Changes	1.576	0.13
Hospital Procedures	-1.884	0.07
Health Maintenance	-0.306	0.76
Physical Changes	-0.751	0.465
Care of Newborn	0.827	0.422
Labor	-3.939	0.001
Delivery	-3.130	0.006
Complications in Pregnancy	2.226	0.049

p= .01

Significant differences between childbirth educators and parents in areas of learning regarding Labor (p= .001) and Delivery (p= .006) were found. It is noteworthy that some differences may exist in the

area of Complications in Pregnancy ($p = .049$).

Table 13 represents the mean response rating of the parents and childbirth educators to the sub-topics of Labor. Childbirth educators rated the following areas of learning more important than expectant parents did: Signs of False Labor; Signs of True Labor; Duration of Labor; and Effacement. Childbirth educators rated none of the other sub-topics lower than parents did.

Table 13

Mean Rating Response to the Sub-topics of Labor by Group

Sub-topic	Grp I	Grp II	Grp III	Grp IV	Grp V
	\bar{x}	\bar{x}	\bar{x}	\bar{x}	\bar{x}
Calculating Baby's Due Date	2.6	2.2	3.5	2.3	2.5
Signs of False Labor	3.4	3.0	3.6	2.9	3.9
Signs of True Labor	3.8	3.4	3.6	2.9	3.9
Relax Techniques in Labor	3.9	3.7	3.8	3.8	3.9
Duration of Labor	3.8	3.5	3.6	3.7	3.9
Stages of Labor	4.0	3.3	3.7	3.6	3.8
What is Effacement?	3.2	3.2	3.3	2.8	3.5
What is Dilatation?	3.8	3.3	3.6	2.9	3.6
When to Call the Doctor	3.8	3.4	3.5	3.1	3.8
Back Labor	3.5	3.6	3.4	3.2	3.6
Medication for Pain	3.5	3.6	3.4	3.2	3.6

Note: Grp I= First-time Fathers; Grp II= Repeat Fathers; Grp III= First-time Mothers; Grp IV= Repeat Mothers; Grp V= Childbirth Educators.

Note: These responses are based on a one to four Likert Scale. One= Little Importance; Four= Great Importance.

The mean response for parents and childbirth educators to the sub-topics within the general category

of Delivery is presented in Table 14. These figures are based on the mean rating of importance given in response to the Likert scale of the EPLNT. Childbirth educators placed greater importance than parents on Medications and Anesthesia Available; What is an Episiotomy; What is a Birthing Chair; and Use of a Birthing Room.

Table 14

Mean Rating Response to the Sub-topics of Delivery by Group

Sub-topic	Grp I	Grp II	Grp III	Grp IV	Grp V
	\bar{x}	\bar{x}	\bar{x}	\bar{x}	\bar{x}
Position of Baby	3.6	3.5	3.8	3.5	3.5
Medications and Anesthesia	3.2	3.1	3.4	3.1	3.6
Cearean Birth & It's Use	3.7	3.1	3.6	3.2	3.5
What is an Episiotomy?	3.2	2.9	3.1	2.2	3.8
Traditional Delivery Room	3.0	2.4	3.4	2.2	3.3
What is a Birthing Chair?	2.2	2.4	3.0	2.3	3.4
Use of Forceps	2.9	3.1	3.7	2.9	3.4
Multiple Births	2.3	2.7	2.0	2.1	2.5
Premature Births	3.5	3.6	3.5	3.0	2.9
Birthing Room	3.2	2.8	3.0	3.0	3.9

Note: Grp I= First-time Fathers; Grp II= Repeat Fathers; Grp III= First-time Mothers; Grp IV= Repeat Mothers; Grp V= Childbirth Educators.

Note: These responses are based on a one to four Likert Scale. One= Little Importance; Four= Great Importance.

Table 15 displays the mean response for parents and childbirth educators to the sub-topics in the area of Complications in Pregnancy. These figures are based on

the four point Likert scale of the EPLNT. Childbirth educators rated the sub-topics Placenta Previa, Danger Signs in Pregnancy, Emergency Delivery Outside the Hospital, Diabetes in Pregnancy, high Blood Pressure, and Placenta Abruptio of less importance as an expectant parent's learning need than did the expectant parents.

Table 15

Mean Rating Response to the Sub-topics of Complications in Pregnancy by Group

Sub-topic	Grp I \bar{x}	Grp II \bar{x}	Grp III \bar{x}	Grp IV \bar{x}	Grp V \bar{x}
Placenta Previa	3.2	3.7	3.8	3.1	2.8
Danger Signs in Pregnancy	4.0	4.0	3.7	3.5	3.5
Emerg Dlvy Outside Hospital	4.0	3.8	3.7	3.3	3.1
Diabetes in Pregnancy	3.2	2.7	3.1	2.9	2.7
Signs of Early Labor	3.7	3.5	3.4	3.2	3.5
High Blood Pressure	3.3	3.5	3.2	2.8	2.9
Overdue Pregnancy	3.5	3.4	3.4	3.4	3.5
Placenta Abruptio	3.5	3.7	3.5	3.3	2.9

Note: Grp I= First-time Fathers; Grp II= Repeat Fathers; Grp III= First-time Mothers; Grp IV= Repeat Mothers; Grp V= Childbirth Educators.

educators, a one way analysis of variance (ANOVA) was utilized to explore differences in rating response to the broad categories of learning needs between all groups. An ANOVA is a parametric procedure used to test the significance of differences between three or more group means. Variation between groups is contrasted with variations within the groups to yield the F-ratio. If differences between groups is large relative to random fluctuations within groups, then it is possible to establish the probability that differences are related to actual differences between groups (Polit and Hungler, 1983). Using the five groups designated as first-time fathers, repeat fathers, first-time mothers, repeat mothers, and childbirth educators; differences between and within groups were examined.

Table 16 presents the results of the ANOVA for the general categories of learning needs. Differences were significant at the .01 alpha level. Significant differences between groups were found in the areas of Labor ($p = .0052$); Delivery ($p = .0096$); and Complications in Pregnancy ($p = .0027$).

Table 16

ANOVA: Differences Between All Groups By Topic

Topic	F-Ratio	Probability
Emotional Changes	2.4055	.06
Hospital Procedures	1.0800	.37
Health Maintenance	.1452	.964
Physical Changes	.4324	.784
Care of Newborn	.8524	.499
Labor	4.2672	.0052
Delivery	3.8000	.0096
Complications in Pregnancy	4.7603	.0027

$p < .01$

The ANOVA procedure cannot determine each group that differed significantly from all other groups. In order to determine which groups significantly differed from each other, multiple comparison procedures were calculated. The function of these procedures is to determine specific group differences (Polit and Hungler, 1983).

For this study the Tukey Multiple Comparison procedure was used. Significant differences at the .01 level were determined between specific groups in the

areas of Labor and Complications in Pregnancy. No significant differences between groups was found for the topic of Delivery. Multiple comparison procedures protect against assuming too many differences to be significant. These procedures set-up more stringent criteria for declaring differences significant than using all possible group combinations for the t-test (Norusis, 1983). In the area of Labor, significant differences were found between repeat fathers and childbirth educators. Significant differences were also found between childbirth educators and first-time mothers in the area of Complications in Pregnancy.

To summarize, significant differences in the rating of the importance of learning needs were found between expectant parents and childbirth educators. Specifically, childbirth educators differed from repeat fathers in the importance of knowledge regarding labor and from first-time mothers in the importance of knowledge regarding complications in pregnancy. A rejection of any portion of the null hypothesis results in the rejection of the null hypothesis. Hypothesis four was therefore rejected indicating significant differences in the learning needs of expectant parents and childbirth educators.

Qualitative Data

In addition to the quantitative responses of the EPLNT, qualitative data were also analyzed. The first part of the EPLNT included two open-ended questions. These questions were completed prior to initiating the second part of the EPLNT to prevent response bias.

The first question explored why expectant parents decided to participate in childbirth classes. Table 17 represents the tabulated responses. First-time fathers and repeat fathers most frequently reported a desire to gain knowledge. First-time mothers and repeat mothers indicated expectations related to learning relaxation techniques. Childbirth educators believed parents attended to share the experience as a couple and to gain knowledge.

Table 17

Reasons for Participating in Childbirth Education Class
by Group

Responses by Group	Number
First-time Fathers	
To gain general knowledge	4
To help	3
To experience childbirth	3
Repeat Fathers	
To gain knowledge	7
To share a special time with my wife	2
To learn to care for the baby	1
My wife made me	1
First-time Mothers	
To learn relaxation techniques	4
To gain knowledge	3
To learn about labor and delivery	2
To learn about the baby	1
Repeat Mothers	
Review relaxation techniques	8
To gain general information	2

Table 17 (continued)

Reasons for Participating in Childbirth Education Class
by Group

Responses by Group	Number
Childbirth Educators	
Expectant parents want to share experience	4
Expectant parents want to gain knowledge	5
Expectant parents want to cope with pain	1

The second question requested parents to list five or more areas of childbirth information which they hoped to learn through their participation in childbirth education classes. Table 18 displays these findings. First-time fathers most frequently responded they wanted to learn how to help and to learn "what goes on". Repeat fathers responded that they also wanted to learn how to help their wife. First-time mothers and repeat mothers wanted to learn relaxation techniques and to gain knowledge about childbirth. Childbirth educators thought parents wanted to learn coping strategies and to gain general knowledge.

Table 18

The Five Most Frequently Identified Learning
Expectations for Childbirth Education Class by Group

Responses by Group	Number
First-time Fathers	
How to help	11
To learn what goes on	11
To understand what my wife is going through	3
To learn what happens after the baby is born	3
How to be a good parent	2
Repeat Fathers	
How I can help my wife	9
Delivery of the baby (How a baby is born)	5
Knowledge regarding possible complications	4
To gain knowledge	3
What happens in labor	2
First-time Mothers	
To learn relaxation	9
To gain knowledge about childbirth	8
How to cope with pain	5
How to determine true labor	4
How my husband can help	4

Table 18 (continued)

The Five Most Frequently Identified Learning
Expectations for Childbirth Education Class by Group

Responses by Group	Number
Repeat Mothers	
Relaxation techniques	12
Review general knowledge	4
What are the stages of labor	3
Cope with pain	3
Exercises	3
Childbirth Educators	
Coping strategies	8
General knowledge	5
Hospital procedures	5
Medication options available	3
Knowledge of newborn	3

The last portion of the EPLNT asked participants to consider the 72 sub-topics and choose three which were of greatest importance, ranking them one, two, and three. Table 19 lists the results by rank within each designated group, indicating in parenthesis how many participants within the group gave that sub-topic a similar ranking.

Table 19

Ranking of Sub-topic Importance by Group

Ranking	Sub-topic by Group
	First-time Fathers
1	Stages of Labor (2)
	Growth of Baby During Pregnancy (1)
	Supplies for the New Baby (1)
	Danger Signs in Pregnancy (1)
	Emergency Delivery Outside of Hospital (1)
2	Location of Labor & Delivery (1)
	Signs of True Labor (1)
	Relaxation Techniques in Labor (1)
	Premature Birth (1)
	Danger Signs in Pregnancy (1)
3	Position of the Baby for Delivery (1)
	Cesarean Birth and Its Use (1)
	Emergency Delivery Outside of Hospital (1)
	Duration of Labor (1)
	Stages of Labor (1)

Table 19 (continued)

Ranking of Sub-topic Importance by Group

Ranking	Sub-topic by Group
---------	--------------------

Repeat Fathers

- | | |
|---|--|
| 1 | Preparing Children for the New Baby (1)
Nutritional Needs of Pregnant Women (1)
Signs of True Labor (1)
Premature Birth (1)
Danger Signs in Pregnancy (1)
Emergency Delivery Outside of Hospital (1)
Overdue Pregnancy (1) |
| 2 | Danger Signs in Pregnancy (2)
Emotional Changes in Mother (1)
Preparing Children for New Baby (1)
Relaxation Techniques in Labor (1)
Cesarean Birth and Its Use (1)
Premature Birth (1) |
| 3 | Signs of Early Labor (2)
Preparing Children for the New Baby (1)
Relaxation Techniques in Labor (1)
Duration of Labor (1)
Position of the Baby for Delivery (1)
Danger Signs in Pregnancy (1)
Placenta Abruptio (1) |

Table 19 (continued)

Ranking of Sub-topic Importance by Group

Ranking	Sub-topic by Group
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First-time Mothers

1	Relaxation Techniques in Labor (2) Health Resources Available (1) Growth of the Baby During Pregnancy (1) Danger Signs in Pregnancy (1) Placenta Abruption (1)
2	Breast Feeding (2) Health Resources Available (1) Growth of the Baby During Pregnancy (1) Medication & Anesthesia Available (1) Placenta Previa (1)
3	Use of Ultrasound (1) Weight Gain in Pregnancy (1) Breast Feeding (1) Feeding Baby (1) Cesarean Birth and Its Use (1)

Table 19 (continued)

Ranking of Sub-topic Importance by Group

Ranking	Sub-topic by Group
---------	--------------------

Repeat Mothers

- | | |
|---|---|
| 1 | Relaxation Techniques in Labor (2)
Danger Signs in Pregnancy (2)
Preparing Children for New Baby (1)
Duration of Labor (1)
Multiple Births (1)
Premature Birth (1) |
| 2 | Preparing Children for New Baby (2)
Relaxation Techniques in Labor (2)
Growth of the Baby During Pregnancy (1)
Child-proofing the Home (1)
Signs of True Labor (1)
Medication for Pain (1) |
| 3 | Preparing Children for New Baby (1)
Growth of the Baby During Pregnancy (1)
Child-proofing the Home (1)
Signs of True Labor (1)
Relaxation Techniques in Labor (1) |

Table 19 (continued)

Ranking of Sub-topic Importance by Group

Ranking	Sub-topic by Group
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Childbirth Educators

1	Relaxation Techniques in Labor (5) Stages of Labor (2) Alcohol's Effect on the Developing Baby (1) Effect of Smoking on Developing Baby (1) Signs of True Labor (1)
2	Stages of Labor (2) Nutritional Needs of Pregnant Women (1) Breast Feeding (1) Relaxation Techniques in Labor (1) Duration of Labor (1) When to Call the Doctor (1) Back Labor (1) Birthing Room (1) Signs of Early Labor (1)

Table 19 (continued)

Ranking of Sub-topic Importance by Group

Ranking	Sub-topic by Group
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Childbirth Educators (continued)

- | | |
|----|---|
| 3. | Danger Signs in Pregnancy (2) |
| | Admission Procedures (1) |
| | Nutritional Needs of Pregnant Women (1) |
| | Duration of Labor (1) |
| | Stages of Labor (1) |
| | Medication for Pain (1) |
| | Position of Baby for Delivery (1) |
| | What is an Episiotomy? (1) |
-

These qualitative data provided further discrimination of the similarities and differences between the participant groups. First-time mothers, repeat mothers, and childbirth educators rated relaxation techniques of high importance. Repeat parents ranked the preparation of siblings for the birth of the new baby as an item of great interest. For the most part, these data pointed to more differences than similarities within and among groups.

The qualitative data used in this study must be

analyzed as a complement to the quantitative data in the final analysis. An understanding of human behaviors or characteristics is best advanced by the judicious and combined use of both quantitative and qualitative data (Polit and Hungler, 1983). Determining the existence of differences between the groups through quantitative analysis and deriving specific distinctions through a qualitative approach create a holistic framing for these results.

Summary

Significant differences in the learning needs of expectant parents and childbirth educators were found. However, first-time mothers did not differ statistically from repeat mothers and first-time fathers did not differ statistically from repeat fathers in what they wanted to learn. No differences were found between expectant mothers and expectant fathers as a broad group. Childbirth educators differed from expectant parents in determining in what areas parents desired information. Therefore hypothesis one, two, and three were accepted and hypothesis four was rejected.

Chapter Four will delineate conclusions of this study. Findings are linked, where possible, to the literature and recommendations are made for further research.

Chapter 4

Discussion

The purpose of this study was to examine the unique differences between the learning needs of first-time fathers, repeat fathers, first-time mothers, repeat mothers and the teaching needs of childbirth educators. The Expectant Parents Learning Needs Tool (EPLNT), developed by the researcher was tested for reliability and used to determine the learning needs of the expectant parents and the teaching needs of childbirth educators. Forty expectant parents and ten childbirth educators agreed to participate in the study.

The EPLNT consisted of eight broad topics commonly taught in childbirth education classes with a series of sub-topics listed under each. Participants were asked to rate the broad topics and each of the sub-topics on a Likert scale from one (little importance) to four (great importance). Responses between first-time fathers and repeat fathers, first-time mothers and repeat mothers, expectant fathers and expectant mothers, expectant parents and childbirth educators were analyzed using a t-test. Group differences between expectant parents and childbirth educators were analyzed using an ANOVA. In addition, participants were asked to respond to two open

ended questions and to rank the three sub-topics that were most important to the learning needs of expectant parents.

Four hypotheses were examined. The first hypothesis examined differences in the learning needs of first-time mothers and repeat mothers. Hypothesis two examined differences in the learning needs of first-time fathers and repeat fathers. Differences in the learning needs of expectant mothers and expectant fathers were examined in hypothesis three. Hypothesis four investigated differences in the learning needs of expectant parents and those perceived by childbirth educators.

Results of this study indicated differences in the learning needs of expectant parents and those needs as perceived by childbirth educators based on findings of statistical significance. Though acceptance of hypothesis one and two was based on findings of no statistical significance between first-time mothers and repeat mothers; and first-time fathers and repeat fathers, some qualitative differences did exist. Through application of qualitative analysis, t-tests, and an ANOVA, differences in learning needs related to the Emotional Changes in Parents and Siblings, Labor, Delivery, and Complications in Pregnancy were found

between specific groups.

The differences between repeat mothers and first-time mothers in the area of Emotional Changes in Parents and Siblings, was a result of the expressed need by repeat mothers for information regarding sibling preparation. First-time mothers had no children and therefore did not require such information. Sibling preparation is an educational deficit reflective of the repeat mother's concern in meeting this familial need. Light and Fenster (1973) found that repeat mothers reported concern for their ability to meet the needs of family members.

Differences in learning needs between first-time mothers and repeat mothers regarding labor may also be indicated. Repeat mothers wanted information concerning true labor while first-time mothers wanted information regarding the stages of labor. These findings support those of Norr and colleagues (1980) who found that repeat mothers worried about what a subsequent childbirth would be like. Repeat mothers may need additional information regarding true labor to qualitatively evaluate their past experience. They may also need information to formulate realistic expectations of their anticipated labor. Having experienced labor, the repeat mother may feel that the

specific stages of labor are not indicative of the length and quality of the entire labor experience. The first-time mother lacks the experience to determine whether the text-book stages are truly representative of labor. Therefore the response of first-time mothers may be indicative of either their lack of information regarding the labor experience or their lack of actual labor experience.

Information regarding complications in pregnancy was an expressed learning need by first-time mothers. This indirectly supported the findings of Light and Fenster (1973). In their study primiparas expressed more concern for the baby's health as it related to possible complications in pregnancy. The need indicated by this study could be interpreted to include complications related to the health of the baby, as well as, the mother. In a woman's life, the fear of death becomes noticeable during adolescence, pregnancy and approaching menopause (Muiswinkel, 1974). Although modern science has improved the quality of obstetrical practices and reduced potential risks to the pregnant woman, the fear of death may still exist. In the pregnant woman, death fears may become more intense in relation to the time of delivery and involve both a fear for herself and a fear for the unborn child (Muiswinkel,

1974). Since first-time mothers do not have the experience of successfully carrying a healthy baby to term they may not have the positive reinforcement needed to overcome their fears. In addition, considering the topic of Complications in Pregnancy may evoke fears by expectant mothers which previously may not have been considered. Further study is required to discriminate the germinal need in this area.

The acceptance of hypothesis one indicated that first-time mothers and repeat mothers did not differ statistically in their learning needs. However, qualitative findings in this study supported the conclusions of Norr and colleagues (1980) by indicating differences between first-time mothers and repeat mothers.

Though no differences between first-time fathers and repeat fathers were indicated by the acceptance of hypothesis two, qualitative findings suggest that differences may exist. The first-time father's greater desire for information regarding all aspects of labor as compared to the repeat father could have been a factor of his inexperience in the process of childbirth. Adult learning needs are a result of life-centered experiences (Lindemann, 1926 and Knowles, 1984). The new father must accumulate knowledge in this area as it affects his

life, while the repeat father has already assimilated information from previous experience with labor. Repeat fathers and first-time fathers also differed in their desire for information related to the delivery of the baby. The repeat father's need to know more about the use of birthing chairs and forceps in delivery could be a product of past experience and future expectations. Level of education and age may also account for differences between first-time fathers and repeat fathers. Repeat fathers in this study were older and had a higher level of education than first-time fathers. This may provoke repeat fathers to analyze methods of delivery rather than accepting traditional approaches. With more alternatives to traditional delivery available more information may need to be disseminated to expectant parents. There is no current literature to document the differences between first-time and repeat fathers. Further study is required to validate the findings of this study.

Differences between expectant mothers and expectant fathers were examined in hypothesis three. No significant differences were identified. The similarities and differences between first-time parents and repeat parents may mask specific learning needs in these two groups. Maloney (1983) identified differences

in the expectations fathers and mothers had for the content of childbirth education classes; however, Maloney also noted that there were more similarities than differences between the mother's and father's expectations. The results of this researchers study lend support to Maloney's observations. Expectant mothers and expectant fathers may have similar learning needs since no differences were determined.

Differences in the learning needs of expectant parents and childbirth educators were examined in hypothesis four. An ANOVA indicated significant differences in the areas of Labor, Delivery, and Complications in Pregnancy between expectant parents and childbirth educators. Analysis based on multiple comparison statistics revealed specifically that differences existed between repeat fathers and childbirth educators regarding the learning needs of Labor. Differences also existed between childbirth educators and first-time mothers regarding information on Complications in Pregnancy.

Since ninety percent of the childbirth educators had experienced childbirth, their responses would be most similar to those of repeat mothers. In addition, first-time fathers and first-time mothers may have a need to know everything about childbirth since they lack

previous experience. They may be willing to learn anything the childbirth educator feels is important for them to know. The expectant parents may not have understood the subtopics and believed they needed more information regarding complications in pregnancy. Childbirth educators knowing the low frequency of actual complications may not have perceived this an important area to cover. Repeat fathers have the quantitative labor experience but lack the qualitative experience from the mother's perspective. Therefore, their differences from the childbirth educator may be due to the quality of past experience as well as gender related.

Differences between childbirth educators and parents may also be a product of the educator's professional education. Since the group of childbirth educators consisted of teachers and nurses, data may be affected by their professional perceptions. In addition, the nurses differed as to their level of education. These differences may also have contributed to the learning needs perceived by childbirth educators as a group. A more homogeneous sample of educators is required to more effectively determine true differences between expectant parents and childbirth educators. No studies in the current literature examine the learning

needs of expectant parents and those perceived by childbirth educators. More research in this area is needed to fully determine potential discrepancies between this group of adult learners and educators.

Qualitative data identified childbirth educators as being in agreement with expectant mothers, concerning relaxation techniques. In addition these qualitative data also identified that repeat fathers and first-time fathers attended childbirth education classes for the purpose of learning how to help their partners in childbirth. The concept of "helping" is important in prepared childbirth where the father, as coach, is recognized as a vital supportive member of the childbirth team (Elsherif, McGrath, and Syrski (1979). These qualitative data support the complementary roles of expectant parents during childbirth. Childbirth educators may need to examine learning needs and teaching strategies to encourage these complementary parental roles. These data further support the father's role in the birth of his child. Examination of hypothesis four revealed that childbirth educators differed from repeat fathers in their perception of learning needs for the labor experience. Further exploration of the father's learning needs as related to his role assimilation may reveal more specific

discrepancies from those learning needs perceived important by childbirth educators.

Conclusions

Results of this study must be analyzed and applied with consideration given the specificity of the data generated by the limited size of the sample of expectant parents and childbirth educators. But, given the review of the current literature and the level of significance of the data, an empirical base can be established for further study.

The acceptance of hypothesis one, two, and three indicates that there are no statistically significant differences in the learning needs of expectant parents. However, the learning needs of repeat mothers and fathers must be examined in comparison to those of first-time mothers and fathers so that the unique qualitative experiences of these individuals can be appreciated. By rejecting hypothesis four, differences between the learning needs of expectant parents and childbirth educators was accepted.

The combined theoretical framework of adult learning theory and Orem's (1985) theory of self-care was appropriate to use with expectant parents participating in childbirth education classes. Adult learning theory allows the nurse as educator to

appreciate the unique experiences of expectant parents. These experiences help to define individual learning needs. Orem's (1985) Theory of Self-care provides the framework from which the nursing process operates in meeting the knowledge deficits of expectant parents. It is through this combined theoretical framework that specific teaching strategies can be established to address the learning needs of expectant parents participating in childbirth education classes.

As educators, nurses must be prepared to recognize the unique learning needs of expectant parents as adult learners. In addition, the nurse must initiate the nursing process to assess knowledge deficits and enter into the supportive-educative system described by Orem (1985). This study provides data indicating specific areas of learning where the potential exists for a knowledge deficit. These data may serve as a guide for the nurse to assess learning needs as they apply specifically to first-time fathers, repeat fathers, first-time mothers and repeat mothers.

These data suggest cognitive differences in the learning needs of expectant parents which may affect their ability to perform within their role during the childbirth experience. The data were collected during the last trimester of pregnancy and may reflect learning

needs specific to that time. The nurse educator is encouraged to examine the potential for learning needs specific to each trimester of the pregnancy. Potential knowledge deficits throughout the pregnancy should be addressed by designing childbirth classes to meet parental learning needs at each trimester. The nurse educator should act as a resource while allowing parents to share life experiences and actively take part in determining the content and structure of childbirth education classes. It is important that the nurse educator recognize their role in facilitating adult learning while meeting self-care knowledge deficits of expectant parents.

Recommendations

Based on the findings and conclusions of this study, the researcher offers the following recommendations for further study:

1. compare the learning needs of first-time expectant fathers with those of first-time expectant mothers;
2. compare the learning needs of repeat expectant fathers with those of repeat expectant mothers;
3. further study be done using the EPLNT with a larger sample to confirm or deny

findings from this study and to further validate the reliability of this tool.

4. compare the learning needs of expectant couples with those of expectant single parents.
5. examine the learning needs of expectant parents at each trimester of the pregnancy.
6. compare the learning needs of expectant parents as perceived by childbirth educators who by profession are teachers with those childbirth educators who by profession are nurses.
7. Compare perceptions of parents learning needs by childbirth educators espousing various childbirth education philosophies.
8. Examine the parent's perceived quality of the childbirth experience as measured by their perception of learning needs met.

For meaningful learning needs to be formulated, the learning needs of adult learners must be investigated and documented. The process of education is facilitated by studies such as this one which describes the learning needs of expectant parents participating in childbirth education.

Childbirth education classes should be a dynamic resource of information for expectant parents. For this to happen the nurse as educator must continually assess the needs of the parents using nursing process and implement strategies to meet those needs. Descriptive studies such as this provide a base upon which the empirical body of knowledge specific to childbirth education can be addressed so that a plan for effective teaching can be initiated.

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Appendixes

Appendix A

Appendix A

CHILDBIRTH EDUCATOR'S DEMOGRAPHIC QUESTIONNAIRE

Directions: Please complete the blanks, circle the appropriate response, or answer the question. Thank you for your participation.

1. Today's Date: _____
2. Marital Status: _____
3. Age: _____
4. How many children do you have? _____
5. What are their ages? _____
6. Have you personally experienced a Lamaze delivery for any of your children? _____
7. Last grade completed in school: (circle one)

4	5	6	7	8	9	10	11	12	1	2	3	4	5	1	2	3	4
8. College Degree in: _____
9. Occupation: _____
10. How long have you taught childbirth education? _____
11. Are you ASPO certified? _____
Date of certification _____
12. What other life experiences have contributed to your involvement in teaching childbirth education classes?
13. In what trimester of pregnancy are couples encouraged to participate in childbirth education classes?

Appendix B

Appendix B

EXPECTANT PARENT'S DEMOGRAPHIC QUESTIONNAIRE

Directions: Please complete the blanks, circle the appropriate response, or answer the question. Thank you for your participation.

1. Today's Date _____
2. Your Age: _____ 3. Partner's Age: _____
4. Marital Status: _____
5. (Check one) I am the Father _____ Mother _____
6. Expected Date of Delivery: _____
7. Last grade completed in school: (circle one)

4	5	6	7	8	9	10	11	12	1	2	3	4	5	1	2	3	4
Grammar				High				College				Post					
School				School								Graduate					
8. Annual Family Income: (Check one)

less than \$10,000 _____	\$25,001- \$30,000 _____
\$10,001- \$15,000 _____	\$30,001- \$35,000 _____
\$15,001- \$20,000 _____	\$35,001- \$40,000 _____
\$20,001- \$25,000 _____	above \$40,000 _____
9. Your Occupation: _____
10. How many children do you have? _____
11. Have you attended childbirth education classes before? Yes _____ No _____
12. Have you experienced a Lamaze childbirth?
Yes _____ No _____

Appendix C

Appendix C

EXPECTANT PARENT'S LEARNING NEEDS

Expectant parents have many questions during the course of their pregnancy. A goal for childbirth educators is to answer these questions and to meet the unique needs of you, the parents, whether this is your first or third child. The purpose of this questionnaire is to find out what information expectant couples would like to know.

Below are two questions. Please answer each as it relates to you.

1. Why did you decide to participate in childbirth classes?

2. Please list five or more things that you hope to learn through your participation in childbirth classes.

Below are 8 groups of information that are of common interest to expectant parents. For each item please circle the number which best indicates how important information about that item is to you. Each item is rated on a scale from one to four, with one being of "Little Importance" and four being of "Great Importance".

	IMPORTANCE			
	Little		Great	

Emotional Changes in Parents and Siblings	1	2	3	4
Hospital Procedures	1	2	3	4
Health Maintenance (nutrition, smoking, pre-natal exercises)	1	2	3	4
Physical Changes in Mother and Baby	1	2	3	4
Care of the Newborn	1	2	3	4
Labor	1	2	3	4
Delivery	1	2	3	4
Complications in Pregnancy	1	2	3	4

Specific information related to each of the groups which you have just rated has been identified. Please rate the importance to you of each item listed under the eight groups.

Group I:

Emotional Changes in Parents and Siblings

Emotional changes in the mother	1	2	3	4
Sexual relationship of the couple	1	2	3	4
Preparing children for the new baby	1	2	3	4
Emotional changes in the father	1	2	3	4
After delivery depression	1	2	3	4
Dealing with the grandparents	1	2	3	4

Group II:

Hospital Procedures

Admission procedures	1	2	3	4
Location of labor and delivery room	1	2	3	4
Hospital visiting hours	1	2	3	4
Children orientation program	1	2	3	4
Rooming-in	1	2	3	4
Length of hospital stay	1	2	3	4

Group III:

Health Maintenance	IMPORTANCE			
	Little		Great	
	-----		-----	
Health resources available (social services, medical, emergency room, education)	1	2	3	4
Prevention of nausea and vomiting	1	2	3	4
Nutritional needs of the pregnant woman	1	2	3	4
Alcohol's effect on the developing baby	1	2	3	4
Pre-natal exercises	1	2	3	4
Effects of non-prescription medications on the developing baby	1	2	3	4
Use of ultrasound (a test using sound waves)	1	2	3	4
Methods of birth control	1	2	3	4
Effect of maternal smoking on the developing baby	1	2	3	4
Use of amniocentesis (test for birth defects)	1	2	3	4

Group IV:

Physical Changes in Mother and Baby

Growth of the baby during pregnancy	1	2	3	4
Preparing for breast feeding	1	2	3	4
Varicose veins	1	2	3	4
Weight gain in pregnancy	1	2	3	4
Leg cramps	1	2	3	4
Purchasing maternity clothes	1	2	3	4
Fatigue	1	2	3	4
Morning sickness	1	2	3	4
Stretch marks	1	2	3	4
Water retention (swelling)	1	2	3	4

Group V:	IMPORTANCE			
	Little	Great	-----	
Care of the Newborn				
Breast feeding	1	2	3	4
How often, how much, and what should I feed my baby	1	2	3	4
Supplies for the new baby	1	2	3	4
Circumcision for the male	1	2	3	4
What is bonding?	1	2	3	4
Bathing baby	1	2	3	4
Umbilical cord care	1	2	3	4
What is a colicky baby	1	2	3	4
Diapering baby	1	2	3	4
"Child-proofing" the home (making home safe)	1	2	3	4
Bottle feeding	1	2	3	4

Group VI:

Labor

Calculating the baby's due date	1	2	3	4
Signs of false labor	1	2	3	4
Signs of true labor	1	2	3	4
Relaxation techniques in labor	1	2	3	4
Duration of labor	1	2	3	4
Stages of labor	1	2	3	4
What is effacement?(thinning of opening to birth canal)	1	2	3	4
What is dilation?(opening of birth canal)	1	2	3	4
When to call the doctor	1	2	3	4
Back labor	1	2	3	4
Medication for pain	1	2	3	4

Group VII:

Delivery

IMPORTANCE
Little Great

Position of the baby for delivery	1	2	3	4
Medication and anesthesia available	1	2	3	4
Cesarean birth and its use	1	2	3	4
What is an episiotomy?	1	2	3	4
Traditional delivery room	1	2	3	4
What is a birthing chair?	1	2	3	4
Use of forceps	1	2	3	4
Multiple births (twins, etc)	1	2	3	4
Premature birth	1	2	3	4
Birthing room	1	2	3	4

Group VIII:

Complications in Pregnancy

Placenta previa?(placenta not in its normal position)	1	2	3	4
Dangers signs in pregnancy	1	2	3	4
Emergency delivery outside of the hospital	1	2	3	4
Diabetes in pregnancy	1	2	3	4
Signs of early labor	1	2	3	4
High blood pressure in pregnancy	1	2	3	4
Overdue pregnancy	1	2	3	4
Placenta abruptio(placenta separates from uterus too early)	1	2	3	4

Of all 72 items rated above, choose three which are of greatest importance to you and rank them by placing the number "1", "2", or "3" in the left margin next to the item.

Thank you for your time.

Appendix D

Appendix D

SAMPLE LETTER FOR EDUCATORS CONTACTED IN PERSON

(childbirth educator's address)

Dear _____,

As a graduate student in nursing education at Old Dominion University, I am conducting research regarding the learning objectives of expectant parents participating in childbirth education classes. The local chapter president of the American Society for Psychoprophylaxis in Obstetrics has suggested that you may be willing to participate in the study and permit me access to the parents in your classes.

As a participant you and each of the expectant parents will be asked to complete a demographic questionnaire and a data questionnaire at the start of the first class. The data questionnaire consists of a list of topics usually of interest to expectant parents. You and the expectant parents are asked to rank these in order of their importance to expectant parents. Confidentiality will be maintained. The questionnaires will involve 20 minutes of class time. If you do not wish to participate you may withdraw at any time. Completion of the questionnaire provides consent to participate. These data may offer assistance in the continued refinement and development of learning objectives prepared by childbirth educators. These data will be available to you upon request. The proposed data collection will take place between May and September 1986. If you have any questions, please contact me at 440-4297.

Thank you for your cooperation.

Sincerely yours,

Cynthia D. Sweeney, ESN
Graduate Nursing Student
Old Dominion University

Appendix E

Appendix E

SAMPLE LETTER FOR EDUCATORS CONTACTED BY MAIL

(childbirth educator's address)

Dear _____,

As a graduate student in nursing education at Old Dominion University, I am conducting research regarding the learning objectives of expectant parents participating in childbirth education classes. Your willingness to participate is greatly appreciated. Enclosed you will find a questionnaire to complete as a childbirth educator. Your responses are an important dimension of this study.

As a participant you are asked to complete the demographic questionnaire and the data questionnaire, returning them to me in the enclosed envelope by September 5th. The data questionnaire consists of a list of topics usually of interest to expectant parents. You are asked to rate these in order of their importance to expectant parents. Your responses will be confidential. Completion of the questionnaire provides consent to participate. These data may offer assistance in the continued refinement and development of learning objectives prepared by childbirth educators. These data will be available to you upon request. If you have any questions, please contact me at 440-4297.

Thank you for your cooperation.

Sincerely yours,

Cynthia D. Sweeney, BSN
Graduate Nursing Student
Old Dominion University